

# **Environmental Education Resource Directory For Educators**

# Memorandum

**To:** Educators in Douglas County  
**CC:** All other Interested Parties  
**From:** Emily Molter, Education Outreach Coordinator  
**Date:** 4/27/2006  
**Re:** Introduction to the directory

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I am an Americorps\*VISTA member serving at the Umpqua National Forest from August 25, 2005-August 25, 2006. My project includes researching the existing conservation education opportunities for k-12 students in Douglas County; meeting with school teachers, principals, and students to assess the need for conservation education efforts and how to best meet anticipated curriculum; writing a needs assessment for the Forest Service; and developing hands-on service learning projects for youth.

While I was researching the Roseburg District Bureau of Land Management's (BLM) conservation educational opportunities, an idea was suggested by a BLM employee that someone create a document with all of the information that I had received to give to the educators in the county. After speaking with a few educators in the county, I decided this would be a useful tool for incorporating more conservation education into the classroom. The feedback that I received from various groups, organizations, and educators was to include the Oregon state benchmarks and standards because it is an easier way for teachers to integrate the programs into their curriculum.

This directory is a compilation of resources for teachers and other educators to use in the classroom, field trip opportunities, outdoor education opportunities, and workshops for teachers for curriculum development. All standards, benchmarks, Oregon Skill Sets, and Career-Related Learning Standards are suggestive. There may be additional standards that can be implemented into the programs that are not mentioned in this directory.

**Disclosure:** Every effort is made to provide accurate and useful information; however, the US Government, US Department of Agriculture, the USDA Forest Service and their employees and contractors assume no legal liability for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed herein. This directory is meant as a guide. There may be other programs available to students and teachers that are not mentioned in this directory. Neither the US Government, US Department of Agriculture, the USDA Forest Service, nor their employees and contractors makes any warranty, express or implied, including the warranties of merchantability and fitness for a particular purpose with respect to documents or information included in this product. All indirect, consequential, implied, punitive and special damages are deemed waived if you use the information contained in this product in any manner.

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# Symbol Guide



Angling Education



Animal Tracks/ID



Archaeology



Birding/Bird ID



Botany/Weeds



Camping/LNT  
Principals, Safety



Community  
Planning



Compass, Map



Engineering



Entomology,  
Macroinvertebrates



Fire



Fisheries



Forestry



Geology



Habitat



Hazardous Waste  
Waste Management



History/Culture



Hunting Education



Internship/Job  
Shadowing



Monitoring,  
Data Collection,  
Surveying



Organic Gardening



Plant/Tree ID



Recreation



Restoration



Soils



Technology/GPS/  
GIS



Watershed,  
Aquatic, Riparian



Wildlife/Animal  
Science



Zoological

# **Indoor Classroom Activities**

<b>Education Outreach</b>	
<b>Description:</b>	Program responds to requests from the public to provide talks and presentations on a variety of topics (e.g. forestry, wildlife, fisheries, archaeology, etc.)
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	Joe Ross, Supervisory Multi-Resource Specialist 541-464-3248 Joseph_Ross@blm.gov
<b>Location:</b>	classes, clubs, or field locations throughout Douglas County
<b>Target Audience:</b>	K-12 grade, Teachers
<b>Group Size:</b>	Maximum of 50
<b>Program activities:</b>	Field trips/ classroom visits by BLM staff
<b>Cost:</b>	None
<b>Transportation:</b>	Provided by school or organization
<b>Length of time:</b>	Depends on specific program desired
<b>Pre or Post Preparation work:</b>	None needed
<b>Number of times presented/yr:</b>	5-10
<b>Partners:</b>	None
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models</p>



	<p>to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(5)</b> Identify constraints on human activity caused by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the</p>

	<p>function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SS.08.3.0.4(4)</b> Recognize relationships between the physical and cultural characteristics of a place or region.</p> <p><b>SS.08.3.0.8(6)</b> Understand how climatic events or climate change affect human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(13)</b> Explain the rock cycle</p>

	<p>in terms of constructive (crustal deformation, volcanic eruption, and sediment deposition) and destructive (weathering and erosion) forces in land formation.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p>

	<p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Science/Horticulture</p> <p><b>Natural Resource Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork.</p> <p><b>Career Development:</b> Research and analyze career and educational information.</p>



## Learning Opportunities Booklet

<b>Description:</b>	<p>Flexible programs on a variety of topics offered by BLM speakers for schools and clubs—approximately 30 different programs are offered. Topics include:</p> <ul style="list-style-type: none"> <li>• Archeology at North Bank Habitat Area</li> <li>• Fire’s Historic and Present Role on Forest Ecosystems</li> <li>• An Exploration of Water</li> <li>• Fisheries</li> <li>• An Exploration of Soil</li> <li>• An Exploration of Plants</li> <li>• Map and Compass</li> <li>• Math in Forestry</li> <li>• The Butterfly</li> <li>• The Butterfly (Field Session)</li> <li>• The Marvel of Feathers</li> <li>• Wings, Wings, Wings</li> <li>• Neotropical Birds (Field Session)</li> <li>• The Marbled Murrelet</li> <li>• Feet, Feet, Feet, Feet</li> <li>• The Forests of Douglas County</li> <li>• Iridescence: What is it?</li> <li>• In Search of Iridescence (Field Session)</li> <li>• The Del Norte Salamander (Field Session)</li> <li>• Fleas of the Pacific Northwest</li> <li>• Flies Everywhere</li> <li>• Mosquitoes: What good are they?</li> <li>• Silk</li> <li>• Itsi-Bitsi Spider</li> <li>• Wasps: Not as bas as you think, but treat with respect</li> <li>• Animal Skulls, Skins, and Tracks</li> <li>• The China Ditch and Hydraulic Placer Mining in Southern Oregon</li> <li>• Cascadia: Geology from Roseburg to Crater Lake</li> </ul>
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	<p>Joe Ross, Supervisory Multi-Resource Specialist            541-464-3248  <a href="mailto:Joseph_Ross@blm.gov">Joseph_Ross@blm.gov</a></p>
<b>Location:</b>	Programs available for classes, organizations, or field locations

	throughout Douglas County
<b>Target Audience:</b>	Grades 3-adult
<b>Group Size:</b>	50 maximum (some programs may be appropriate for large assemblies; check with presenter)
<b>Program Activities:</b>	Talks, slide shows, field sessions
<b>Cost:</b>	None
<b>Transportation:</b>	Provided by school or organization
<b>Length of time:</b>	Depends on specific program desired. There is information on each program that details time length at the Bureau of Land Management.
<b>Pre or Post Preparation work:</b>	None needed
<b>Number of times presented/yr:</b>	Year round
<b>Partners:</b>	Agencies, universities, non-profits
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p>

	<p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p>

	<p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive</p>



	<p>manner. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Electronic Field Trips</b>	
<b>Description:</b>	Online interactive educational programs on a variety of topics including fire, renewable energy, and habitats.
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	Kevin Flynn, <a href="mailto:Kevin_Flynn@blm.gov">Kevin_Flynn@blm.gov</a>  <a href="http://www.blm.gov/education/www.efieldtrips.org">http://www.blm.gov/education/ www.efieldtrips.org</a>
<b>Location:</b>	online
<b>Target Audience:</b>	Grades K-12
<b>Group Size:</b>	Varies depending on class size
<b>Program Activities:</b>	eFieldTrip Journal, Virtual Visit , and Posting Questions via the Ask the Experts Web Form
<b>Cost:</b>	Free
<b>Transportation:</b>	NA
<b>Length of time:</b>	Varies depending on program and activities
<b>Pre or Post Preparation work:</b>	Teachers need to register their class online in advance
<b>Number of times presented/yr:</b>	Varies, usually one a year
<b>Partners:</b>	Distance Learning Integrators
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry. <b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and

	<p>informational books.</p> <p><b>E.03.1.F.1(2)</b> Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.</p> <p><b>E.03.1.F.1(6)</b> Use dictionaries, encyclopedias, CD ROMs, and Internet to locate information.</p> <p><b>E.03.1.G.1(3)</b> Determine significant information from the text, including problems and solutions.</p> <p><b>E.03.1.G.1(4)</b> Summarize major points from informational text.</p> <p><b>SC.03.1.C.1(1)</b> Identify common types and uses of energy.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading</p>

	<p>level appropriate to grade level.</p> <p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(2)</b> Use the features of informational texts, such as formats, graphics, diagrams, illustrations, charts, maps, and organizational devices to find information and support understanding.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>SC.05.1.C.1(2)</b> Identify various forms of energy including heat, light, sound, and electricity.</p> <p><b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</p> <p><b>SC.05.1.C.1(6)</b> Identify examples of energy transfer in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the</p>
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	<p>relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p>

	<p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>SC.08.1.C.1(1)</b> Compare forms and behaviors of various types of energy.</p> <p><b>SC.08.1.C.1(2)</b> Distinguish between the forms of energy including heat, chemical, mechanical, and gravitational potential energy.</p> <p><b>SC.08.1.C.1(6)</b> Identify how technological advances have changed humankind's use of energy.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support</p>
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	<p>analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines;</p>

	<p>essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>SC.CIM.1.C.1(5)</b> Recognize that heat energy is a by-product of most energy transformations.</p> <p><b>SC.CIM.1.C.1(8)</b> Analyze the flow of energy through a system by applying the law of conservation of energy.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize,</p>
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	<p>and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Understand energy, its transformations, and interactions with matter.</p> <p><b>CCG:</b> Understand the relationships among living things and between living</p>

	<p>things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Understand economic, cultural, and environmental factors that influence changes in population, and evaluate the consequences of the resulting increases or decreases in population.</p>
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	<p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Environmental Services Cluster:</b> Energy Management, Environmental Administration and Planning, and Hazardous Material Management</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Geology and Mineral Industries</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace.</p> <p><b>Career Development:</b> Research and analyze career and educational information.</p>



<b>Classroom Incubator Program</b>	
<b>Description:</b>	Students have the opportunity to watch the salmon life cycle take place by rearing salmon eggs.
<b>Program Offered By:</b>	Oregon Department of Fish and Wildlife (agency)
<b>Contact Information:</b>	Laura Jackson <a href="mailto:laura.s.jackson@state.or.us">laura.s.jackson@state.or.us</a> 541-440-3353
<b>Location:</b>	In the classroom
<b>Target Audience:</b>	Grades 3-12
<b>Group Size:</b>	Varies depending on the number of students in the class
<b>Program Activities:</b>	Indoor activities
<b>Cost:</b>	Free
<b>Transportation:</b>	Not needed because program is held in the classroom
<b>Length of time:</b>	Varies depending on class size
<b>Pre or Post Preparation work:</b>	Classes must provide an aquarium for the salmon eggs and contact ODFW to schedule a classroom visit.
<b>Number of times presented/yr:</b>	Available upon request
<b>Partners:</b>	No
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.2.A.1(2)</b> Describe the basic needs of living things. <b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there. <b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.
<b>Possible Connections to Fifth Grade Standards:</b>	<b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism. <b>SC.05.2.B.1(3)</b> Recognize that organisms are produced by living organisms of similar kind, and do not appear spontaneously from inanimate materials. <b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat. <b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.

	<p><b>SS.05.3.0.4(2)</b> Identify and locate major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics</p>

	<p>of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skills Sets:</b></p>	<p><b>Environmental Sciences Cluster:</b> Water Quality</p> <p><b>Natural Resource Management Cluster:</b> Aquatic and Marine Management and Fish and Wildlife Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork.</p> <p><b>Career Development:</b> Research and analyze career and educational information.</p>



<b>United States Forest Service Online Curriculum and Activities</b>	
<b>Description:</b>	FS website offers free curriculum materials for teachers and online activities for students such as a virtual tour through the forest or a link to the <i>Natural Inquirer</i> magazine.
<b>Program Offered By:</b>	United States Forest Service (agency)
<b>Contact Information:</b>	Sue Baker <a href="mailto:Baker04@fs.fed.us">Baker04@fs.fed.us</a>  <a href="http://www.na.fs.fed.us/spfo/ce/index.cfm">www.na.fs.fed.us/spfo/ce/index.cfm</a>
<b>Location:</b>	online
<b>Target Audience:</b>	Grades K-12, Teachers
<b>Group Size:</b>	N/A
<b>Program Activities:</b>	Curriculum & online activities
<b>Cost:</b>	Free
<b>Transportation:</b>	N/A
<b>Length of time:</b>	Varies depending on activities and number of students in class
<b>Pre or Post Preparation work:</b>	Teachers need to review the online curriculum materials and decide which activities are best for their students before implementing the activities into curriculum.
<b>Number of times presented/yr:</b>	Available online all year
<b>Partners:</b>	Government agencies that manage public lands, EPA, Department of Education, Project Learning Tree, and other non-profit organizations
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic needs of living things. <b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics. <b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there. <b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.

	<p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or</p>



	<p>not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.3.A.1(5)</b> Recognize that discarded products contribute to the problem of waste disposal.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(4)</b> Understand how human activities are affected by the physical</p>
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	<p>environment.</p> <p><b>SS.05.3.0.8(5)</b> Identify constraints on human activity caused by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors</p>

	<p>affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary</p>
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	literature, poetry, magazines, newspapers, reference materials, and online information.
<b>Possible Connections to CIM Standards:</b>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and</p>

	<p>analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or</p>

	<p>hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Sciences/Horticulture</p> <p><b>Natural Resources Management Cluster:</b> Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p> <p><b>Fire and Emergency Services Cluster:</b> Fire Services</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences</p>

	<p>of decisions and actions. Maintain regular attendance and be on time.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Read technical/instructional materials for information and apply to specific tasks.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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## ***The Greatest Good***

<b>Description:</b>	<i>The Greatest Good</i> film was produced by the Forest Service in honor of its Centennial celebration in 2005 and provides an in-depth look at natural resource management during the 20th century. The use of this film in a classroom offers an ideal way for students to study many related issues such as forest conservation, the role of fire in our society, wildlife protection, human impacts on the environment, and environmental decision-making in a democracy. Disc 1 contains the two-hour history documentary film, detailing, in four 30-minute parts, some of the major Forest Service events and issues from the early 1900s to present. Disc 2 contains bonus materials, including the original film trailers (ads), as well as music videos, various views on hot topics in the Forest Service, and historic public service announcements. Disc 3 contains additional bonus materials including such topics as Fire, Smokey Bear, brief historical short stories, and historical out-takes from the film.
<b>Program Offered By:</b>	United States Forest Service (agency)
<b>Contact Information:</b>	<a href="http://www.lib.duke.edu/forest/Education/TGG/Teacher%20Guide.htm">http://www.lib.duke.edu/forest/Education/TGG/Teacher%20Guide.htm</a>
<b>Location:</b>	In the classroom
<b>Target Audience:</b>	K-12 students
<b>Group Size:</b>	Varies depending on class size
<b>Program Activities:</b>	Film, in-door activities, labs
<b>Cost:</b>	<i>The Greatest Good</i> can be purchased on DVD and includes three disks.
<b>Transportation:</b>	N/A
<b>Length of time:</b>	2 hour video; activities range from 30 minutes to a full week
<b>Pre or Post Preparation work:</b>	Teachers need to fill out the order form for the DVD and mail along with payment to the address on the form. The registration form can be downloaded from the website.
<b>Number of times presented/yr:</b>	Varies depending on how often teachers want to incorporate the video and activities into their curriculum.
<b>Partners:</b>	Duke University
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.



	<p><b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>E.03.1.F.1(2)</b> Use titles, tables of contents, chapter headings, illustrations, captions, glossaries, and indexes to locate information in text.</p> <p><b>E.03.1.F.1(4)</b> Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).</p> <p><b>E.03.1.G.1(1)</b> Demonstrate comprehension by identifying answers to questions about the text.</p> <p><b>E.03.1.G.1(3)</b> Determine significant information from the text, including problems and solutions.</p> <p><b>E.03.1.G.1(4)</b> Summarize major points from informational text.</p> <p><b>E.03.1.H.1(3)</b> Ask how, why, and what-if questions in interpreting informational texts.</p> <p><b>E.03.2.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to text and read text to make connections and respond to a wide variety of significant works of children's literature-including poetry, fiction, non-fiction, and drama-from a variety of cultures and time periods.</p> <p><b>E.03.2.B.1(2)</b> Distinguish the order of events or a specific event from a sequence of events.</p> <p><b>E.03.2.B.1(3)</b> Determine significant events from the story.</p> <p><b>E.03.2.B.1(4)</b> Summarize major points from literary text.</p> <p><b>E.03.4.B.1(1)</b> Retell in own words and explain what has been said by a speaker.</p> <p><b>E.03.4.B.1(3)</b> Answer questions completely and with appropriate elaboration.</p> <p><b>E.03.4.C.1(1)</b> Distinguish between the speaker's opinions and verifiable facts.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store</p>
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	<p>food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.1.0.1(1)</b> Identify essential ideas and values expressed in national symbols, heroes, and patriotic songs of the United States.</p> <p><b>SS.03.1.0.4(1)</b> Identify rights that people have in their communities.</p> <p><b>SS.03.1.0.5(1)</b> Identify ways that people can participate in their communities and the responsibilities of participation.</p> <p><b>SS.03.1.0.7(1)</b> Distinguish local and world issues.</p> <p><b>SS.03.2.0.1(1)</b> Understand that limited resources make economic choice necessary.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p> <p><b>SS.03.4.D.2(1)</b> Understand events from local history.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.2(1)</b> Gather information relating to an issue or problem.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.D.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Demonstrate listening comprehension of more</p>

	<p>complex text through class and/or small group interpretive discussions across the subject areas.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(1)</b> Read textbooks, biographical sketches, letters, diaries, directions, procedures, magazines, news stories, and almanacs.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>E.05.1.H.1(2)</b> Draw inferences, conclusions, or generalizations about main ideas in text, and support them with textual evidence and prior knowledge.</p> <p><b>E.05.2.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to text and read text to make connections and respond to a wide variety of significant works of literature, including poetry, fiction, non-fiction, and drama, from a variety of cultures and time periods that enhance the study of other subjects.</p> <p><b>E.05.4.B.1(1)</b> Ask relevant questions that seek information not already discussed.</p> <p><b>E.05.4.B.1(2)</b> Interpret a speaker's verbal and non-verbal messages, purposes, and perspectives.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.1.0.2(1)</b> Identify the primary functions of federal, state, and local governments.</p>
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	<p><b>SS.05.1.0.4(1)</b> Identify the rights of U.S. citizens.</p> <p><b>SS.05.1.0.4(2)</b> Identify basic rights that are given to citizens of the United States.</p> <p><b>SS.05.1.0.5(1)</b> Understand how citizens can learn about public issues.</p> <p><b>SS.05.1.0.6(1)</b> Identify and give examples of how individuals can influence the actions of government.</p> <p><b>SS.05.1.0.6(2)</b> Identify and give examples of actions citizens can take to influence government policy and decision-making.</p> <p><b>SS.05.2.0.1(2)</b> Know that whenever a choice is made, there is a cost.</p> <p><b>SS.05.2.0.2(2)</b> Identify and give examples of consequences of economic choices in terms of trade-off and opportunity cost.</p> <p><b>SS.05.2.0.3(1)</b> Understand how supply and demand influence price, and how price increases or decreases influence the decisions of consumers.</p> <p><b>SS.05.2.0.6(2)</b> Recognize that nations interact through trade.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.6(2)</b> Understand how physical geography affects the routes, flow, and destinations of migration.</p> <p><b>SS.05.3.0.7(1)</b> Identify and give examples of issues related to population increases and decreases.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.1(1)</b> Interpret data and chronological relationships presented in timelines and narratives.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p> <p><b>SS.05.4.A.3(1)</b> Understand how history can be organized using themes, geography, or chronology.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
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<p><b>Possible Connections to Eighth Grade Students:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.08.1.D.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Demonstrate listening comprehension of more complex text through class and/or small group interpretive discussions across the subject areas.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.G.1(1)</b> Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.</p> <p><b>E.08.2.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to text and read text to make connections and respond to historically or culturally significant works of literature that enhance the study of other subjects.</p> <p><b>E.08.4.B.1(1)</b> Analyze oral presentations, including language choice and delivery, and the effect of the speaker's interpretations on the listener.</p> <p><b>E.08.4.B.1(2)</b> Paraphrase a speaker's purpose and point of view, and ask relevant questions concerning the speaker's content, delivery, and purpose.</p> <p><b>E.08.4.C.1(1)</b> Provide constructive feedback to speakers concerning the coherence and logic of a speech's content and delivery and its overall impact upon the listener.</p> <p><b>E.08.4.C.1(2)</b> Evaluate the credibility of a speaker (e.g., hidden agendas, slanted or biased material).</p> <p><b>E.08.4.C.1(3)</b> Interpret and evaluate the various ways in which visual image-makers (e.g., graphic artists, illustrators, news photographers, film makers) communicate information and</p>
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	<p>affect impressions and opinions.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.1.0.2(1)</b> Identify and distinguish how powers and responsibilities are distributed and balanced among the federal, state, and local levels.</p> <p><b>SS.08.1.0.2(2)</b> Identify the power and/or responsibility of each level of government.</p> <p><b>SS.08.1.0.5(1)</b> Understand how citizens can make their voices heard in the political process.</p> <p><b>SS.08.1.0.5(2)</b> Identify and give examples of ways that citizens can let their opinions be known in the political process.</p> <p><b>SS.08.1.0.6(1)</b> Identify and give examples of how groups and organizations can influence the actions of government.</p> <p><b>SS.08.2.0.1(1)</b> Understand incentives in a market economy that influence individuals and businesses in allocating resources (time, money, labor, and natural resources).</p> <p><b>SS.08.2.0.3(2)</b> Understand how supply and demand respond predictably to changes in economic circumstances.</p> <p><b>SS.08.2.0.4(1)</b> Understand how decisions regarding what to produce, how to produce, and for whom to produce are answered in various economic systems.</p> <p><b>SS.08.3.0.7(1)</b> Identify economic, cultural, and environmental factors that affect population, and predict how the population would change as a result.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
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	<p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p> <p><b>SS.08.4.A.1(1)</b> Represent and interpret data and chronological relationships from history, using timelines and narratives.</p> <p><b>SS.08.4.A.1(2)</b> Compare and contrast historical interpretations.</p> <p><b>SS.08.4.A.1(3)</b> Identify and create chronologies of events.</p> <p><b>SS.08.4.C.1(4)</b> Understand the effects of 19th century westward migration, the idea of Manifest Destiny, European immigration, and rural to urban migration on indigenous populations and newcomers in the United States.</p> <p><b>SS.08.4.D.1(1)</b> Understand how various groups of people were affected by events and developments in Oregon state history.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.G.1(1)</b> Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.</p> <p><b>E.CIM.4.B.1(1)</b> Formulate judgments about ideas under discussion, and support those judgments with convincing evidence.</p> <p><b>E.CIM.4.B.1(2)</b> Follow complex verbal instructions that include technical vocabulary and processes.</p> <p><b>E.CIM.4.C.1(1)</b> Evaluate the clarity, quality, and effectiveness</p>

	<p>of a speaker's important points, arguments, evidence, organization of ideas, delivery, diction, and syntax.</p> <p><b>E.CIM.4.C.1(3)</b> Identify the aesthetic effects of a media presentation, and evaluate the techniques used to create them.</p> <p><b>E.CIM.4.C.1(6)</b> Analyze how language and delivery affect the mood and tone of the oral communication and make an impact on the audience.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.1.0.1(1)</b> Understand the purpose of laws and government, provisions to limit power, and the ability to meet changing needs as essential ideas of the Constitution.</p> <p><b>SS.CIM.1.0.1(3)</b> Understand the concept of judicial review as a means of resolving conflict over the interpretation of the Constitution and the actions of government.</p> <p><b>SS.CIM.1.0.2(1)</b> Understand the interrelationship between local, state, and federal government.</p> <p><b>SS.CIM.1.0.6(1)</b> Understand how government policies and decisions have been influenced and changed by individuals, groups, and international organizations.</p> <p><b>SS.CIM.2.0.2(3)</b> Understand how people make decisions by analyzing economic conditions and changes.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p>
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	<p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.4.A.1(1)</b> Reconstruct, interpret, and represent the chronology of significant events, developments, and narratives from history.</p> <p><b>SS.CIM.4.A.1(2)</b> Reconstruct the chronological order of significant events related to historical developments.</p> <p><b>SS.CIM.4.A.3(1)</b> Recognize and interpret continuity and/or change with respect to particular historical developments in the 20th century.</p> <p><b>SS.CIM.4.C.1(1)</b> Understand how individuals, issues, and events changed or significantly influenced the course of U.S. history after 1900.</p> <p><b>SS.CIM.4.C.1(8)</b> Understand the changes that created the economic boom after World War II.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Demonstrate general understanding of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Listen critically and respond appropriately across the subject areas.</p> <p><b>CCG:</b> Evaluate the significance and accuracy of information and ideas presented in oral, visual, and multi-media communications across the subject areas.</p>

	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the origins, purposes, and functions of U.S. government, including the structure and meaning of the U.S. Constitution.</p> <p><b>CCG:</b> Understand the organization, responsibilities, and interrelationships of local, state, and federal governments in the United States.</p> <p><b>CCG:</b> Understand personal and political rights of citizens in the United States.</p> <p><b>CCG:</b> Understand how government is influenced and changed by support and dissent of individuals, groups, and international organizations.</p> <p><b>CCG:</b> Understand that resources are limited (e.g., scarcity).</p> <p><b>CCG:</b> Understand how conditions in an economy influence and are influenced by the decisions of consumers, producers, economic institutions, and government.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are</p>
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	<p>interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Interpret and reconstruct chronological relationships.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments within and across eras of U.S. history.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Environmental Services Cluster:</b> Environmental Administration and Planning</p> <p><b>Natural Resources Management Cluster:</b> Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p> <p><b>Visual, Performing and Media Arts Cluster:</b> Audio and Video Technologies</p> <p><b>Fire and Emergency Services Cluster:</b> Fire Services</p>
<b>Possible Connections to Career-Related Learning Standards:</b>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Read technical/instructional materials for information and apply to specific tasks.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>





<b>Talk About Trees</b>	
<b>Description:</b>	A science-based program that encourages appreciation for trees and forests while explaining principals about protection, management, and conservation of forests. Talk About Trees offers a packet designed to meet state benchmarks and all classroom programs have been correlated to address benchmarks.
<b>Program Offered By:</b>	Oregon Women in Timber (non-profit)
<b>Contact Information:</b>	Paula Yablonski, Facilitator 541-837-3545 paula@rogueriver.net
<b>Location:</b>	Chosen by teacher, usually the classroom
<b>Target Audience:</b>	PreK-8
<b>Group Size:</b>	Varies depending on class size
<b>Program Activities:</b>	Indoor presentations, papermaking, group activities, and out-door classroom
<b>Cost:</b>	Free
<b>Transportation:</b>	Not needed because facilitator comes to the school.
<b>Length of time:</b>	Varies depending on program and age group- ranges from 20 minutes to 90 minutes
<b>Pre or Post Preparation work:</b>	Facilitators prepare the materials presented to the class. Teachers must prepare any additional activities for the class that will be performed after the Talk About Trees sessions.
<b>Number of times presented/yr:</b>	Varies upon request (usually up to 3)
<b>Partners:</b>	Oregon Forest Resources Institute (OFRI)
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic needs of living things. <b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.

	<p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Students:</b></p>	<p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is</p>

	<p>the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand that any collection</p>

	<p>of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand that a model is a tentative scheme or structure with explanatory power.</p>
<p><b>Possible Connections to Oregon Skills Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Natural Resources Cluster:</b> Forestry and Forest Products</p> <p><b>Fire and Emergency Services:</b> Fire Services</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Initiate tasks that need to be done and initiate action to complete tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p>



	<p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Oregon Natural Resources Research Institute</b>	
<b>Description:</b>	Goal of the program is to increase the interest and enthusiasm that students have for the study of math and science, through interaction with professionals in a variety of scientific disciplines. The program is meant to be a resource that aids students in reaching the benchmarks set forth in the state standards of science.
<b>Program Offered By:</b>	Oregon Natural Resources Research Institute (non-profit)
<b>Contact Information:</b>	Bob Craft 541-680-7938, bcraft@smotis.com  Lenny Schussel 541-679-4997 lenny@howdt.com
<b>Location:</b>	Statewide
<b>Target Audience:</b>	All students
<b>Group Size:</b>	Up to 25, optimum 5-10
<b>Program Activities:</b>	Research projects, visiting lecturer, and online school enrichment knowledge base
<b>Cost:</b>	Free to Douglas County School Age youth
<b>Transportation:</b>	Worked out through school transportation provider.
<b>Length of time:</b>	Semester or full year
<b>Pre or Post Preparation work:</b>	Teacher referral
<b>Number of times presented/yr:</b>	Available upon request
<b>Partners:</b>	Touch A Life Learning Partnership, Wildlife Safari, BLM, Wolf Creek Job Corps, and other organizations
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties. <b>SC.03.1.A.2(1)</b> Describe changes that occur in matter. <b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.

	<p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.A.1(1)</b> Identify substances as they exist in different states of matter.</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.1(3)</b> Identify unique properties of each state of matter.</p> <p><b>SC.05.1.A.2(1)</b> Describe the ability of matter to change state by heating and cooling.</p> <p><b>SC.05.1.A.2(2)</b> Recognize that heating and cooling cause changes in states of matter.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.B.1(2)</b> Describe the life cycle</p>

	<p>of common organisms.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.3.A.1(5)</b> Recognize that discarded products contribute to the problem of waste disposal.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p>
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	<p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(1)</b> Compare properties of specific substances.</p> <p><b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.1.A.2(2)</b> Distinguish between examples of chemical changes and physical changes.</p> <p><b>SC.08.1.A.2(3)</b> Describe processes that will separate the components of physical mixtures.</p> <p><b>SC.08.1.A.2(4)</b> Describe events that accompany chemical changes, but not physical changes.</p> <p><b>SC.08.1.A.2(5)</b> Explain how our understanding of the nature of matter and chemical reactions has changed over time.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most</p>

	<p>ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.1(1)</b> Describe properties of elements and their relationship to the periodic table.</p> <p><b>SC.CIM.1.A.1(2)</b> Explain atoms and their base components (protons, neutrons, and electrons) as a basis for</p>

	<p>all matter.</p> <p><b>SC.CIM.1.A.1(3)</b> Read and interpret the periodic table, recognizing the relationship of the chemical and physical properties of the elements to their position on the periodic table.</p> <p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.1.A.2(4)</b> Describe chemical reactions in terms of reactants and products.</p> <p><b>SC.CIM.1.A.2(5)</b> Describe the factors that affect the rate of chemical reactions.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.B.1(4)</b> Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in organisms.</p> <p><b>SC.CIM.2.B.1(6)</b> Recognize the existence of technology that can alter and/or determine inherited traits.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with</p>
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	<p>the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(7)</b> Recognize that natural selection and its evolutionary consequences provide an explanation for the fossil record as well as an explanation for the molecular similarities among varied species.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p>



	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p>
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	<p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Sciences/Horticulture, and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p> <p><b>Information and Communications Technology (ICT) Cluster:</b> Information Support and Services and Programming and Software Development</p> <p><b>Computer Systems Cluster:</b> Network Systems, Software Engineering, and Telecommunications</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with</p>

	<p>colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Write instructions, technical reports, and business communications clearly and accurately. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain appropriate tools and technologies appropriate for the workplace. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information. Demonstrate job-seeking skills.</p>
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# **Guest Speakers and Presentations**

<b>Umpqua National Forest Speakers Bureau</b>	
<b>Description:</b>	Guest speakers present a variety of topics including restoration, future of the forest, fisheries, invasive species, and more.
<b>Program Offered By:</b>	Umpqua National Forest (agency)
<b>Contact Information:</b>	541-672-6001
<b>Location:</b>	Varies
<b>Target Audience:</b>	Schools, service and professional groups
<b>Group Size:</b>	Varies
<b>Program Activities:</b>	Guest speakers and presentations
<b>Cost:</b>	Free
<b>Transportation:</b>	Speakers provide their own transportation
<b>Length of time:</b>	Usually 20-40 minutes
<b>Pre or Post Preparation work:</b>	Teachers interested in having a guest speaker must contact the Forest Service. Further instruction will be provided once a topic is decided upon.
<b>Partners:</b>	None
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.1.C.1(1)</b> Identify common types and uses of energy.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SS.03.3.0.8(1)</b> Understand how</p>

	<p>peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.C.1(1)</b> Identify forms of various types of energy and their effects on matter.</p> <p><b>SC.05.1.C.1(2)</b> Identify various forms of energy including heat, light, sound, and electricity.</p> <p><b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</p> <p><b>SC.05.1.C.1(6)</b> Identify examples of energy transfer in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.B.1(2)</b> Describe the life cycle of common organisms.</p> <p><b>SC.05.2.B.1(3)</b> Recognize that organisms are produced by living organisms of similar kind, and do not appear spontaneously from inanimate materials.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific</p>

	<p>habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.3.A.1(5)</b> Recognize that discarded products contribute to the problem of waste disposal.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(4)</b> Understand how human activities are affected by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p>
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	<p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p>
<p><b>Possible Connections to Eighth Grade Students:</b></p>	<p><b>SC.08.1.C.1(1)</b> Compare forms and behaviors of various types of energy.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.B.1(5)</b> Explain how our understanding of heredity has changed over time.</p> <p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which</p>

	<p>various resources can be recycled and reused.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.C.1(5)</b> Recognize that heat energy is a by-product of most energy transformations.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.B.1(2)</b> Describe the structure of DNA and the way that DNA functions to control protein synthesis.</p> <p><b>SC.CIM.2.B.1(4)</b> Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in organisms.</p> <p><b>SC.CIM.2.B.1(6)</b> Recognize the</p>

	<p>existence of technology that can alter and/or determine inherited traits.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SS.CIM.3.0.3(2)</b> Locate and identify places and regions most prominent in contemporary events in Oregon, the United States, and the world.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p>
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	<p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand energy, its transformations, and interactions with matter.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of</p>

	<p>scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural</p>

	<p>Resources</p> <p><b>Fire and Emergency Services Cluster:</b> Emergency Services and Fire Services</p> <p><b>Engineering Cluster:</b> Civil and Infrastructure Systems</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>



<b>Spring Visitation Program</b>	
<b>Description:</b>	A representative from Douglas Forest Protective Association (DFPA) comes to all elementary schools in Douglas County and gives a presentation on fire prevention, wilderness safety, and camp fire safety.
<b>Program Offered By:</b>	Douglas Forest Protective Association (non-profit)
<b>Contact Information:</b>	Tom Fields, Public Information Officer 541-672-6507 tfields@odf.state.or.us
<b>Location:</b>	schools
<b>Target Audience:</b>	Grades K-3
<b>Group Size:</b>	Varies depending on size of class
<b>Program Activities:</b>	Guest speakers/presentations
<b>Cost:</b>	Free
<b>Transportation:</b>	Guest speakers provide their own transportation to the schools.
<b>Length of time:</b>	30 minutes
<b>Pre or Post Preparation work:</b>	Teachers may need to have equipment ready before the presentation such as power point, over-head projector, etc. Arrangements will be determined after speaking with the representative in February.
<b>Number of times presented/yr:</b>	Schools are called in February to make an appointment for the Spring Visitation Program. Program is held in April.
<b>Partners:</b>	Douglas County Fire Prevention Cooperative
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.1.C.1(1)</b> Identify common types and uses of energy.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.4.A.1(1)</b> Make observations.</p>

	Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.
<b>Possible Connections to Common Curriculum Goals:</b>	<p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p>
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Science Cluster:</b> Environmental Administration and Planning</p> <p><b>Natural Resources Management Cluster:</b> Forestry and Forest Products and Recreation and Cultural Resources</p> <p><b>Fire and Emergency Services Cluster:</b> Emergency Services and Fire Services</p> <p><b>Manufacturing Cluster:</b> Health, Safety, and Environmental Assurance</p>
<b>Possible Connections to Career Related Learning Standards:</b>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems</p>



	<p>and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>
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<b>Animal Outreach</b>	
<b>Description:</b>	Animal Ambassadors bring animals to schools, organizations, and businesses.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Christine Spencer, Director of Education 541-679-6761x260 <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Varies upon request
<b>Target Audience:</b>	Ages varied
<b>Group Size:</b>	Varies upon request
<b>Program Activities:</b>	Information session and hands-on learning activities
<b>Cost:</b>	Time is charged by the hour and mileage traveled
<b>Transportation:</b>	Wildlife Safari provides their own transportation to the site
<b>Length of time:</b>	1-2 hour presentations (fair booth available)
<b>Pre or Post Preparation work:</b>	Up to 2 hours
<b>Partners:</b>	Varied
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p>

	<p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SS.05.3.0.6(2)</b> Understand how physical geography affects the routes, flow, and destinations of migration.</p> <p><b>SS.05.3.0.7(1)</b> Identify and give examples of issues related to population increases and decreases.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative impacts of population increases or decreases.</p>
<p><b>Possible Connections to Eighth Grade Students:</b></p>	<p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans</p>

	<p>and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p>
<b>Possible Connections to Common Curriculum Goals:</b>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p>
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p> <p><b>Hospitality and Tourism Cluster:</b> Recreation, Amusements, and Attractions</p>
<b>Possible Connections to Career Related Learning Standards:</b>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate</p>

	<p>interactions with colleagues.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Noon Visits</b>	
<b>Description:</b>	Animal Ambassadors bring animals and artifacts to schools during lunch break.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Christine Spencer, Director of Education 541-679-6761x260 <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Varies upon request
<b>Target Audience:</b>	Ages varied
<b>Group Size:</b>	Varies upon request
<b>Program Activities:</b>	Presentation
<b>Cost:</b>	Time is charged by the hour and mileage traveled.
<b>Transportation:</b>	Provided by Wildlife Safari
<b>Length of time:</b>	1 hour
<b>Pre or Post Preparation work:</b>	Up to 2 hours
<b>Partners:</b>	Varied
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models</p>

	<p>to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of</p>

	<p>organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p>



	<p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p>

<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems  <b>Natural Resources Management:</b> Fish and Wildlife Resources and Recreation and Cultural Resources  <b>Hospitality and Tourism Cluster:</b> Recreation, Amusements, and Attractions</p>
<p><b>Possible Connections to Career-Related Learning Standards</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p>



<b>Watershed Education Program</b>	
<b>Description:</b>	Students write natural resource management plans for a piece of property with the help of guest lecturers, interviews, and landowners.
<b>Program Offered By:</b>	Douglas Soil and Water Conservation District (agency)
<b>Contact Information:</b>	Jim Lee, Project Manager 541-957-5061 jim.lee@oacd.org
<b>Location:</b>	Sutherlin High School and Elkton High School
<b>Target Audience:</b>	Vocational/Agricultural Students Grades 9-12
<b>Group Size:</b>	12-16
<b>Program Activities:</b>	Guest speakers, site visits, and natural resource management plans
<b>Cost:</b>	Free
<b>Transportation:</b>	NA
<b>Length of time:</b>	2-3 weeks
<b>Pre or Post Preparation work:</b>	Post work: Farm Management Plan
<b>Number of times presented/yr:</b>	1 school per semester
<b>Partners:</b>	Oregon Watershed Enhancement Board, ODFW, and other local organizations
<b>Possible Connections to CIM Standards:</b>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories;</p>

	<p>periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.3.A.1(1) Skill To Support the Standard:</b> (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.CIM.3.A.1(2) Skill To Support the Standard:</b> (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.</p> <p><b>E.CIM.3.A.1(3) Skill To Support the Standard:</b> (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.CIM.3.A.1(4) Skill To Support the Standard:</b> (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose-personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.CIM.3.A.1(5) Skill To Support the Standard:</b> (For the purpose of noting key skills that support classroom instruction of the standards) Use the writing process-rewriting, drafting, revising, editing, and publishing successive versions.</p> <p><b>E.CIM.3.A.1(8) Skill To Support the Standard:</b> (For the purpose of noting key skills that support classroom instruction of the standards) Revise drafts to improve the logic and coherence of the organization and controlling idea, the precision of word</p>
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choice, and the tone-by taking into consideration the audience, purpose, and formality of the context.

**E.CIM.3.A.1(9)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections of specific errors.

**E.CIM.3.B.1(1)** Establish a coherent and clearly supported thesis that engages the reader, conveys a clear and distinctive perspective on the subject, maintains a consistent tone and focus throughout the piece of writing, and ends with a well supported conclusion.

**E.CIM.3.B.1(2)** Create an organizational structure that logically and effectively presents information using transitional elements that unify paragraphs and the work as a whole.

**E.CIM.3.C.1(1)** Produce writing that shows accurate spelling.

**E.CIM.3.D.1(3)** Demonstrate an understanding of proper English usage, including the consistent use of verb tenses and forms.

**E.CIM.3.E.1(1)** Use conventions of punctuation correctly, including semicolons, colons, ellipses, hyphens and dashes.

**E.CIM.3.F.1(1)** Use correct capitalization.

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

	<p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Pre-write, draft, revise, edit, and publish across the subject areas.</p> <p><b>CCG:</b> Communicate supported ideas across the subject areas, including relevant examples, facts, anecdotes, and details appropriate to audience and purpose that engage reader interest ; organize information in clear sequence, making connections and transitions among ideas, sentences, and paragraphs ; and use precise words and fluent sentence structures that support</p>

	<p>meaning.</p> <p><b>CCG:</b> Demonstrate knowledge of spelling, grammar, punctuation, capitalization, and penmanship across the subject areas.</p> <p><b>CCG:</b> Demonstrate knowledge of spelling, grammar, punctuation, capitalization, and penmanship across the subject areas.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Understand that resources are</p>
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	limited (e.g., scarcity).
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Agriculture Cluster:</b> Agribusiness, Animal Science Systems, Plant Sciences/Horticulture, and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Food Science and Processing Cluster:</b> Quality Control, Nutrition, and Research</p> <p><b>Natural Resources Management Cluster:</b> Fish and Wildlife Resources, Forestry and Forest Products, and Geology and Mineral Industries</p>
<b>Possible Connections to Career-Related Learning Standards:</b>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>





<b>Healthy Homes of Myrtle Creek</b>	
<b>Description:</b>	Improve quality of the watershed in Myrtle Creek area
<b>Program Offered By:</b>	Douglas Soil and Water Conservation District (agency)
<b>Contact Information:</b>	Jim Lee, Project Manager 541-957-5061 jim.lee@oacd.org
<b>Location:</b>	Public workshops at MC Grange in Myrtle Creek; guest speakers will come to local schools
<b>Target Audience:</b>	Public and students
<b>Group Size:</b>	Anyone who is interested is welcome
<b>Program Activities:</b>	Information sessions and school visits
<b>Cost:</b>	Free
<b>Transportation:</b>	Must be provided
<b>Length of time:</b>	June 2004- October 2006
<b>Pre or Post Preparation work:</b>	Household survey
<b>Number of times presented/yr:</b>	Several workshops and school visits through the year until Fall 2006 unless further funding is available
<b>Partners:</b>	Oregon Department of Environmental Quality, Partnership for the Umpqua Rivers, Douglas County Waste Reduction, and City of Myrtle Creek
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SS.03.3.0.2(1)</b> Understand the purpose of maps, globes, and other geographic tools.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask</p>

	<p>questions or form hypotheses, which can be explored through simple investigations.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SS.05.3.0.1(2)</b> Know and use basic map elements to answer geographic questions or display geographic information.</p> <p><b>SS.05.3.0.2(2)</b> Use maps and charts to interpret geographic information.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.7(1)</b> Identify and give examples of issues related to population increases and decreases.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative impacts of population increases or decreases.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SC.05.1.A.1(1)</b> Identify substances as they exist in different states of matter.</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(1)</b> Describe the ability of matter to change state by heating and cooling.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.3.A.1(5)</b> Recognize that</p>

	<p>discarded products contribute to the problem of waste disposal.</p> <p><b>SC.05.3.A.2(4)</b> Identify causes of Earth surface changes.</p> <p><b>SC.05.3.A.2(5)</b> Identify effects of wind and water on Earth materials using appropriate models.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.4(4)</b> Recognize relationships between the physical and cultural characteristics of a place or region.</p> <p><b>SS.08.3.0.7(2)</b> Identify and give examples of economic, cultural, and environmental factors that influence population.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p> <p><b>SC.08.1.A.1(1)</b> Compare properties of specific substances.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will</p>

	<p>float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.1.A.2(2)</b> Distinguish between examples of chemical changes and physical changes.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(4)</b> Identify factors that affect the rate of evaporation, condensation, and cloud formation.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SS.CIM.3.0.2(2)</b> Use a variety of geographic representations to analyze information and draw conclusions about geographic issues.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.7(1)</b> Analyze and evaluate the impact of economic, cultural or environmental factors that result in changes to population of cities, countries, or regions.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human</p>

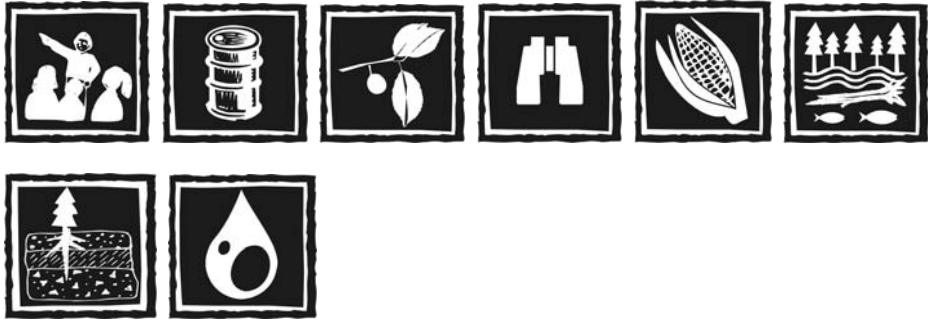
	<p>activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and</p>

	<p>human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Analyze the causes of human migration (e.g., density, food and water supply, transportation and communication systems) and its effects (e.g., impact on physical and human systems).</p> <p><b>CCG:</b> Understand economic, cultural, and environmental factors that influence changes in population, and evaluate the consequences of the resulting increases or decreases in population.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect</p>
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	<p>global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connection to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Agribusiness, Plant Sciences/Horticulture, and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p> <p><b>Health Diagnostic and Therapeutic Services Cluster:</b> Health Promotion and Therapeutic Services</p>
<p><b>Possible Connection to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Listen attentively</p>



	<p>and summarize key elements of verbal and non-verbal communication.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>
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<b>Education Outreach</b>	
<b>Description:</b>	Program responds to requests from the public to provide talks and presentations on a variety of topics (e.g. forestry, wildlife, fisheries, archaeology, etc.)
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	Joe Ross, Supervisory Multi-Resource Specialist 541-464-3248 Joseph_Ross@blm.gov
<b>Location:</b>	classes, clubs, or field locations throughout Douglas County
<b>Target Audience:</b>	K-12 grade, Teachers
<b>Group Size:</b>	Maximum of 50
<b>Program activities:</b>	Field trips/ classroom visits by BLM staff
<b>Cost:</b>	None
<b>Transportation:</b>	Provided by school or organization
<b>Length of time:</b>	Depends on specific program desired
<b>Pre or Post Preparation work:</b>	None needed
<b>Number of times presented/yr:</b>	5-10
<b>Partners:</b>	None
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between</p>

	<p>animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(5)</b> Identify constraints on human activity caused by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SS.08.3.0.4(4)</b> Recognize relationships between the physical and cultural characteristics of a place or region.</p> <p><b>SS.08.3.0.8(6)</b> Understand how climatic events or climate change affect human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>

<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(13)</b> Explain the rock cycle in terms of constructive (crustal deformation, volcanic eruption, and sediment deposition) and destructive (weathering and erosion) forces in land formation.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological</p>

	<p>design to solve problems and meet needs.  <b>CCG:</b> Locate major physical and human (cultural) features of the Earth.  <b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.  <b>CCG:</b> Understand how people and the environment are interrelated.  <b>CCG:</b> Understand the geographic results of resource use and management programs and policies.  <b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Science/Horticulture  <b>Natural Resource Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.  <b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication.  <b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork.  <b>Career Development:</b> Research and analyze career and educational information.</p>



## Learning Opportunities Booklet

<b>Description:</b>	<p>Flexible programs on a variety of topics offered by BLM speakers for schools and clubs—approximately 30 different programs are offered. Topics include:</p> <ul style="list-style-type: none"> <li>• Archeology at North Bank Habitat Area</li> <li>• Fire’s Historic and Present Role on Forest Ecosystems</li> <li>• An Exploration of Water</li> <li>• Fisheries</li> <li>• An Exploration of Soil</li> <li>• An Exploration of Plants</li> <li>• Map and Compass</li> <li>• Math in Forestry</li> <li>• The Butterfly</li> <li>• The Butterfly (Field Session)</li> <li>• The Marvel of Feathers</li> <li>• Wings, Wings, Wings</li> <li>• Neotropical Birds (Field Session)</li> <li>• The Marbled Murrelet</li> <li>• Feet, Feet, Feet, Feet</li> <li>• The Forests of Douglas County</li> <li>• Iridescence: What is it?</li> <li>• In Search of Iridescence (Field Session)</li> <li>• The Del Norte Salamander (Field Session)</li> <li>• Fleas of the Pacific Northwest</li> <li>• Flies Everywhere</li> <li>• Mosquitoes: What good are they?</li> <li>• Silk</li> <li>• Itsi-Bitsi Spider</li> <li>• Wasps: Not as bad as you think, but treat with respect</li> <li>• Animal Skulls, Skins, and Tracks</li> <li>• The China Ditch and Hydraulic Placer Mining in Southern Oregon</li> <li>• Cascadia: Geology from Roseburg to Crater Lake</li> </ul>
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	<p>Joe Ross, Supervisory Multi-Resource Specialist            541-464-3248  <a href="mailto:Joseph_Ross@blm.gov">Joseph_Ross@blm.gov</a></p>
<b>Location:</b>	<p>Programs available for classes, organizations, or field locations throughout Douglas County</p>

<b>Target Audience:</b>	Grades 3-adult
<b>Group Size:</b>	50 maximum (some programs may be appropriate for large assemblies; check with presenter)
<b>Program Activities:</b>	Talks, slide shows, field sessions
<b>Cost:</b>	None
<b>Transportation:</b>	Provided by school or organization
<b>Length of time:</b>	Depends on specific program desired. There is information on each program that details time length at the Bureau of Land Management.
<b>Pre or Post Preparation work:</b>	None needed
<b>Number of times presented/yr:</b>	Year round
<b>Partners:</b>	Agencies, universities, non-profits
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species</p>

	<p>survive.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased</p>



	<p>consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Speak clearly, accurately, and in a manner</p>

	<p>appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Talk About Trees</b>	
<b>Description:</b>	A science-based program that encourages appreciation for trees and forests while explaining principals about protection, management, and conservation of forests. Talk About Trees offers a packet designed to meet state benchmarks and all classroom programs have been correlated to address benchmarks.
<b>Program Offered By:</b>	Oregon Women in Timber (non-profit)
<b>Contact Information:</b>	Paula Yablonski, Facilitator 541-837-3545 paula@rogueriver.net
<b>Location:</b>	Chosen by teacher usually the classroom
<b>Target Audience:</b>	PreK-8
<b>Group Size:</b>	Varies depending on class size
<b>Program Activities:</b>	Indoor presentations, paper-making, group activities, and out-door classroom
<b>Cost:</b>	Free
<b>Transportation:</b>	Not needed because facilitator comes to the school.
<b>Length of time:</b>	Varies depending on program and age group- ranges from 20 minutes to 90 minutes
<b>Pre or Post Preparation work:</b>	Facilitators prepare the materials presented to the class. Teachers must prepare any additional activities for the class that will be performed after the Talk About Trees sessions.
<b>Number of times presented/yr:</b>	Varies upon request (usually up to 3)
<b>Partners:</b>	Oregon Forest Resources Institute
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic needs of living things. <b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics. <b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.

<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Students:</b></p>	<p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes</p>

	<p>from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p>

	<p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand that a model is a tentative scheme or structure with explanatory power.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Natural Resources Cluster:</b> Forestry and Forest Products</p> <p><b>Fire and Emergency Services:</b> Fire Services</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Initiate tasks that need to be done and initiate action to complete tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to</p>

	<p>solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Animal Outreach</b>	
<b>Description:</b>	Education Staff bring animals to schools, organizations, and businesses.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Christine Spencer, Director of Education 541-679-6761x260 <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Varies upon request
<b>Target Audience:</b>	Ages varied
<b>Group Size:</b>	Varies upon request
<b>Program Activities:</b>	Information session and hands-on learning activities
<b>Cost:</b>	Time is charged by the hour and mileage traveled
<b>Transportation:</b>	Wildlife Safari provides their own transportation to the site
<b>Length of time:</b>	1-2 hour presentations (fair booth available)
<b>Pre or Post Preparation work:</b>	Teachers need to call and schedule a representative of Wildlife Safari to come and speak to their class.
<b>Partners:</b>	Varied
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p>



	<p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SS.05.3.0.6(2)</b> Understand how physical geography affects the routes, flow, and destinations of migration.</p> <p><b>SS.05.3.0.7(1)</b> Identify and give examples of issues related to population increases and decreases.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative impacts of population increases or decreases.</p>
<p><b>Possible Connections to Eighth Grade Students:</b></p>	<p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p>

<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p> <p><b>Hospitality and Tourism Cluster:</b> Recreation, Amusements, and Attractions</p>
<p><b>Possible Connections to Career</b></p>	<p><b>Personal Management:</b> Take</p>

**Related Learning Standards:**

responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.

**Communication:** Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.

**Employment Foundations:** Apply academic knowledge and technical skills in a career context.

**Career Development:** Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.



<b>Noon Visits</b>	
<b>Description:</b>	Animal Ambassadors bring animals and artifacts to schools during lunch break.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Christine Spencer, Director of Education 541-679-6761x260 <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Varies upon request
<b>Target Audience:</b>	Ages varied
<b>Group Size:</b>	Varies upon request
<b>Program Activities:</b>	Presentation
<b>Cost:</b>	Time is charged by the hour and mileage traveled.
<b>Transportation:</b>	Provided by Wildlife Safari
<b>Length of time:</b>	1 hour
<b>Pre or Post Preparation work:</b>	Teachers need to call to schedule a presentation for their class.
<b>Partners:</b>	Varied
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific</p>

	<p>habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most</p>

	<p>ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p>

	<p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p>

	<b>CCG:</b> Understand the geographic results of resource use and management programs and policies.
<b>Possible Connections to Oregon Skill Sets:</b>	<b>Agriculture Cluster:</b> Animal Science Systems <b>Natural Resources Management:</b> Fish and Wildlife Resources and Recreation and Cultural Resources <b>Hospitality and Tourism Cluster:</b> Recreation, Amusements, and Attractions
<b>Possible Connections to Career-Related Learning Standards</b>	<b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.





# Exhibits

<b>Diversity Endangered Poster Exhibit</b>	
<b>Description:</b>	Traveling exhibit that examines the causes, consequences, and potential solutions to the loss of biological diversity
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	Joe Ross, Supervisory Multi-Resource Specialist, 541-464-3248 Joseph_Ross@blm.gov
<b>Location:</b>	Available for loan throughout the United States
<b>Target Audience:</b>	6-12 grade, Teachers
<b>Group Size:</b>	N/A; The entire exhibit can serve many people depending on the viewing time frame and promotion.
<b>Program Activities:</b>	Indoor exhibit
<b>Cost:</b>	None
<b>Transportation:</b>	Best if picked up and returned to the BLM Roseburg District office at 777 NW Garden Valley Blvd, Roseburg, OR. If shipping is arranged, the presenter must pay shipping charges.
<b>Length of time:</b>	Varies depending on how long each student takes to read the exhibit.
<b>Pre or Post Preparation work:</b>	Approximately two hours required for set-up and tear-down of the exhibit
<b>Number of times presented/yr:</b>	Varies
<b>Partners:</b>	Agencies, non-profits
<b>Possible Connections to Eighth Grade Standards:</b>	<p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(7)</b> Identify and explain how random variations</p>

	<p>in species can be preserved through natural selection.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem</p> <p><b>SC.CIM.2.C.1(6)</b> Recognize that, over time, natural selection may result in development of a new species or subspecies</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Analyze the causes of human migration (e.g., density, food and water supply, transportation and communication systems) and its effects (e.g., impact on physical and human systems).</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are</p>

	well understood.
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Agriculture Cluster:</b> Agribusiness; Animal Science Systems; Plant Science/Horticulture; and Power, Structure, and Technology</p> <p><b>Environmental Sciences Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Food Science and Processing Cluster:</b> Quality Control, Nutrition, and Research</p> <p><b>Natural Resource Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p> <p><b>Hospitality and Tourism Cluster:</b> Lodging; Recreation, Amusements, and Attractions; and Travel and Tourism</p>
<b>Possible Connections to Career Related Learning Standards:</b>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p>



<b>Discovery Center at World Forestry Center</b>	
<b>Description:</b>	1st floor of the museum shows how forests have systems, structure, and cycles. 2nd floor highlights "People and Forests" and how they interact around the world. There is gallery space devoted to temporary exhibits that explore art, history, and culture from around the world.
<b>Program Offered By:</b>	World Forestry Center (nonprofit educational institution)
<b>Contact Information:</b>	Rick Zen, Education Director 503-488-2103
<b>Location:</b>	Portland
<b>Target Audience:</b>	All ages
<b>Group Size:</b>	Varies (minimum 1:5 chaperone/student ratio for most programs. Students must be accompanied by adults at all times.)
<b>Program Activities:</b>	Indoor activities and exhibits
<b>Cost:</b>	Museum Self-Guided Exploration costs \$3.50 and chaperones are free. There is a \$1 parking fee per vehicle.
<b>Transportation:</b>	Oregon Forest Resources Institute provides transportation funds to support Oregon classroom teachers' forest education efforts.
<b>Length of time:</b>	All day field trip- many presentations are 90 minutes long.
<b>Pre or Post Preparation work:</b>	Teachers wanting transportation reimbursement must make arrangements before going to the museum and reservations to the museum 4-6 weeks in advance. Students and chaperones need to wear name tags to represent their school or group. Lunch is not provided at the museum and food is not permitted inside. There is a picnic area in the adjacent park or reservations for a lunch room can be made in advance.
<b>Number of times presented/yr:</b>	Open all year

<b>Partners:</b>	Timber industry, educational community, and many others
<b>Possible Connections to Third Grade Standards:</b>	<p><b>A.03.2.0.1(1)</b> Recognize essential elements, organizational principles and aesthetic effects in works of art.</p> <p><b>A.03.2.0.2(1)</b> Identify and describe personal preferences connected with viewing or listening to a work of art using terminology that conveys knowledge of the arts.</p> <p><b>A.03.2.0.3(1)</b> Identify the disciplines used in an integrated work of art.</p> <p><b>A.03.3.0.1(1)</b> Identify an event or condition that influenced a work of art.</p> <p><b>A.03.3.0.2(1)</b> Identify social, historical and cultural characteristics in a work of art.</p> <p><b>A.03.3.0.4(1)</b> Describe how the arts serve a variety of purposes in the student's life, community and culture.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how</p>

	<p>peoples' lives are affected by the physical environment.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>A.05.2.0.1(1)</b> Identify essential elements, organizational principles and aesthetic criteria that can be used to analyze works of art.</p> <p><b>A.05.2.0.2(1)</b> Describe personal preferences and identify how essential elements and organizational principles in a work of art contribute to those preferences.</p> <p><b>A.05.2.0.3(1)</b> Describe how essential elements and organizational principles from various arts disciplines are used in an integrated work of art.</p> <p><b>A.05.3.0.1(1)</b> Identify and describe the influence of events and/or conditions on works of art.</p> <p><b>A.05.3.0.2(1)</b> Identify and relate common and unique characteristics in works of art that reflect social, historical, and cultural contexts.</p> <p><b>A.05.3.0.3(1)</b> Describe how works of art from various historic periods reflect the artist's environment, society and culture.</p> <p><b>A.05.3.0.4(1)</b> Describe how the arts serve a variety of purposes and needs in other communities and cultures.</p> <p><b>A.05.3.0.4(2)</b> Describe how the arts have influenced various communities and cultures.</p> <p><b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant</p>

	<p>and animal structures and their functions.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate</p>
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	<p>major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(4)</b> Understand how human activities are affected by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.1(1)</b> Interpret data and chronological relationships presented in timelines and narratives.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>A.08.2.0.1(1)</b> Use knowledge of essential elements, organizational principles and aesthetic criteria to describe works of art and identify how the elements and principles contribute to the aesthetic effect.</p> <p><b>A.08.2.0.2(1)</b> Describe personal preferences for works of art using aesthetic criteria and identify how essential elements and organizational principles contribute to the aesthetic effect.</p> <p><b>A.08.2.0.3(1)</b> Explain the distinctive ways that essential elements and organizational principles from various arts disciplines are used in an integrated work of art and identify their impact on that work.</p> <p><b>A.08.3.0.1(1)</b> Distinguish the influence of events and conditions on works of art.</p> <p><b>A.08.3.0.2(1)</b> Identify and relate works</p>

	<p>of art from different societies, time periods and cultures, emphasizing their common and unique characteristics.</p> <p><b>A.08.3.0.3(1)</b> Explain how works of art from around the world reflect the artist's environment, society and culture.</p> <p><b>A.08.3.0.4(1)</b> Explain how the arts serve a variety of purposes, needs and values in different communities and cultures.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p>
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	<p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.3(1)</b> Identify the location of major mountain ranges, deserts, rivers, cultural regions and countries in the world.</p> <p><b>SS.08.3.0.4(1)</b> Identify and compare physical and human characteristics of major regions and significant places in the world.</p> <p><b>SS.08.3.0.4(3)</b> Identify, locate, and compare the cultural characteristics of places and regions.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.4.A.1(1)</b> Represent and interpret data and chronological relationships from history, using timelines and narratives.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>A.CIM.2.0.1(1)</b> Use knowledge of essential elements, organizational principles and aesthetic criteria to explain the artistic merit and aesthetic effect of a work of art.</p>

	<p><b>A.CIM.2.0.2(1)</b> Explain personal preferences for works of art based on an analysis of how the essential elements and organizational principles contribute to the work's artistic merit.</p> <p><b>A.CIM.2.0.3(1)</b> Explain the roles of essential elements and organizational principles from various arts disciplines in an integrated work of art and identify how they contribute to the aesthetic effect, overall idea and impact of the work.</p> <p><b>A.CIM.3.0.1(1)</b> Explain the influence of events and conditions on an artist's work.</p> <p><b>A.CIM.3.0.2(1)</b> Describe and distinguish works of art from different societies, time periods, and cultures, emphasizing their common and unique characteristics.</p> <p><b>A.CIM.3.0.3(1)</b> Explain how works of art reflect the artist's personal experience, environment, society and culture and apply this knowledge to one's own work.</p> <p><b>A.CIM.3.0.4(1)</b> Explain the connections among the arts, career opportunities, and quality of life in the context of personal, practical, community and cultural needs.</p> <p><b>A.CIM.3.0.4(2)</b> Explain the influence of the arts on human behavior, community life and cultural traditions.</p> <p><b>SC.CIM.2.A.1(2)</b> Describe how biological systems can maintain equilibrium (homeostasis).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how</p>
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	<p>humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.3(1)</b> Locate and identify places, regions, and geographic features that have played prominent roles in historical or contemporary issues and events.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give</p>
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	<p>examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.4.A.1(1)</b> Reconstruct, interpret, and represent the chronology of significant events, developments, and narratives from history.</p> <p><b>SS.CIM.4.A.2(1)</b> Compare and contrast institutions and ideas in history, noting cause and effect relationships.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Apply critical analysis to works of art.</p> <p><b>CCG:</b> Respond to works of art and give reasons for preferences.</p> <p><b>CCG:</b> Understand the interrelationships among art forms.</p> <p><b>CCG:</b> Understand how events and conditions influence the arts.</p> <p><b>CCG:</b> Distinguish works of art from different societies, time periods and cultures.</p> <p><b>CCG:</b> Understand how the arts can reflect the environment and personal experiences within a society or culture, and apply to one's own work.</p> <p><b>CCG:</b> Understand the place of the arts within, and their influences on, society.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p>

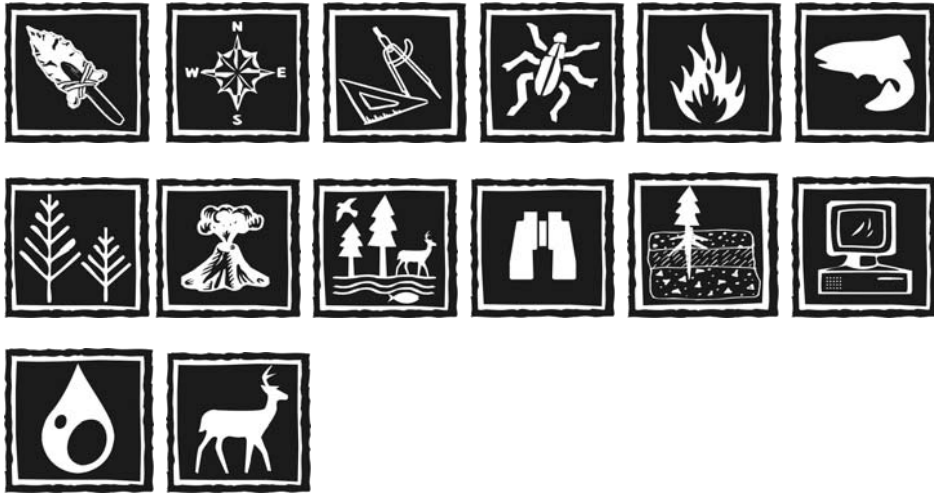
	<p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Interpret and reconstruct chronological relationships.</p> <p><b>CCG:</b> Analyze cause and effect relationships, including multiple causalities.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments within and across eras of world history.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p>

	<p><b>Environmental Services Cluster:</b> Environmental Administration and Planning, Water Quality</p> <p><b>Natural Resources and Management Cluster:</b> Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p> <p><b>Visual, Performing, and Media Arts Cluster:</b> Interactive Media, Visual Arts</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical</p>



	<p>skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Oregon Museum of Science and Industry</b>	
<b>Description:</b>	Scientific, educational, and cultural resource center dedicated to improving the public's understanding of science and technology. OMSI offers exhibits, programs, and experiences that are presented in an entertaining and participatory fashion.
<b>Program Offered By:</b>	Oregon Museum of Science and Industry (non-profit)
<b>Contact Information:</b>	503-797-4661 www.oms.edu
<b>Location:</b>	Portland
<b>Target Audience:</b>	Teachers, students, public
<b>Group Size:</b>	Varies-groups larger than 12 receive discounts
<b>Program Activities:</b>	field trips to the museum, exhibits, reserved labs, science festivals, after school programs, traveling science day camps, teacher workshops, and a planetarium
<b>Cost:</b>	Group rates of 12 students or more \$60. Schools can apply for financial aid through OMSI's Educational Endowment. Schools with 50% or more of their students on free or reduced lunch programs are eligible for financial assistance or contact OMSI at 503-797-4649 to receive a copy by mail.
<b>Transportation:</b>	Must be provided
<b>Length of time:</b>	Varies depending on which program students participate in
<b>Pre or Post Preparation work:</b>	Teachers can all Group Registration at 503-797-4661 between 8am and 4pm, Monday-Friday, fax worksheets to 503-239-7800, mail the completed worksheet to: OMSI/Group Registration, 1945 SE Water Ave., Portland, OR 97214, or email <a href="mailto:groups@oms.edu">groups@oms.edu</a> . Reservations must be made at least 10 days in advance for to be eligible for group rates. Students must bring their own lunch. There is

	an area available for lunch.
<b>Number of times presented/yr:</b>	Open all year
<b>Partners:</b>	Comcast and Southwest.com
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.1.B.1(1)</b> Describe an object's position and how to affect its movement.</p> <p><b>SC.03.1.C.1(1)</b> Identify common types and uses of energy.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.3.B.1(1)</b> Identify and trace the movement of objects in the sky.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.1.A.1(1)</b> Identify substances as they exist in different states of matter.</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among</p>

	<p>solids, liquids, and gases.</p> <p><b>SC.05.1.A.1(3)</b> Identify unique properties of each state of matter.</p> <p><b>SC.05.1.A.2(1)</b> Describe the ability of matter to change state by heating and cooling.</p> <p><b>SC.05.1.A.2(2)</b> Recognize that heating and cooling cause changes in states of matter.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.1.B.1(1)</b> Describe and compare the motion of objects.</p> <p><b>SC.05.1.B.1(2)</b> Recognize and describe the motion of an object in terms of one or more forces acting on it.</p> <p><b>SC.05.1.B.1(3)</b> Identify examples of magnetism and gravity exerting force on an object.</p> <p><b>SC.05.1.B.1(4)</b> Recognize that magnets attract and repel each other and other materials.</p> <p><b>SC.05.1.B.1(5)</b> Recognize that things on or near Earth are pulled toward it by Earth's gravity.</p> <p><b>SC.05.1.C.1(1)</b> Identify forms of various types of energy and their effects on matter.</p> <p><b>SC.05.1.C.1(2)</b> Identify various forms of energy including heat, light, sound, and electricity.</p> <p><b>SC.05.1.C.1(3)</b> Describe examples of energy transfer.</p> <p><b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</p> <p><b>SC.05.1.C.1(6)</b> Identify examples of energy transfer in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p>
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**SC.05.2.A.1(3)** Describe the function of organ systems.

**SC.05.2.A.1(5)** Describe basic plant and animal structures and their functions.

**SC.05.2.A.1(6)** Associate specific structures with their functions in the survival of the organism.

**SC.05.2.B.1(1)** Describe the life cycle of an organism.

**SC.05.2.B.1(2)** Describe the life cycle of common organisms.

**SC.05.2.C.1(1)** Describe the relationship between characteristics of specific habitats and the organisms that live there.

**SC.05.2.C.1(3)** Identify the producers, consumers, and decomposers in a given habitat.

**SC.05.2.C.1(4)** Recognize how all animals depend upon plants whether or not they eat the plants directly.

**SC.05.2.C.1(6)** Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.

**SC.05.3.A.1(1)** Identify properties and uses of Earth materials.

**SC.05.3.A.1(2)** Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.

**SC.05.3.A.1(3)** Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.

**SC.05.3.A.1(4)** Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.

**SC.05.3.A.1(5)** Recognize that discarded products contribute to the problem of waste disposal.

**SC.05.3.A.2(1)** Describe patterns of seasonal weather.

**SC.05.3.A.2(2)** Describe weather in

	<p>measurable quantities including temperature, wind direction, wind speed, and precipitation.</p> <p><b>SC.05.3.A.2(4)</b> Identify causes of Earth surface changes.</p> <p><b>SC.05.3.A.2(6)</b> Identify effects of rapid changes on Earth's surface features including earthquakes and volcanoes.</p> <p><b>SC.05.3.B.1(1)</b> Describe the Earth's place in the solar system and the patterns of movement of objects within the solar system using pictorial models.</p> <p><b>SC.05.3.B.1(2)</b> Describe Earth's position and movement in the solar system.</p> <p><b>SC.05.3.B.1(3)</b> Recognize that the rotation of the Earth on its axis every 24 hours produces the night-and-day cycle.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(1)</b> Compare properties of specific substances.</p> <p><b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.1.A.2(2)</b> Distinguish between</p>

	<p>examples of chemical changes and physical changes.</p> <p><b>SC.08.1.A.2(3)</b> Describe processes that will separate the components of physical mixtures.</p> <p><b>SC.08.1.A.2(4)</b> Describe events that accompany chemical changes, but not physical changes.</p> <p><b>SC.08.1.B.1(1)</b> Explain interactions between force and matter and relationships among force, mass, and motion.</p> <p><b>SC.08.1.B.1(2)</b> Recognize and describe the motion of an object based on its mass and the force exerted on it.</p> <p><b>SC.08.1.B.1(3)</b> Predict the change in direction or speed of an object by changing the forces acting on it.</p> <p><b>SC.08.1.B.1(4)</b> Explain inertia.</p> <p><b>SC.08.1.B.1(5)</b> Recognize that every object exerts gravitational force on every other object.</p> <p><b>SC.08.1.B.1(6)</b> Describe the effect of gravitational force on objects at the Earth's surface.</p> <p><b>SC.08.1.C.1(1)</b> Compare forms and behaviors of various types of energy.</p> <p><b>SC.08.1.C.1(2)</b> Distinguish between the forms of energy including heat, chemical, mechanical, and gravitational potential energy.</p> <p><b>SC.08.1.C.1(3)</b> Describe and explain various energy transfers and resulting transformations.</p> <p><b>SC.08.1.C.1(4)</b> Trace the flow of energy transformations in a system.</p> <p><b>SC.08.1.C.1(5)</b> Explain the principle that energy is conserved, neither created nor destroyed.</p> <p><b>SC.08.1.C.1(6)</b> Identify how technological advances have changed humankind's use of energy.</p> <p><b>SC.08.2.A.1(1)</b> Describe and explain the relationship and interaction of organ systems.</p> <p><b>SC.08.2.A.1(2)</b> Identify organ systems</p>
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at work during a particular activity and describe their effect on each other.

**SC.08.2.A.1(4)** Identify differences and similarities between plant and animal cells.

**SC.08.2.A.1(5)** Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.

**SC.08.2.A.1(6)** Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.

**SC.08.2.B.1(1)** Describe how the traits of an organism are passed from generation to generation.

**SC.08.2.B.1(2)** Distinguish between asexual and sexual reproduction.

**SC.08.2.B.1(3)** Identify traits inherited through genes and those resulting from interactions with the environment.

**SC.08.2.C.1(1)** Identify and describe the factors that influence or change the balance of populations in their environment.

**SC.08.2.C.1(2)** Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.

**SC.08.2.C.1(3)** Identify populations of organisms within an ecosystem by the function that they serve.

**SC.08.2.C.1(4)** Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.

**SC.08.2.C.1(5)** Explain the importance of niche to an organism's ability to avoid direct competition for resources.

**SC.08.2.C.1(6)** Describe and explain the theory of natural selection as a

	<p>mechanism for evolution.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(1)</b> Explain the water cycle and its relationship to weather and climatic patterns.</p> <p><b>SC.08.3.A.2(3)</b> Identify factors that cause or affect weather patterns.</p> <p><b>SC.08.3.A.2(4)</b> Identify factors that affect the rate of evaporation, condensation, and cloud formation.</p> <p><b>SC.08.3.A.2(5)</b> Identify the difference between weather and climate.</p> <p><b>SC.08.3.A.2(8)</b> Recognize the solid Earth is layered with a lithosphere, a hot convecting mantle, and a dense metallic core.</p> <p><b>SC.08.3.A.2(9)</b> Identify the processes that result in different kinds of landforms.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(14)</b> Describe that the total amount of Earth material stays the same as its forms change in the rock cycle.</p> <p><b>SC.08.3.B.1(1)</b> Explain the relationship of the Earth's motion to the day, season, year, phases of the moon, and eclipses.</p> <p><b>SC.08.3.B.1(2)</b> Explain the relationship between the cycle of seasons and the tilt of the Earth on its axis.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and</p>
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	<p>display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.1(1)</b> Describe properties of elements and their relationship to the periodic table.</p> <p><b>SC.CIM.1.A.1(2)</b> Explain atoms and their base components (protons, neutrons, and electrons) as a basis for all matter.</p> <p><b>SC.CIM.1.A.1(3)</b> Read and interpret the periodic table, recognizing the relationship of the chemical and physical properties of the elements to their position on the periodic table.</p> <p><b>SC.CIM.1.A.1(4)</b> Recognize that the historical development of atomic theory demonstrates how scientific knowledge changes over time, and how those changes have had an impact on society.</p> <p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.1.A.2(4)</b> Describe chemical reactions in terms of reactants and products.</p> <p><b>SC.CIM.1.A.2(5)</b> Describe the factors that affect the rate of chemical reactions.</p> <p><b>SC.CIM.1.B.1(1)</b> Describe and explain the effects of multiple forces acting on an object.</p> <p><b>SC.CIM.1.B.1(3)</b> Recognize that equal and opposite forces occur when one object exerts a force on another.</p>

**SC.CIM.1.B.1(5)** Recognize that gravity is a universal force.

**SC.CIM.1.B.1(6)** Describe the relationship of mass and distance to gravitational force.

**SC.CIM.1.C.1(1)** Describe differences and similarities between kinds of waves, including sound, seismic, and electromagnetic, as a means of transmitting energy.

**SC.CIM.1.C.1(4)** Describe and analyze examples of conservation of energy.

**SC.CIM.1.C.1(5)** Recognize that heat energy is a by-product of most energy transformations.

**SC.CIM.1.C.1(6)** Describe ways in which energy can be transferred, including chemical reactions, nuclear reactions, and light waves.

**SC.CIM.1.C.1(7)** Explain the difference between potential and kinetic energy.

**SC.CIM.2.A.1(1)** Describe, explain, and compare the structure and functions of cells in organisms.

**SC.CIM.2.A.1(3)** Identify unique structures in cells from plants, animals, and prokaryotes.

**SC.CIM.2.A.1(6)** Distinguish between active and passive transport, including diffusion and osmosis, explaining the mechanics of each.

**SC.CIM.2.A.1(7)** Describe photosynthesis as a chemical process and part of the carbon cycle.

**SC.CIM.2.A.1(8)** Explain how the development of tools and technology, including microscopes, has aided in the understanding of cells and microbes.

**SC.CIM.2.B.1(1)** Explain laws of heredity and their relationship to the structure and function of DNA.

**SC.CIM.2.B.1(2)** Describe the structure of DNA and the way that DNA functions to control protein

synthesis.

**SC.CIM.2.B.1(4)** Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in organisms.

**SC.CIM.2.B.1(6)** Recognize the existence of technology that can alter and/or determine inherited traits.

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

**SC.CIM.2.C.1(4)** Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.

**SC.CIM.2.C.1(5)** Analyze how living things have changed over geological time, using fossils and other scientific evidence.

**SC.CIM.2.C.1(6)** Recognize that, over time, natural selection may result in development of a new species or subspecies.

**SC.CIM.2.C.1(8)** Explain how biological evolution can account for the diversity of species developed over time.

**SC.CIM.2.C.1(9)** Explain the relationship between genetics, mutations, and biological evolution.

**SC.CIM.2.C.1(10)** Explain how our understanding of evolution has changed over time.

**SC.CIM.3.A.1(1)** Describe how the importance and use of resources has changed over time with changes in economic and technological systems.

**SC.CIM.3.A.1(2)** Predict consequences of increased consumption of renewable and non-

renewable resources.

**SC.CIM.3.A.2(1)** Analyze the relationship between global energy transfer and climate.

**SC.CIM.3.A.2(2)** Describe the effect of various gases in the atmosphere on the amount of energy retained by the Earth system.

**SC.CIM.3.A.2(4)** Describe how differential heating of the Earth's surface, atmosphere, and oceans produces wind and ocean currents.

**SC.CIM.3.A.2(6)** Describe methods of determining ages of rocks and fossils.

**SC.CIM.3.A.2(7)** Use rock sequences and fossil evidence to determine geologic history.

**SC.CIM.3.A.2(9)** Describe how earthquakes, volcanic eruptions, mountain building, and continental movements result from slow plate motions.

**SC.CIM.3.A.2(11)** Identify how volcanic eruptions and impacts of huge rocks from space can cause widespread effects on climate.

**SC.CIM.3.B.1(1)** Explain how mass and distance affect the interaction between Earth and other objects in space.

**SC.CIM.3.B.1(2)** Recognize that the sun's gravitational pull holds the Earth and other planets in their orbits, just as the planets' gravitational pull keeps their moons in orbit around them.

**SC.CIM.3.B.1(3)** Explain that the force of gravity between Earth and other objects in space depends only upon their masses and the distances between them.

**SC.CIM.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.

**SC.CIM.4.B.1(1)** Design a scientific

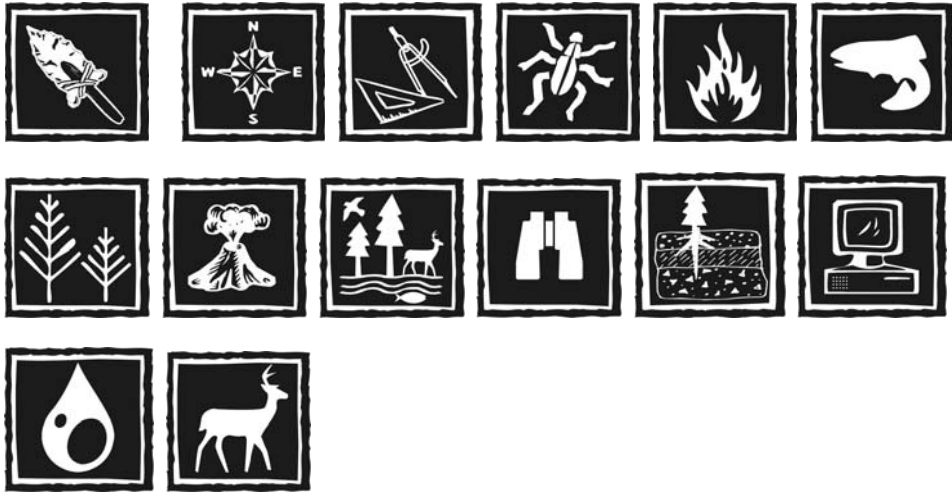
	<p>investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand fundamental forces, their forms, and their effects on motion.</p> <p><b>CCG:</b> Understand energy, its transformations, and interactions with matter.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p> <p><b>CCG:</b> Understand the Earth's place in the solar system and the universe.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection</p>

	<p>of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Sciences/Horticulture, and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Natural Resources Management:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>



	<p><b>Visual, Performing, and Media Arts Cluster:</b> Audio and Video Technologies, Interactive Media, Technical Design and Production, and Visual Arts</p> <p><b>Health Research and Biotechnology:</b> Biotechnology Research and Development</p> <p><b>Engineering Cluster:</b> Aerospace Systems, Bio/Medical Systems, Chemical/Nuclear Systems, Civil and Infrastructure, Industrial/Manufacturing Systems, and Mechanical Systems</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork.</p>

	<p>Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Identify parts of organizations and systems and how they fit together. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal and characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Umpqua Discovery Center</b>	
<b>Description:</b>	The Umpqua Discovery Center is an educational and cultural resource for all ages making active, innovative contributions to preserving the Oregon "Tidewater Community" experience.
<b>Program Offered By:</b>	Umpqua Discovery Center (non-profit)
<b>Contact Information:</b>	Portia Harris 541-271-4816 info@umpquadiscoverycenter.com
<b>Location:</b>	Reedsport
<b>Target Audience:</b>	Public
<b>Group Size:</b>	Varies
<b>Program Activities:</b>	Interactive exhibits and programs focusing on the natural and cultural history of the "Tidewater Country" of the Oregon Coast
<b>Cost:</b>	8 for adults, \$4 for kids ages 6-15, \$7 for seniors
<b>Transportation:</b>	Must be provided
<b>Length of time:</b>	Varies
<b>Pre or Post Preparation work:</b>	Teachers will need to make transportation arrangements and contact the UDC to inform of the size of the group coming to visit. Teachers need to inform UDC of the programs they desire during visit.
<b>Number of times presented/yr:</b>	Open 7 days a week year round except Thanksgiving, Christmas, and New Year's Day
<b>Partners:</b>	Confederated Tribes of Coos, Lower Umpqua, & Siuslaw Indians; USDA Forest Service; Bureau of Land Management; NOAA
<b>Possible Connections to Third Grade Standards:</b>	<b>A.03.3.0.1(1)</b> Identify an event or condition that influenced a work of art. <b>A.03.3.0.3(1)</b> Describe how art from the student's community reflects the artist's environment and culture. <b>A.03.3.0.4(1)</b> Describe how the arts serve a variety of purposes in the student's life, community and culture. <b>A.03.3.0.4(2)</b> Recognize how the arts

	<p>can influence an individual's life.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SS.03.1.0.4(1)</b> Identify rights that people have in their communities.</p> <p><b>SS.03.1.0.5(1)</b> Identify ways that people can participate in their communities and the responsibilities of participation.</p> <p><b>SS.03.1.0.7(1)</b> Distinguish local and world issues.</p> <p><b>SS.03.3.0.2(1)</b> Understand the purpose of maps, globes, and other geographic tools.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p> <p><b>SS.03.4.D.2(1)</b> Understand events from local history.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>A.05.3.0.1(1)</b> Identify and describe the influence of events and/or conditions on works of art.</p> <p><b>A.05.3.0.2(1)</b> Identify and relate common and unique characteristics in works of art that reflect social, historical, and cultural contexts.</p> <p><b>A.05.3.0.4(1)</b> Describe how the arts serve a variety of purposes and needs in</p>

	<p>other communities and cultures.</p> <p><b>A.05.3.0.4(2)</b> Describe how the arts have influenced various communities and cultures.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SS.05.1.0.5(1)</b> Understand how citizens can learn about public issues.</p> <p><b>SS.05.3.0.1(1)</b> Define basic geography vocabulary such as concepts of location, direction, distance, scale, movement, and region using appropriate words and diagrams.</p> <p><b>SS.05.3.0.1(2)</b> Know and use basic map elements to answer geographic questions or display geographic information.</p> <p><b>SS.05.3.0.2(2)</b> Use maps and charts to interpret geographic information.</p> <p><b>SS.05.3.0.2(3)</b> Use other visual representations to locate, identify, and distinguish physical and human features of places and regions.</p> <p><b>SS.05.3.0.3(1)</b> Locate and identify on maps the continents of the world, the 50 states of the United States, and the major physical features of Oregon.</p>
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	<p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.6(1)</b> Identify patterns of migration and cultural interaction in the United States.</p> <p><b>SS.05.3.0.6(3)</b> Explain how migrations affect the culture of emigrants and native populations.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative impacts of population increases or decreases.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.1(1)</b> Interpret data and chronological relationships presented in timelines and narratives.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p> <p><b>SS.05.4.A.3(1)</b> Understand how history can be organized using themes, geography, or chronology.</p> <p><b>SS.05.4.D.1(1)</b> Understand how individuals changed or significantly influenced the course of Oregon state history.</p> <p><b>SS.05.4.D.2(1)</b> Understand how individuals changed or significantly influenced the course of local history.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>A.08.3.0.1(1)</b> Distinguish the influence of events and conditions on works of art.</p> <p><b>A.08.3.0.2(1)</b> Identify and relate works of art from different societies, time periods and cultures, emphasizing their common and unique characteristics.</p>

	<p><b>A.08.3.0.3(1)</b> Explain how works of art from around the world reflect the artist's environment, society and culture.</p> <p><b>A.08.3.0.4(1)</b> Explain how the arts serve a variety of purposes, needs and values in different communities and cultures.</p> <p><b>A.08.3.0.4(2)</b> Explain the influence of the arts on individuals, communities and cultures in various time periods.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SS.08.3.0.1(2)</b> Use maps, charts, and graphs to understand patterns of movement over time and space.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.6(3)</b> Recognize and identify patterns of migration streams in U.S. history.</p> <p><b>SS.08.3.0.7(1)</b> Identify economic, cultural, and environmental factors that affect population, and predict how the population would change as a result.</p>
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	<p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.4.A.1(1)</b> Represent and interpret data and chronological relationships from history, using timelines and narratives.</p> <p><b>SS.08.4.A.1(2)</b> Compare and contrast historical interpretations.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.</p> <p><b>SS.08.4.D.1(1)</b> Understand how various groups of people were affected by events and developments in Oregon state history.</p> <p><b>SS.08.4.D.1(3)</b> Understand the interactions and contributions of the various people and cultures that have lived in or migrated to the area that is now Oregon from post-American Revolution until 1900.</p> <p><b>SS.08.4.D.2(1)</b> Understand the lasting influence of events and developments in local history.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p>
<b>Possible Connections to CIM</b>	<b>A.CIM.3.0.1(1)</b> Explain the influence of



**Standards:**

events and conditions on an artist's work.

**A.CIM.3.0.2(1)** Describe and distinguish works of art from different societies, time periods, and cultures, emphasizing their common and unique characteristics.

**A.CIM.3.0.3(1)** Explain how works of art reflect the artist's personal experience, environment, society and culture and apply this knowledge to one's own work.

**A.CIM.3.0.4(1)** Explain the connections among the arts, career opportunities, and quality of life in the context of personal, practical, community and cultural needs.

**A.CIM.3.0.4(2)** Explain the influence of the arts on human behavior, community life and cultural traditions.

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

**SC.CIM.2.C.1(5)** Analyze how living things have changed over geological time, using fossils and other scientific evidence.

**SC.CIM.3.A.1(1)** Describe how the importance and use of resources has changed over time with changes in economic and technological systems.

**SC.CIM.3.A.2(6)** Describe methods of determining ages of rocks and fossils.

**SC.CIM.3.A.2(7)** Use rock sequences and fossil evidence to determine geologic history.

**SC.CIM.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.

**SS.CIM.1.0.5(1)** Understand the civic responsibilities of U.S. citizens and how they are met.

**SS.CIM.1.0.5(2)** Identify the

	<p>responsibilities of citizens in the United States and understand what an individual can do to meet these responsibilities.</p> <p><b>SS.CIM.3.0.3(1)</b> Locate and identify places, regions, and geographic features that have played prominent roles in historical or contemporary issues and events.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.7(1)</b> Analyze and evaluate the impact of economic, cultural or environmental factors that result in changes to population of cities, countries, or regions.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.4.A.1(1)</b> Reconstruct, interpret, and represent the chronology of significant events, developments, and narratives from history.</p> <p><b>SS.CIM.4.A.1(4)</b> Interpret timelines, charts and graphs illustrating chronological relationships.</p> <p><b>SS.CIM.4.D.2(1)</b> Understand the causes, characteristics and impact, and lasting influence of political, economic, and social developments in local history.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p>
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	<p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand how events and conditions influence the arts.</p> <p><b>CCG:</b> Understand how the arts can reflect the environment and personal experiences within a society or culture, and apply to one's own work.</p> <p><b>CCG:</b> Understand the place of the arts within, and their influences on, society.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand participatory responsibilities of citizens in the community (voluntarism) and in the political process (becoming informed about public issues and candidates,</p>

	<p>joining political parties/interest groups/associations, communicating with public officials, voting, influencing lawmaking through such processes as petitions/initiatives).</p> <p><b>CCG:</b> Understand the spatial concepts of location, distance, direction, scale, movement, and region.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand economic, cultural, and environmental factors that influence changes in population, and evaluate the consequences of the resulting increases or decreases in population.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Interpret and reconstruct chronological relationships.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments in the history of one's family, local community, and culture.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and</p>

	Recreation and Cultural Resources <b>Visual, Performing and Media Arts Cluster:</b> Interactive Media and Visual Arts
<b>Possible Connections to Career-Related Learning Standards:</b>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Read technical/instructional materials for information and apply to specific tasks.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>



<b>Oregon Dunes National Recreation Area</b>	
<b>Description:</b>	Small visitor display about the dunes ecosystem and a small theater for films. Limited staffing; with advance notice they may be able to arrange for special presentations.
<b>Program Offered By:</b>	Siuslaw National Forest (agency)
<b>Contact Information:</b>	Siuslaw National Forest 541-271-6000
<b>Location:</b>	From Florence to Coos Bay, the Oregon Dunes extends for 40 miles along the Oregon Coast
<b>Target Audience:</b>	Public
<b>Group Size:</b>	Varies
<b>Program Activities:</b>	Displays and films
<b>Cost:</b>	Free
<b>Transportation:</b>	Must be provided
<b>Length of time:</b>	Varies
<b>Pre or Post Preparation work:</b>	For those not located near the ODNRA transportation arrangements will need to be made as well as inform students to bring their own lunches. Calls to local Forest Service employees will need to be made to arrange guest speakers to present to the class.
<b>Number of times presented/yr:</b>	Varies
<b>Partners:</b>	None
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SS.03.1.0.5(1)</b> Identify ways that people can participate in their communities and the responsibilities of participation.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare</p>

	<p>them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.2(4)</b> Identify causes of Earth surface changes.</p> <p><b>SC.05.3.A.2(5)</b> Identify effects of wind and water on Earth materials using appropriate models.</p> <p><b>SC.05.3.A.2(6)</b> Identify effects of rapid changes on Earth's surface features including earthquakes and volcanoes.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SS.05.1.0.5(1)</b> Understand how citizens can learn about public issues.</p> <p><b>SS.05.1.0.5(2)</b> Identify and give examples of resources that provide information about public issues.</p> <p><b>SS.05.3.0.3(1)</b> Locate and identify on maps the continents of the world, the</p>



	<p>50 states of the United States, and the major physical features of Oregon.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(4)</b> Identify factors that affect the rate of evaporation, condensation, and cloud formation.</p> <p><b>SC.08.3.A.2(9)</b> Identify the processes that result in different kinds of landforms.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(13)</b> Explain the rock cycle in terms of constructive (crustal deformation, volcanic eruption, and</p>

	<p>sediment deposition) and destructive (weathering and erosion) forces in land formation.</p> <p><b>SC.08.3.A.2(14)</b> Describe that the total amount of Earth material stays the same as its forms change in the rock cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SS.08.3.0.4(4)</b> Recognize relationships between the physical and cultural characteristics of a place or region.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p>

	<p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(4)</b> Describe how differential heating of the Earth's surface, atmosphere, and oceans produces wind and ocean currents.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific</p>

	<p>knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Science/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems</p>

	<p>and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Read technical/instructional materials for information and apply to specific tasks.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>
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# **Outdoor Educational Opportunities**

<b>Glide Middle School Partnership</b>	
<b>Description:</b>	Water Quality Monitoring Awareness Program at 5 different sites in Little River Watershed
<b>Program Offered By:</b>	United States Forest Service and Bureau of Land Management (agencies)
<b>Contact Information:</b>	USFS: Steve Hofford 541-957-3361 <a href="mailto:shofford@fs.fed.us">shofford@fs.fed.us</a>  BLM: Dan Dammann 541-464-3287 <a href="mailto:Dan_Dammann@or.blm.gov">Dan_Dammann@or.blm.gov</a>  <a href="http://www.handsontheland.org/profiles/profile_details.cfm?sitecode=rose">http://www.handsontheland.org/profiles/profile_details.cfm?sitecode=rose</a>
<b>Location:</b>	Little River Watershed near Glide, OR
<b>Target Audience:</b>	8th grade students at Glide Middle School
<b>Group Size:</b>	1 group of approximately 8-10 students goes out each week students (including 2 student leaders) goes out each week; student leaders provide instruction
<b>Program Activities:</b>	Outdoor water quality monitoring program
<b>Cost:</b>	The transportation is a cost to the school (driver's time and fuel)
<b>Transportation:</b>	Provided by Glide Middle School bus drivers
<b>Length of time:</b>	Two hours each week during the students' science class
<b>Pre or Post Preparation work:</b>	Post: Students download water quality data from field instrument then FAX results to BLM
<b>Number of times presented/yr:</b>	One introductory presentation; data collected once a week
<b>Partners:</b>	USFS, BLM Hands on the Land program as Partners in Resource Education
<b>Possible Connections to Eighth Grade Standards:</b>	<b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density. <b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water. <b>SC.08.3.A.2(2)</b> Explain the water cycle. <b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.

	<p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG: Forming the Question/Hypothesis:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG: Designing the Investigation:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG: Collecting and Presenting Data:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG: Analyzing Data and Interpreting Results:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG: Understand that any collection of things that have an influence on one another can be thought of as a system.</b></p> <p><b>CCG: Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</b></p> <p><b>CCG: Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</b></p> <p><b>CCG: Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</b></p> <p><b>CCG: Understand the relationship that exists between science and technology.</b></p> <p><b>CCG: Understand the process of technological design to solve problems and meet needs.</b></p> <p><b>CCG: Define and clarify an issue so that its dimensions are well understood.</b></p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Environmental Services Cluster:</b> Waste Water and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management and Fish and Wildlife Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p>



	<p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Identify parts of organizations and systems and how they fit together. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Alder Creek Children's Forest</b>	
<b>Description:</b>	Students develop recommendations for managing forests by consulting with woodland owners, professional foresters, and industrial foresters. The program is student-based terrestrial and aquatic inventory of the Alder-Jordan Creek watershed, intended to establish a baseline for watershed management, restoration, and monitoring.
<b>Program Offered By:</b>	Alder Creek Children's Forest (non-profit)
<b>Contact Information:</b>	ACCF Office at 541-839-4379 Alan Baumann, Site Manager, at 541-957-3446 <a href="mailto:abaumann@fs.fed.us">abaumann@fs.fed.us</a> <a href="http://aldercreek.org/about/index.html">http://aldercreek.org/about/index.html</a>
<b>Location:</b>	Accessed from I-5 in southern Douglas County 1 mile west of Canyonville-Riddle Road in the 2300 acre Alder-Jordan Creek watershed
<b>Target Audience:</b>	6-12 grade, Teachers
<b>Group Size:</b>	Small group size 5-10, large group size 25-30
<b>Program Activities:</b>	Outdoor study, field research, instructional stations, games, teacher workshop, Fall Forum, and Spring Forest Fair
<b>Cost:</b>	None
<b>Transportation:</b>	OFRI can provide transportation reimbursement
<b>Length of time:</b>	Full day
<b>Pre or Post Preparation work:</b>	Teachers need to apply for transportation reimbursement and call to make schedule arrangements.
<b>Number of times presented/yr:</b>	At least 12 on a monthly basis-2nd Fridays Try to provide each student in south county to come and visit at least once every school year. The Fall Forum is in October and Spring Forest Fair is in May.
<b>Partners:</b>	USFS, Cow Creek Band (Umpqua Tribe), others-Hands on the Land site, BLM
<b>Possible Connections to Eighth Grade Standards:</b>	<b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment. <b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs. <b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve. <b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources. <b>SC.08.2.C.1(8)</b> Describe how animal and plant structures

	<p>adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.3(1)</b> Locate and identify on maps and globes the regions of the world and their prominent physical features.</p> <p><b>SS.08.3.0.4(4)</b> Recognize relationships between the physical and cultural characteristics of a place or region.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources</p>

	<p>and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Forming the Question/Hypothesis: Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Designing the Investigation: Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Collecting and Presenting Data: Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p>

	<p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Environmental Science Cluster:</b> Environmental Administration and Planning and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p>

**Career Development:** Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.



<b>Douglas County School Forestry Tour</b>	
<b>Description:</b>	Tour that introduces 5 <sup>th</sup> graders to forest management and products, tree identification, wildlife, fisheries, fire, and archaeology
<b>Program Offered By:</b>	OSU Extension Office (university)
<b>Contact Information:</b>	Elissa Wells, Forestry Instructor 541-672-4461 Elissa.Wells@oregonstate.edu
<b>Location:</b>	Glide Educational Forest at Glide Transfer Site
<b>Target Audience:</b>	5th grade students
<b>Group Size:</b>	14-30 students
<b>Program Activities:</b>	Field trips, hands-on learning, other highly interactive instruction methods, and booklet of supplemental classroom activities
<b>Cost:</b>	None
<b>Transportation:</b>	Oregon Forest Resource Institute (OFRI) reimburses bus costs
<b>Length of time:</b>	9:30am-2pm
<b>Pre or Post Preparation work:</b>	30 minute pre-preparation work: contacting OSU Extension to register, bus arrangements, and other logistics. There are optional pre/post activity ideas to use with the classes that can be used for up to 10 hours of instruction, if desired.
<b>Number of times presented/yr:</b>	2nd week of May
<b>Partners:</b>	Agencies, non-profits, colleges, businesses
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p>

	<p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(5)</b> Identify constraints on human activity caused by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are</p>



	well understood.
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<b>Possible Connections to Career Related Learning Standards:</b>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication.</p> <p><b>Teamwork:</b> Demonstrate skills that improve team effectiveness.</p>



<b>Aquatic and Angler Education Program</b>	
<b>Description:</b>	<p>The goal of the program is to provide youth with an understanding of aquatic ecosystems and to develop the skills, knowledge, and responsibilities associated with angling. The program emphasizes four major areas of instruction which include:</p> <ul style="list-style-type: none"> <li>• Basic Fishing Skills</li> <li>• Aquatic Conservation and Stewardship</li> <li>• Ethical Conduct and Responsibilities</li> <li>• Water Safety</li> </ul>
<b>Program Offered By:</b>	Oregon Department of Fish and Wildlife (agency)
<b>Contact Information:</b>	Laura Jackson 541-440-3353 <a href="mailto:laura.s.jackson@state.or.us">laura.s.jackson@state.or.us</a>
<b>Location:</b>	
<b>Target Audience:</b>	Public and Youth
<b>Group Size:</b>	
<b>Program Activities:</b>	Instructional Curriculum, Teaching Materials, Student Manuals, Equipment, and Teaching Aids
<b>Cost:</b>	Free
<b>Transportation:</b>	
<b>Length of time:</b>	
<b>Pre or Post Preparation work:</b>	Teachers need to call to schedule a visit.
<b>Number of times presented/yr:</b>	Available upon request
<b>Partners:</b>	School districts, Boys and Girls Clubs, Police Activity Leagues, Parks and Recreation Departments
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p>

	<p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>
<p><b>Possible Connections to Fifth Grades Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by</p>

	human activities.
<b>Possible Connections to Eighth Grade Standards:</b>	<p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p>
<b>Possible Connections to CIM Standards:</b>	<p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with</p>

	<p>the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand how people and the</p>

	environment are interrelated.
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Environmental Sciences Cluster:</b> Water Quality</p> <p><b>Natural Resource Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p>
<b>Possible Connections to Career Related Learning Standards:</b>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational</p>

and career goals.



## Eastwood Elementary Outdoor Education Program

<b>Description:</b>	An outdoor education area that provides conservation education for students and the community.
<b>Program Offered By:</b>	Eastwood Elementary School (school)
<b>Contact Information:</b>	Jill Weber, Principal 541-440-4180 x224 <a href="mailto:jweber@roseburg.k12.or.us">jweber@roseburg.k12.or.us</a>
<b>Location:</b>	Eastwood Elementary School
<b>Target Audience:</b>	K-5 students and public
<b>Group Size:</b>	Varies depending on class size
<b>Program Activities:</b>	Outdoor classrooms and labs, fish hatchery, nature trails, and observation classrooms
<b>Cost:</b>	Free
<b>Transportation:</b>	Group must provide
<b>Length of time:</b>	One half to full day programs
<b>Pre or Post Preparation work:</b>	Provided upon request
<b>Number of times presented/yr:</b>	Available all year
<b>Partners:</b>	ODFW, Umpqua Fishermen's Association, Project Leadership, Umpqua Community College, Roseburg High School
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the</p>



	<p>results.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask</p>

	<p>questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Forming the Question/Hypothesis: Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Designing the Investigation: Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Collecting and Presenting Data: Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyzing Data and Interpreting Results: Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p>

	<p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Environmental Science Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal</p>

	<p>communication. Give and receive feedback in a positive manner. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>
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<b>Mildred Kanipe Memorial Park</b>	
<b>Description:</b>	Students learn how to restore the park by tree planting, noxious weed control, trail reconstruction, wetland restoration, and stream bank stabilization. There is a discussion/background history and students typically go on an interpretive hike looking at past restoration efforts and potential future projects or ecological points of interest.
<b>Program Offered By:</b>	Douglas County Soil and Water Conservation District (agency)
<b>Contact Information:</b>	Jim Lee, Project Manager 541-957-5061 jim.lee@oacd.org
<b>Location:</b>	Mildred Kanipe Memorial Park
<b>Target Audience:</b>	Students in 3-12 grade
<b>Group Size:</b>	Varies depending on classroom size
<b>Program Activities:</b>	Restoration instruction and hands-on learning experience
<b>Cost:</b>	Free
<b>Transportation:</b>	The class usually provides their own transportation, although the District may be able to provide some compensation.
<b>Length of time:</b>	All day
<b>Pre or Post Preparation work:</b>	There is no formal pre or post lesson plan required although the OSU extension video and article called, "Life on the edge, improving riparian function," is a good introduction for students.
<b>Number of times presented/yr:</b>	All year with different groups
<b>Partners:</b>	EPA and Title 3 Grant; 10 Community Groups
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic needs of living things. <b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there. <b>SC.03.2.C.1(2)</b> Identify how some

	<p>animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.2(1)</b> Understand the purpose of maps, globes, and other geographic tools.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p>

**SC.05.2.C.1(3)** Identify the producers, consumers, and decomposers in a given habitat.

**SC.05.2.C.1(6)** Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.

**SC.05.3.A.1(1)** Identify properties and uses of Earth materials.

**SC.05.3.A.1(2)** Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.

**SC.05.3.A.1(3)** Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.

**SC.05.3.A.1(4)** Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.

**SC.05.3.A.1(5)** Recognize that discarded products contribute to the problem of waste disposal.

**SC.05.4.A.1(1)** Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.

**SC.05.4.B.1(1)** Design a simple scientific investigation to answer questions or test hypotheses.

**SC.05.4.C.1(1)** Collect, organize, and summarize data from investigations.

**SC.05.4.D.1(1)** Summarize, analyze, and interpret data from investigations.

**SS.05.3.0.1(2)** Know and use basic map elements to answer geographic questions or display geographic information.

**SS.05.3.0.2(1)** Examine and understand how to prepare maps, charts, and other visual representations to locate places and interpret geographic information.

**SS.05.3.0.2(3)** Use other visual representations to locate, identify, and

	<p>distinguish physical and human features of places and regions.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(4)</b> Understand how human activities are affected by the physical environment.</p> <p><b>SS.05.3.0.8(5)</b> Identify constraints on human activity caused by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p>



	<p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(11)</b> Give examples of landform changes that occur at different rates.</p> <p><b>SC.08.3.A.2(13)</b> Explain the rock cycle in terms of constructive (crustal deformation, volcanic eruption, and sediment deposition) and destructive (weathering and erosion) forces in land formation.</p> <p><b>SC.08.3.A.2(14)</b> Describe that the total amount of Earth material stays the same as its forms change in the rock cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human</p>
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	<p>modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans</p>

	<p>and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of</p>
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error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.

**SS.CIM.3.0.1(1)** Understand and use geographic information using a variety of scales, patterns of distribution, and arrangement.

**SS.CIM.3.0.1(2)** Understand the advantages and disadvantages of using various geographic representations to depict and solve geographic problems.

**SS.CIM.3.0.2(1)** Interpret and evaluate information using complex geographic representations.

**SS.CIM.3.0.8(1)** Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.

**SS.CIM.3.0.8(2)** Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.

**SS.CIM.3.0.8(3)** Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.

**SS.CIM.3.0.8(4)** Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.

**SS.CIM.3.0.8(5)** Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.

**SS.CIM.5.0.1(1)** Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.

**SS.CIM.5.0.3(1)** Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.

**SS.CIM.5.0.4(1)** Analyze an event,

	<p>issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Forming the Question/Hypothesis: Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Designing the Investigation: Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Collecting and Presenting Data: Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyzing Data and Interpreting Results: Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and</p>

	<p>technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Agribusiness, Plant Science/Horticulture, and Power, Structure, and Technology.</p> <p><b>Environmental Sciences Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality.</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest</p>

	<p>Products, Geology and Mineral Industries, and Recreation and Cultural Resources.</p> <p><b>Construction Cluster:</b> Construction, Design/Pre-Construction, and Maintenance/Operations.</p> <p><b>Engineering Cluster:</b> Architectural Systems, Civil and Infrastructure Systems, and Mechanical Systems.</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is</p>

	<p>important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Asses personal characteristics related to educational and career goals. Research and analyze career and educational information. Demonstrate job-seeking skills.</p>
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## Learning Opportunities Booklet

<b>Description:</b>	<p>Flexible programs on a variety of topics offered by BLM speakers for schools and clubs—approximately 30 different programs are offered. Topics include:</p> <ul style="list-style-type: none"> <li>• Archeology at North Bank Habitat Area</li> <li>• Fire’s Historic and Present Role on Forest Ecosystems</li> <li>• An Exploration of Water</li> <li>• Fisheries</li> <li>• An Exploration of Soil</li> <li>• An Exploration of Plants</li> <li>• Map and Compass</li> <li>• Math in Forestry</li> <li>• The Butterfly</li> <li>• The Butterfly (Field Session)</li> <li>• The Marvel of Feathers</li> <li>• Wings, Wings, Wings</li> <li>• Neotropical Birds (Field Session)</li> <li>• The Marbled Murrelet</li> <li>• Feet, Feet, Feet, Feet</li> <li>• The Forests of Douglas County</li> <li>• Iridescence: What is it?</li> <li>• In Search of Iridescence (Field Session)</li> <li>• The Del Norte Salamander (Field Session)</li> <li>• Fleas of the Pacific Northwest</li> <li>• Flies Everywhere</li> <li>• Mosquitoes: What good are they?</li> <li>• Silk</li> <li>• Itsi-Bitsi Spider</li> <li>• Wasps: Not as bas as you think, but treat with respect</li> <li>• Animal Skulls, Skins, and Tracks</li> <li>• The China Ditch and Hydraulic Placer Mining in Southern Oregon</li> <li>• Cascadia: Geology from Roseburg to Crater Lake</li> </ul>
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	<p>Joe Ross, Supervisory Multi-Resource Specialist            541-464-3248            Joseph_Ross@blm.gov</p>
<b>Location:</b>	<p>Programs available for classes, organizations, or field locations throughout Douglas County</p>

<b>Target Audience:</b>	Grades 3-adult
<b>Group Size:</b>	50 maximum (some programs may be appropriate for large assemblies; check with presenter)
<b>Program Activities:</b>	Talks, slide shows, field sessions
<b>Cost:</b>	None
<b>Transportation:</b>	Provided by school or organization
<b>Length of time:</b>	Depends on specific program desired. There is information on each program that details time length at the Bureau of Land Management.
<b>Pre or Post Preparation work:</b>	None needed
<b>Number of times presented/yr:</b>	Year round
<b>Partners:</b>	Agencies, universities, non-profits
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species</p>

	<p>survive.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased</p>

	<p>consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Speak clearly, accurately, and in a manner</p>

appropriate for the intended audience when giving oral instructions, technical reports, and business communications.

**Teamwork:** Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.

**Employment Foundations:** Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.

**Career Development:** Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.



<b>Oregon Natural Resources Research Institute</b>	
<b>Description:</b>	Goal of the program is to increase the interest and enthusiasm that students have for the study of math and science, through interaction with professionals in a variety of scientific disciplines. The program is meant to be a resource that aids students in reaching the benchmarks set forth in the state standards of science.
<b>Program Offered By:</b>	Oregon Natural Resources Research Institute (non-profit)
<b>Contact Information:</b>	Bob Craft 541-680-7938, bcraft@smotis.com  Lenny Schussel 541-679-4997 lenny@howdt.com
<b>Location:</b>	Statewide
<b>Target Audience:</b>	All students
<b>Group Size:</b>	Up to 25, 5-10 optimum
<b>Program Activities:</b>	Research projects, visiting lecturer, and online school enrichment knowledge base
<b>Cost:</b>	Free to Douglas County School age youth
<b>Transportation:</b>	Worked out through school transportation provider.
<b>Length of time:</b>	Semester or full year
<b>Pre or Post Preparation work:</b>	Teacher referral
<b>Number of times presented/yr:</b>	Available upon request
<b>Partners:</b>	Touch A Life Learning Partnership, Wildlife Safari, BLM, Wolf Creek Job Corps, and other organizations
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties. <b>SC.03.1.A.2(1)</b> Describe changes that occur in matter. <b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic

	<p>needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.A.1(1)</b> Identify substances as they exist in different states of matter.</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.1(3)</b> Identify unique properties of each state of matter.</p> <p><b>SC.05.1.A.2(1)</b> Describe the ability of matter to change state by heating and cooling.</p> <p><b>SC.05.1.A.2(2)</b> Recognize that heating and cooling cause changes in states of matter.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p>

	<p><b>SC.05.2.B.1(2)</b> Describe the life cycle of common organisms.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.3.A.1(5)</b> Recognize that discarded products contribute to the problem of waste disposal.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer</p>
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	<p>questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(1)</b> Compare properties of specific substances.</p> <p><b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.1.A.2(2)</b> Distinguish between examples of chemical changes and physical changes.</p> <p><b>SC.08.1.A.2(3)</b> Describe processes that will separate the components of physical mixtures.</p> <p><b>SC.08.1.A.2(4)</b> Describe events that accompany chemical changes, but not physical changes.</p> <p><b>SC.08.1.A.2(5)</b> Explain how our understanding of the nature of matter and chemical reactions has changed over time.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is</p>

	<p>the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.1(1)</b> Describe properties of elements and their relationship to the periodic table.</p> <p><b>SC.CIM.1.A.1(2)</b> Explain atoms and their base components (protons,</p>

	<p>neutrons, and electrons) as a basis for all matter.</p> <p><b>SC.CIM.1.A.1(3)</b> Read and interpret the periodic table, recognizing the relationship of the chemical and physical properties of the elements to their position on the periodic table.</p> <p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.1.A.2(4)</b> Describe chemical reactions in terms of reactants and products.</p> <p><b>SC.CIM.1.A.2(5)</b> Describe the factors that affect the rate of chemical reactions.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.B.1(4)</b> Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in organisms.</p> <p><b>SC.CIM.2.B.1(6)</b> Recognize the existence of technology that can alter and/or determine inherited traits.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the</p>
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	<p>balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(7)</b> Recognize that natural selection and its evolutionary consequences provide an explanation for the fossil record as well as an explanation for the molecular similarities among varied species.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and</p>

	<p>physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global</p>
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	<p>issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Sciences/Horticulture, and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p> <p><b>Information and Communications Technology (ICT) Cluster:</b> Information Support and Services and Programming and Software Development</p> <p><b>Computer Systems Cluster:</b> Network Systems, Software Engineering, and Telecommunications</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.</p>

	<p>Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Write instructions, technical reports, and business communications clearly and accurately. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain appropriate tools and technologies appropriate for the workplace. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information. Demonstrate job-seeking</p>
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skills.





<b>Natural Resource Education Program</b>	
<b>Description:</b>	Classes include earth science, freshwater macroinvertebrates, chemical water quality monitoring, wetlands invasive species and remediation, forestry, and stream studies.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Christine Spencer, Director of Education 541-679-6761x260 <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Wildlife Safari
<b>Target Audience:</b>	High school students
<b>Group Size:</b>	Varies depending on class size
<b>Program Activities:</b>	Field-trip service
<b>Cost:</b>	Free--transport & equipment included
<b>Transportation:</b>	Provided by Wildlife Safari
<b>Length of time:</b>	All Day
<b>Pre or Post Preparation work:</b>	Teachers need to contact Wildlife Safari to set up program at their school.
<b>Number of times presented/yr:</b>	Varies depending on response from schools.
<b>Partners:</b>	Bureau of Land Management
<b>Possible Connections to CIM Standards:</b>	<p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.1.A.2(4)</b> Describe chemical reactions in terms of reactants and products.</p> <p><b>SC.CIM.1.A.2(5)</b> Describe the factors that affect the rate of chemical reactions.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of</p>

	<p>changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(1)</b> Analyze the relationship between global energy transfer and climate.</p> <p><b>SC.CIM.3.A.2(2)</b> Describe the effect of various gases in the atmosphere on the amount of energy retained by the Earth system.</p> <p><b>SC.CIM.3.A.2(3)</b> Describe how solar radiation and the amount that reaches Earth is affected by stratospheric ozone.</p> <p><b>SC.CIM.3.A.2(4)</b> Describe how differential heating of the Earth's surface, atmosphere, and oceans produces wind and ocean currents.</p> <p><b>SC.CIM.3.A.2(5)</b> Analyze evidence of ongoing evolution of the Earth system.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.3.A.2(9)</b> Describe how earthquakes, volcanic eruptions, mountain building, and continental movements result from slow plate motions.</p>
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	<p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the relationships among living things and between living</p>

	<p>things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p>
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	<p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Identify and analyze an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Write instructions, technical reports, and business communications clearly and accurately.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply</p>

	<p>academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Describe the changing nature of work, workplaces, and work processes on individuals, organizations, and systems.</p> <p>Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p> <p>Explain and follow health and safety practices in the work environment.</p> <p>Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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The ZooSchool	
<b>Description:</b>	School groups enjoy visiting the Wildlife Safari for scientific field trips. The Education Department gives guided tours for students and teachers. As the groups travel through the entire park, the staff relates each individual species and habitat to the lesson being learned in the students' class. If the group is small, events such as Sika Deer feeds, Hippo feeds, or Elephant encounters are offered. Each class also gets the opportunity to touch our Education animal ambassadors and receive a private presentation.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Christine Spencer, Director of Education 541-679-6761x260 <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Wildlife Safari
<b>Target Audience:</b>	Ages 4-12
<b>Group Size:</b>	20 maximum
<b>Program Activities:</b>	Tour and live show
<b>Cost:</b>	\$6.00 per student \$4.00 for members
<b>Transportation:</b>	Not available
<b>Length of time:</b>	All day
<b>Pre or Post Preparation work:</b>	None
<b>Number of times presented/yr:</b>	All year
<b>Partners:</b>	Varied
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p>
<b>Possible Connections to Fifth</b>	<b>SC.05.2.C.1(1)</b> Describe the relationship

<p><b>Grade Standards:</b></p>	<p>between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems</p> <p><b>Natural Resources Management Cluster:</b> Fish and Wildlife Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Employment Foundations:</b> Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>





<b>Jackson Bottoms Wetland Preserve</b>	
<b>Description:</b>	Offers a wide range of educational programs for all ages. A new Wetlands Education Center provides interactive exhibits, indoor multipurpose classroom, volunteer works space, and restrooms.
<b>Program Offered By:</b>	Jackson Bottoms Wetland Preserve
<b>Contact Information:</b>	Sarah Pinnock 503-681-6278 <a href="mailto:sarahp@ci.hillsboro.or.us">sarahp@ci.hillsboro.or.us</a>
<b>Location:</b>	Hillsboro, OR
<b>Target Audience:</b>	Grades K-12
<b>Group Size:</b>	Varies depending on class size
<b>Program Activities:</b>	Active participatory learning opportunities
<b>Cost:</b>	Call for rates.
<b>Transportation:</b>	Oregon Forest Resources Institute (OFRI) may provide busing to those who apply.
<b>Length of time:</b>	All Day
<b>Pre or Post Preparation work:</b>	Teachers need to apply for buses through OFRI, make other travel arrangements, and other logistics associated with field trips at their school.
<b>Number of times presented/yr:</b>	All year M-S 10am-4pm
<b>Partners:</b>	OFRI
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p>

**SC.03.4.A.1(1)** Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.

**SC.03.4.B.1(1)** Plan a simple investigation.

**SC.03.4.C.1(1)** Collect data from an investigation.

**SC.03.4.D.1(1)** Use the data collected from an investigation to explain the results.

**SS.03.3.0.3(1)** Identify major physical features and describe how they are represented on maps, globes, and other tools.

**SS.03.3.0.4(1)** Identify physical characteristics of places and compare them.

**SS.03.5.0.1(1)** Identify an issue or problem that can be studied.

**SS.03.5.0.2(1)** Gather information relating to an issue or problem.

**SS.03.5.0.4(1)** Identify how people or other living things might be affected by an event, issue, or problem.

**E.03.1.C.1(1)** Read regular words with several syllables.

**E.03.1.D.1(1)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.

**E.03.1.E.1(1)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read

	<p>stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.2(1)</b> Describe patterns of seasonal weather.</p>

**SC.05.4.A.1(1)** Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.

**SC.05.4.B.1(1)** Design a simple scientific investigation to answer questions or test hypotheses.

**SC.05.4.C.1(1)** Collect, organize, and summarize data from investigations.

**SC.05.4.D.1(1)** Summarize, analyze, and interpret data from investigations.

**SS.05.3.0.1(1)** Define basic geography vocabulary such as concepts of location, direction, distance, scale, movement, and region using appropriate words and diagrams.

**SS.05.3.0.3(4)** Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.

**SS.05.3.0.8(1)** Understand how physical environments are affected by human activities.

**SS.05.3.0.8(2)** Understand how and why people alter the physical environment.

**SS.05.3.0.8(3)** Describe how human activity can impact the environment.

**SS.05.3.0.8(5)** Identify constraints on human activity caused by the physical environment.

**SS.05.3.0.8(6)** Understand how the physical environment presents opportunities for economic and recreational activity.

**E.05.1.F.1(2)** Use the features of informational texts, such as formats, graphics, diagrams, illustrations, charts, maps, and organizational devices to find information and support understanding.

**E.05.1.F.1(4)** Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).

	<p><b>E.05.3.L.1(1)</b> Write research reports about ideas, issues, or events:</p> <ul style="list-style-type: none"> <li>• Frame questions that direct the investigation.</li> <li>• Establish a main idea or topic.</li> <li>• Use a variety of information sources, including firsthand interviews, reference materials, and electronic resources to locate information to support the topic.</li> <li>• Cite references appropriately.</li> </ul>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth</p>

	<p>materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(6)</b> Explain how geography affects climate.</p> <p><b>SC.08.3.A.2(9)</b> Identify the processes that result in different kinds of landforms.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.1(1)</b> Understand fundamental geography vocabulary such as concepts of distance, latitude, longitude, interdependence, accessibility, and connections.</p> <p><b>SS.08.3.0.2(2)</b> Use maps, charts, graphs, and photographs to analyze spatial distributions and patterns.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment</p>
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	<p>affect human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.G.1(2)</b> Clarify understanding of informational texts by creating detailed outlines, graphic organizers, diagrams, logical notes, or summaries.</p> <p><b>E.08.3.L.1(1)</b> Write research reports:</p> <ul style="list-style-type: none"> <li>• Specify a thesis.</li> <li>• Use a variety of primary and secondary sources, and distinguish the nature and value of each.</li> <li>• Include important ideas, concepts, and direct quotations from significant information sources, and paraphrase and summarize different perspectives on the topic, as appropriate.</li> <li>• Organize and display information on charts, tables, maps, and graphs.</li> <li>• Document sources.</li> </ul>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process</p>



and part of the carbon cycle.

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

**SC.CIM.2.C.1(4)** Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.

**SC.CIM.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.

**SC.CIM.4.B.1(1)** Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.

**SC.CIM.4.C.1(1)** Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.

**SC.CIM.4.D.1(1)** Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.

**SS.CIM.3.0.2(1)** Interpret and evaluate information using complex geographic representations.

**SS.CIM.3.0.8(4)** Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.

**SS.CIM.3.0.8(5)** Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.

**E.CIM.1.F.1(1)** Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines;

	<p>essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>E.CIM.1.G.1(1)</b> Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.</p> <p><b>E.CIM.3.L.1(1)</b> Write analytical essays and research reports:</p> <ul style="list-style-type: none"> <li>• Gather evidence in support of a thesis, including information on all relevant perspectives.</li> <li>• Convey information and ideas from primary and secondary sources accurately and coherently.</li> <li>• Make distinctions between the relative value and significance of specific data, facts, and ideas.</li> <li>• Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.</li> <li>• Anticipate and address readers' potential misunderstandings, biases, and expectations.</li> <li>• Use technical terms and notations accurately.</li> <li>• Document sources.</li> </ul>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living</p>

	<p>things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the spatial concepts of location, distance, direction, scale, movement, and region.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the</p>
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	<p>environment are interrelated.</p> <p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Demonstrate general understanding of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Write narrative, expository, and persuasive texts, using a variety of written forms—including journals, essays, short stories, poems, research reports, research papers, business and technical writing—to express ideas appropriate to audience and purpose across the subject areas.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Environmental Planning and Administration and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to</p>

	<p>solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Larch Mountain Environmental Education Site</b>	
<b>Description:</b>	This forest site contains old-growth characteristics with Douglas fir and western hemlock along with younger planted trees. There is a trailhead with limited parking, a vault type restroom, designated trails and 2 open-air, 24-foot shelters with picnic tables. This site is in a primitive, natural setting and can be used for habitat, stream, soils, and forest ecology activities. Staff assistance is available for planning and developing science-based field trips, or you can plan your own activities.
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	Scott Brayton Bureau of Land Management 503-375-5638 <a href="mailto:scott_brayton@or.blm.gov">scott_brayton@or.blm.gov</a>  <a href="http://www.or.blm.gov/salem/html/rec/larch.htm">www.or.blm.gov/salem/html/rec/larch.htm</a>
<b>Location:</b>	Corbett, OR
<b>Target Audience:</b>	Grades K-12
<b>Group Size:</b>	Varies depending on size of class
<b>Program activities:</b>	Field trip, outdoor program
<b>Cost:</b>	Free
<b>Transportation:</b>	OFRI may provide busing to those who apply.
<b>Length of time:</b>	Varies depending on activities
<b>Pre or Post Preparation work:</b>	Teachers need to apply for busing through OFRI and make reservations to use the outdoor classroom area.
<b>Number of times presented/yr:</b>	Varies
<b>Partners:</b>	OFRI
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.03.1.D.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Draw upon a variety of

	<p>comprehension strategies as needed-re-reading, self-correcting, summarizing, class and group discussions, generating and responding to essential questions, making predictions, and comparing information from several sources.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>
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	<p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship</p>



	<p>between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(1)</b> Examine and understand how to prepare maps, charts, and other visual representations to locate places and interpret geographic information.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and</p>
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	<p>recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and</p>

	<p>chemical changes.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment</p>
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	<p>in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.E.1(7)</b> Understand technical vocabulary in subject area reading.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p>

	<p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.2(2)</b> Use a variety of geographic representations to analyze information and draw conclusions about geographic issues.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue,</p>
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	<p>problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p>

	<p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular</p>

	<p>attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Port Blakely Tree Farms</b>	
<b>Description:</b>	Offers an interactive forestry experience in which students identify trees, observe signs of wildlife, investigate tree growth, and hunt for insects as they traverse an ADA accessible trail. The trail features a variety of forest types including a plantation, riparian area, and mature forest. Picnic shelter and restrooms available.
<b>Program Offered By:</b>	Port Blakely (private company)
<b>Contact Information:</b>	Cindy Quam 503-399-8085 <a href="mailto:cquam@portblakely.com">cquam@portblakely.com</a>
<b>Location:</b>	Molalla, OR
<b>Target Audience:</b>	Grades 3-6
<b>Group Size:</b>	Varies depending on size of class
<b>Program activities:</b>	Field trip, outdoor program
<b>Cost:</b>	Free
<b>Transportation:</b>	OFRI may provide busing to those who apply.
<b>Length of time:</b>	Varies depending on activities
<b>Pre or Post Preparation work:</b>	Teachers need to apply for busing through OFRI and make reservations to use the outdoor classroom area.
<b>Number of times presented/yr:</b>	Varies
<b>Partners:</b>	OFRI
<b>Possible Connections to Third Grade Standards:</b>	<p><b>E.03.1.C.1(1)</b> Read regular words with several syllables.</p> <p><b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.03.1.D.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Draw upon a variety of comprehension strategies as needed-re-reading, self-correcting, summarizing, class and group discussions, generating and responding to essential questions, making predictions, and comparing information</p>

from several sources.

**E.03.1.E.1(1)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards)

Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.

**E.03.1.F.1(1)** Read written directions, signs, captions, warning labels, and informational books.

**SC.03.1.A.1(1)** Describe objects according to their physical properties.

**SC.03.1.A.2(1)** Describe changes that occur in matter.

**SC.03.2.A.1(1)** Recognize characteristics that are similar and different between organisms.

**SC.03.2.A.1(2)** Describe the basic needs of living things.

**SC.03.2.B.1(1)** Describe how related plants and animals have similar characteristics.

**SC.03.2.C.1(1)** Describe a habitat and the organisms that live there.

**SC.03.2.C.1(2)** Identify how some animals gather and store food, defend themselves, and find shelter.

**SC.03.3.A.1(1)** Recognize physical differences in Earth materials.

**SC.03.4.A.1(1)** Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.

**SC.03.4.B.1(1)** Plan a simple investigation.

**SC.03.4.C.1(1)** Collect data from an investigation.

**SC.03.4.D.1(1)** Use the data collected from an investigation to explain the results.

**SS.03.3.0.4(1)** Identify physical

	<p>characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their</p>

	<p>functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(1)</b> Examine and understand how to prepare maps, charts, and other visual representations to locate places and interpret geographic information.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical</p>
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	<p>environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address</p>

	<p>questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management</b></p>

	<p><b>Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>





<b>Science in the Forest</b>	
<b>Description:</b>	Comprehensive experiential science inquiry education program that uses the forest to deepen and enliven science curriculum with cutting edge classroom activities and rigorous, hands-on outdoor field studies. The educational goal is to accommodate the full range of learning abilities, cultures, and ages through a flexible science program that actively engages participants in the science inquiry process. Students are challenged to use their creative and critical higher order thinking skills, cultivate interest and skills in science and math.
<b>Program Offered By:</b>	Wolfree Inc. (non-profit)
<b>Contact Information:</b>	Wolfree 503-239-1820 <a href="mailto:wolfree@beoutside.com">wolfree@beoutside.com</a>
<b>Location:</b>	Northwest and Central Oregon
<b>Target Audience:</b>	Grades 5-12
<b>Group Size:</b>	Varies depending on size of class
<b>Program activities:</b>	Field trip, outdoor program
<b>Cost:</b>	Free
<b>Transportation:</b>	OFRI may provide busing to those who apply.
<b>Length of time:</b>	Varies depending on activities
<b>Pre or Post Preparation work:</b>	Teachers need to apply for busing through OFRI.
<b>Number of times presented/yr:</b>	Varies
<b>Partners:</b>	OFRI
<b>Possible Connections to Fifth Grade Standards:</b>	<b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational

text, literary text, and instruction across the subject areas.

**E.05.1.F.1(4)** Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).

**SC.05.1.A.1(2)** Distinguish among solids, liquids, and gases.

**SC.05.1.A.2(3)** Identify changes in states of matter seen in the environment.

**SC.05.2.A.1(1)** Group or classify organisms based on a variety of characteristics.

**SC.05.2.A.1(2)** Classify a variety of living things into groups using various characteristics.

**SC.05.2.A.1(5)** Describe basic plant and animal structures and their functions.

**SC.05.2.C.1(1)** Describe the relationship between characteristics of specific habitats and the organisms that live there.

**SC.05.2.C.1(3)** Identify the producers, consumers, and decomposers in a given habitat.

**SC.05.2.C.1(4)** Recognize how all animals depend upon plants whether or not they eat the plants directly.

**SC.05.2.C.1(6)** Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.

**SC.05.3.A.1(1)** Identify properties and uses of Earth materials.

**SC.05.3.A.1(3)** Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.

**SC.05.4.A.1(1)** Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.

**SC.05.4.B.1(1)** Design a simple

	<p>scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(1)</b> Examine and understand how to prepare maps, charts, and other visual representations to locate places and interpret geographic information.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly</p>

identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.

**E.08.1.E.1(1)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards)

Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.

**E.08.1.F.1(1)** Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.

**SC.08.1.A.1(3)** Recognize that substances may be grouped by their physical properties.

**SC.08.1.A.1(4)** Use the concept of density to evaluate which objects will float or sink in water.

**SC.08.1.A.2(1)** Compare physical and chemical changes.

**SC.08.2.A.1(6)** Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.

**SC.08.2.B.1(1)** Describe how the traits of an organism are passed from generation to generation.

**SC.08.2.C.1(2)** Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.

**SC.08.2.C.1(3)** Identify populations of organisms within an ecosystem by the function that they serve.

**SC.08.2.C.1(5)** Explain the importance of niche to an organism's ability to avoid direct competition for resources.

**SC.08.2.C.1(8)** Describe how animal and plant structures adapt to environmental change.

**SC.08.3.A.2(2)** Explain the water cycle.

**SC.08.3.A.2(10)** Identify factors affecting water flow, soil erosion, and deposition.

**SC.08.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.

**SC.08.4.B.1(1)** Design a scientific investigation to answer questions or test hypotheses.

**SC.08.4.C.1(1)** Collect, organize, and display sufficient data to support analysis.

**SC.08.4.D.1(1)** Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.

**SS.08.3.0.2(1)** Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.

**SS.08.3.0.8(1)** Understand how human modification of the physical environment in a place affects both that place and other places.

**SS.08.3.0.8(3)** Understand how clearing vegetation affects the physical environment of a place and other places.

**SS.08.3.0.8(7)** Predict how changes in an ecosystem (not caused by human activity) might influence human activity.

**SS.08.5.0.1(1)** Clarify key aspects of an event, issue, or problem through

	<p>inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.E.1(7)</b> Understand technical vocabulary in subject area reading.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on</p>

observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.

**SC.CIM.4.B.1(1)** Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.

**SC.CIM.4.C.1(1)** Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.

**SC.CIM.4.D.1(1)** Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.

**SS.CIM.3.0.2(2)** Use a variety of geographic representations to analyze information and draw conclusions about geographic issues.

**SS.CIM.3.0.8(1)** Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.

**SS.CIM.3.0.8(2)** Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.

**SS.CIM.3.0.8(4)** Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.

**SS.CIM.3.0.8(5)** Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.

**SS.CIM.5.0.1(1)** Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.

**SS.CIM.5.0.3(1)** Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.

	<p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in</p>



	<p>the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take</p>

responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.

**Problem Solving:** Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.

**Communication:** Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.

**Teamwork:** Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.

**Employment Foundations:** Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.

**Career Development:** Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.



<b>Environmental Education Programs</b>	
<b>Description:</b>	Environmental education programs that teach environmental and biological subjects that meet bench marks set by the state and include subjects such as habitat, tracking, birds, aquatic life, insects, watershed ecology, pollination, plant adaptation, journaling, and more.
<b>Program Offered By:</b>	Oregon Garden (non-profit)
<b>Contact Information:</b>	Fran Gray, Environmental Education Coordinator 503-874-8248  <a href="http://www.oregongarden.org/index.html">http://www.oregongarden.org/index.html</a>
<b>Location:</b>	Silverton, OR
<b>Target Audience:</b>	K-12 students, home groups
<b>Group Size:</b>	Varies depending on class
<b>Program activities:</b>	Hands-on learning, outdoor activities, field trip
<b>Cost:</b>	\$60 per program (1.5 hours), \$3 per student admission into garden, and chaperones are admitted free. There is a 5th grade grant program available to all 5th grade classes in OR. The grant covers transportation, cost of program, cost of admission into garden, and bus driver for one visit a year.
<b>Transportation:</b>	Must be provided by schools except 5th grade grant winners.
<b>Length of time:</b>	Programs range from 45-90 minutes
<b>Pre or Post Preparation work:</b>	Teachers need to register for a program and make travel arrangements
<b>Number of times presented/yr:</b>	Open all year except holidays
<b>Partners:</b>	City of Silverton, private companies, and non-profits
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of

	<p>the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p> <p><b>E.03.1.D.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Point to or clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.03.1.D.1(5)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Read longer selections and books independently.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>E.03.1.F.1(3)</b> Interpret information from diagrams, charts, and graphs.</p> <p><b>E.03.1.G.1(4)</b> Summarize major points from informational text.</p> <p><b>E.03.1.H.1(3)</b> Ask how, why, and what-if questions in interpreting informational texts.</p> <p><b>E.03.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing, use diagrams and charts to develop ideas, and make a list or notebook of ideas.</p> <p><b>E.03.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of</p>
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	<p>the standards) With some guidance, use all aspects of the writing process (e.g., prewriting, drafting, conferencing, revising, editing) in producing compositions and reports.</p> <p><b>E.03.3.A.1(7)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Present and discuss own writing with other students, and respond helpfully to other students' compositions.</p> <p><b>E.03.3.B.1(1)</b> Write appropriately for purpose and audience.</p> <p><b>E.03.3.B.1(2)</b> Create a single paragraph with a topic sentence, simple supporting facts and details, and a concluding sentence.</p> <p><b>E.03.3.B.1(3)</b> Use vivid adjectives and action verbs.</p> <p><b>E.03.3.B.1(5)</b> Write correctly complete sentences of statement, command, question or exclamation.</p> <p><b>E.03.3.C.1(7)</b> Notice when words are not correct, and use a variety of strategies to correct (e.g., word lists, dictionary).</p> <p><b>E.03.3.D.1(1)</b> Use subjects and verbs that are in agreement (we are instead of we is).</p> <p><b>E.03.3.G.1(1)</b> Write legibly in cursive and manuscript, leaving space between letters in a word, words in a sentence, and between words and the edges of the paper.</p> <p><b>E.03.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical</p>
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	<p>differences in Earth materials.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p> <p><b>SS.03.4.D.2(1)</b> Understand events from local history.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.2(1)</b> Gather information relating to an issue or problem.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Students:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry,</p>

	<p>magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(1)</b> Read textbooks, biographical sketches, letters, diaries, directions, procedures, magazines, news stories, and almanacs.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>E.05.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.05.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.</p> <p><b>E.05.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose—personal letter, letter to the editor, review,</p>
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	<p>poem, report, or narrative.</p> <p><b>E.05.3.A.1(9)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections of specific errors.</p> <p><b>E.05.3.B.1(6)</b> To achieve clarity of meaning and to enhance flow and rhythm, correctly use prepositional phrases, appositives, main clauses, and subordinate clauses.</p> <p><b>E.05.3.D.1(3)</b> Ensure that verbs agree with their subjects.</p> <p><b>E.05.3.G.1(1)</b> Write legibly in cursive or manuscript.</p> <p><b>E.05.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and</p>
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	<p>nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.2(1)</b> Describe patterns of seasonal weather.</p> <p><b>SC.05.3.A.2(5)</b> Identify effects of wind and water on Earth materials using appropriate models.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.6(1)</b> Identify patterns of migration and cultural interaction in the United States.</p> <p><b>SS.05.3.0.6(2)</b> Understand how physical geography affects the routes, flow, and destinations of migration.</p> <p><b>SS.05.3.0.6(3)</b> Explain how migrations affect the culture of emigrants and native populations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents</p>
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	<p>opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p> <p><b>SS.05.4.A.3(1)</b> Understand how history can be organized using themes, geography, or chronology.</p> <p><b>SS.05.4.C.1(3)</b> Understand the impact of early European exploration on Native Americans and on the land.</p> <p><b>SS.05.4.D.1(1)</b> Understand how individuals changed or significantly influenced the course of Oregon state history.</p> <p><b>SS.05.4.D.2(1)</b> Understand how individuals changed or significantly influenced the course of local history.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key</p>

	<p>skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.G.1(1)</b> Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.</p> <p><b>E.08.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.</p> <p><b>E.08.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.08.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose—personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.08.3.A.1(9)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections of specific errors.</p>
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	<p><b>E.08.3.B.1(4)</b> Use descriptive language that clarifies and enhances ideas by establishing tone and mood through figurative language, sensory images, and comparisons.</p> <p><b>E.08.3.B.1(5)</b> To present a lively and effective personal style, use varied sentence types (simple, compound, complex, and compound-complex) and sentence openings.</p> <p><b>E.08.3.C.1(1)</b> Use correct spelling conventions.</p> <p><b>E.08.3.D.1(1)</b> Use consistent verb tenses.</p> <p><b>E.08.3.D.1(2)</b> Correctly use frequently misused words (e.g., among, between; fewer, less; bring, take; and good, well).</p> <p><b>E.08.3.F.1(1)</b> Use correct capitalization.</p> <p><b>E.08.3.G.1(1)</b> Write legibly.</p> <p><b>E.08.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the</p>
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	<p>function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(1)</b> Explain the water cycle and its relationship to weather and climatic patterns.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.6(3)</b> Recognize and identify patterns of migration streams in U.S. history.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.</p> <p><b>SS.08.4.C.1(4)</b> Understand the effects of 19th century westward migration, the idea</p>
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	<p>of Manifest Destiny, European immigration, and rural to urban migration on indigenous populations and newcomers in the United States.</p> <p><b>SS.08.4.D.1(1)</b> Understand how various groups of people were affected by events and developments in Oregon state history.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions;</p>

	<p>consumer, workplace, and public documents.</p> <p><b>E.CIM.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.CIM.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.CIM.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose—personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.CIM.3.B.1(3)</b> Use precise language, action verbs, sensory details, and appropriate modifiers.</p> <p><b>E.CIM.3.C.1(1)</b> Produce writing that shows accurate spelling.</p> <p><b>E.CIM.3.D.1(3)</b> Demonstrate an understanding of proper English usage, including the consistent use of verb tenses and forms.</p> <p><b>E.CIM.3.G.1(1)</b> Write legibly.</p> <p><b>E.CIM.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.CIM.2.A.1(3)</b> Identify unique structures in cells from plants, animals, and prokaryotes.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans</p>
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	<p>and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.4.D.1(1)</b> Understand the causes, characteristics, and impact of political, economic, and social developments in Oregon state history.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently</p>



	<p>across the subject areas.</p> <p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Pre-write, draft, revise, edit, and publish across the subject areas.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Analyze the causes of human migration (e.g., density, food and water supply, transportation and communication</p>
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	<p>systems) and its effects (e.g., impact on physical and human systems).</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments within and across eras of U.S. history.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills</p>

	<p>that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Rediscovery Forest Education Program</b>	
<b>Description:</b>	The Rediscovery Forest is a demonstration forest that gives students hands-on opportunities to engage in activities involving tree biology, wildlife habitat, plant identification and forest ecology and management in the Oregon Garden Rediscovery Forest. A wide range of forestry topics are available to meet individual classroom needs. The forestry program is structured to meet Oregon Department of Education benchmarks and content standards.
<b>Program Offered By:</b>	Oregon Garden (non-profit)
<b>Contact Information:</b>	Julie Woodward 503-874-8265 <a href="mailto:woodward@ofri.com">woodward@ofri.com</a>  <a href="http://www.oregongarden.org/index.html">http://www.oregongarden.org/index.html</a>
<b>Location:</b>	Silverton, OR
<b>Target Audience:</b>	K-12 students, home groups, etc.
<b>Group Size:</b>	Varies depending on class
<b>Program activities:</b>	Hands-on learning, outdoor activities, field trip
<b>Cost:</b>	OFRI covers the program cost, admission to the Garden, and transportation costs. Participants must submit a request form and an additional transportation reimbursement form. After a review of applications, participants will be contacted with details of their trip.
<b>Transportation:</b>	Participants may be reimbursed for their travel. Participants must submit a transportation reimbursement form.
<b>Length of time:</b>	Varies depending on program
<b>Pre or Post Preparation work:</b>	Teachers need to register for a program and make travel arrangements.
<b>Number of times presented/yr:</b>	Open all year except holidays
<b>Partners:</b>	The Oregon Garden, Chemeketa Community College, private companies, non-profits, and municipalities
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables.

	<p><b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p> <p><b>E.03.1.D.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Point to or clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.03.1.D.1(5)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Read longer selections and books independently.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>E.03.1.F.1(3)</b> Interpret information from diagrams, charts, and graphs.</p> <p><b>E.03.1.G.1(4)</b> Summarize major points from informational text.</p> <p><b>E.03.1.H.1(3)</b> Ask how, why, and what-if questions in interpreting informational texts.</p> <p><b>E.03.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key</p>
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	<p>skills that support classroom instruction of the standards) Discuss ideas for writing, use diagrams and charts to develop ideas, and make a list or notebook of ideas.</p> <p><b>E.03.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) With some guidance, use all aspects of the writing process (e.g., prewriting, drafting, conferencing, revising, editing) in producing compositions and reports.</p> <p><b>E.03.3.A.1(7)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Present and discuss own writing with other students, and respond helpfully to other students' compositions.</p> <p><b>E.03.3.B.1(1)</b> Write appropriately for purpose and audience.</p> <p><b>E.03.3.B.1(2)</b> Create a single paragraph with a topic sentence, simple supporting facts and details, and a concluding sentence.</p> <p><b>E.03.3.B.1(3)</b> Use vivid adjectives and action verbs.</p> <p><b>E.03.3.B.1(5)</b> Write correctly complete sentences of statement, command, question or exclamation.</p> <p><b>E.03.3.C.1(7)</b> Notice when words are not correct, and use a variety of strategies to correct (e.g., word lists, dictionary).</p> <p><b>E.03.3.D.1(1)</b> Use subjects and verbs that are in agreement (we are instead of we is).</p> <p><b>E.03.3.G.1(1)</b> Write legibly in cursive and manuscript, leaving space between letters in a word, words in a sentence, and between words and the edges of the paper.</p> <p><b>E.03.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar</p>
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	<p>characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p> <p><b>SS.03.4.D.2(1)</b> Understand events from local history.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.2(1)</b> Gather information relating to an issue or problem.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Students:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p>

	<p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(1)</b> Read textbooks, biographical sketches, letters, diaries, directions, procedures, magazines, news stories, and almanacs.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>E.05.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.05.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and</p>
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	<p>collaboratively.</p> <p><b>E.05.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose- personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.05.3.A.1(9)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections of specific errors.</p> <p><b>E.05.3.B.1(6)</b> To achieve clarity of meaning and to enhance flow and rhythm, correctly use prepositional phrases, appositives, main clauses, and subordinate clauses.</p> <p><b>E.05.3.D.1(3)</b> Ensure that verbs agree with their subjects.</p> <p><b>E.05.3.G.1(1)</b> Write legibly in cursive or manuscript.</p> <p><b>E.05.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p>
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	<p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.2(1)</b> Describe patterns of seasonal weather.</p> <p><b>SC.05.3.A.2(5)</b> Identify effects of wind and water on Earth materials using appropriate models.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.6(1)</b> Identify patterns of migration and cultural interaction in the United States.</p> <p><b>SS.05.3.0.6(2)</b> Understand how physical geography affects the routes, flow, and destinations of migration.</p> <p><b>SS.05.3.0.6(3)</b> Explain how migrations affect the culture of emigrants and native populations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human</p>
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	<p>activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p> <p><b>SS.05.4.A.3(1)</b> Understand how history can be organized using themes, geography, or chronology.</p> <p><b>SS.05.4.C.1(3)</b> Understand the impact of early European exploration on Native Americans and on the land.</p> <p><b>SS.05.4.D.1(1)</b> Understand how individuals changed or significantly influenced the course of Oregon state history.</p> <p><b>SS.05.4.D.2(1)</b> Understand how individuals changed or significantly influenced the course of local history.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key</p>

	<p>skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.G.1(1)</b> Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.</p> <p><b>E.08.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.</p> <p><b>E.08.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.08.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose—personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.08.3.A.1(9)</b> Skill To Support the Standard: (For the purpose of noting key</p>
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	<p>skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections of specific errors.</p> <p><b>E.08.3.B.1(4)</b> Use descriptive language that clarifies and enhances ideas by establishing tone and mood through figurative language, sensory images, and comparisons.</p> <p><b>E.08.3.B.1(5)</b> To present a lively and effective personal style, use varied sentence types (simple, compound, complex, and compound-complex) and sentence openings.</p> <p><b>E.08.3.C.1(1)</b> Use correct spelling conventions.</p> <p><b>E.08.3.D.1(1)</b> Use consistent verb tenses.</p> <p><b>E.08.3.D.1(2)</b> Correctly use frequently misused words (e.g., among, between; fewer, less; bring, take; and good, well).</p> <p><b>E.08.3.F.1(1)</b> Use correct capitalization.</p> <p><b>E.08.3.G.1(1)</b> Write legibly.</p> <p><b>E.08.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from</p>
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	<p>interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(1)</b> Explain the water cycle and its relationship to weather and climatic patterns.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.6(3)</b> Recognize and identify patterns of migration streams in U.S. history.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical</p>
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	<p>environment of a place and other places.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.</p> <p><b>SS.08.4.C.1(4)</b> Understand the effects of 19th century westward migration, the idea of Manifest Destiny, European immigration, and rural to urban migration on indigenous populations and newcomers in the United States.</p> <p><b>SS.08.4.D.1(1)</b> Understand how various groups of people were affected by events and developments in Oregon state history.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the</p>

	<p>subject areas.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.CIM.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.CIM.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose—personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.CIM.3.B.1(3)</b> Use precise language, action verbs, sensory details, and appropriate modifiers.</p> <p><b>E.CIM.3.C.1(1)</b> Produce writing that shows accurate spelling.</p> <p><b>E.CIM.3.D.1(3)</b> Demonstrate an understanding of proper English usage, including the consistent use of verb tenses and forms.</p> <p><b>E.CIM.3.G.1(1)</b> Write legibly.</p> <p><b>E.CIM.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.CIM.2.A.1(3)</b> Identify unique structures in cells from plants, animals, and prokaryotes.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p>
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	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.4.D.1(1)</b> Understand the causes, characteristics, and impact of political, economic, and social developments in Oregon state history.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and</p>
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	<p>both short- and long-term effects.  <b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.  <b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.  <b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.  <b>CCG:</b> Pre-write, draft, revise, edit, and publish across the subject areas.  <b>CCG:</b> Understand the characteristics, structure, and functions of organisms.  <b>CCG:</b> Understand the transmission of traits in living things.  <b>CCG:</b> Understand the relationships among living things and between living things and their environments.  <b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.  <b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.  <b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.  <b>CCG:</b> Analyze scientific information to develop and present conclusions.  <b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.  <b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.  <b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.  <b>CCG:</b> Describe how daily choices of individuals, taken together, affect global</p>

	<p>resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Analyze the causes of human migration (e.g., density, food and water supply, transportation and communication systems) and its effects (e.g., impact on physical and human systems).</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments within and across eras of U.S. history.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and</p>

	<p>summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Magness Memorial Tree Farm</b>	
<b>Description:</b>	An outdoor education site for school and youth groups. Groups can choose to go at their own pace and take a self-guided tour or get personalized attention with the "Walks and Talks" program designed to complement topics being studied in the classroom. Each of the educational programs and tours has been designed to correlate with age-appropriate state and national curriculum guidelines.
<b>Program Offered By:</b>	World Forestry Center (non-profit)
<b>Contact Information:</b>	Rick Zen, Education Director 503-488-2103 <a href="http://www.worldforestrycenter.org/treefarms/tf_magnesstreefarm.php">http://www.worldforestrycenter.org/treefarms/tf_magnesstreefarm.php</a>
<b>Location:</b>	Located 20 miles south of Portland near Wilsonville, Oregon
<b>Target Audience:</b>	Groups of all ages
<b>Group Size:</b>	Varies depending on class size
<b>Program activities:</b>	Demonstration Forest, outdoor education site, and guided tours
<b>Cost:</b>	Free and open to the public daily. Fees are charged for education classes and rental of facilities: \$4.50 for students and chaperones are free
<b>Transportation:</b>	Must be provided. Schools can apply for transportation reimbursement through OFRI.
<b>Length of time:</b>	Open all year.
<b>Pre or Post Preparation work:</b>	Teachers need to make travel arrangements and apply for travel reimbursements. They also need to make reservations. Both forms can be filled out online.
<b>Number of times presented/yr:</b>	Open all year.
<b>Partners:</b>	Donations from private citizens and landowners
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple</p>

	<p>investigations.  <b>SC.03.4.B.1(1)</b> Plan a simple investigation.  <b>SC.03.4.C.1(1)</b> Collect data from an investigation.  <b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.  <b>SS.03.3.0.3(1)</b> Identify major physical features and describe how they are represented on maps, globes, and other tools.  <b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.  <b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.  <b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.  <b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.  <b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.  <b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.  <b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.  <b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.  <b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.  <b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.  <b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.  <b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.  <b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.  <b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.  <b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.  <b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.  <b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.  <b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.  <b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p>

	<p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(3)</b> Use other visual representations to locate, identify, and distinguish physical and human features of places and regions.</p> <p><b>SS.05.3.0.7(1)</b> Identify and give examples of issues related to population increases and decreases.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative impacts of population increases or decreases.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to</p>

	<p>environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.A.1(1)</b> Describe, explain, and compare the structure and functions of cells in organisms.</p> <p><b>SC.CIM.2.A.1(3)</b> Identify unique structures in cells from plants, animals, and prokaryotes.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.B.1(6)</b> Recognize the existence of technology that can alter and/or determine inherited traits.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p>



	<p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.1(1)</b> Understand and use geographic information using a variety of scales, patterns of distribution, and arrangement.</p> <p><b>SS.CIM.3.0.6(1)</b> Understand how worldwide transportation and communication patterns have affected the flow and interactions of people, ideas, and products.</p> <p><b>SS.CIM.3.0.6(3)</b> Understand how communication and transportation technologies contribute to trade and cultural convergence.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<b>Possible Connections to</b>	<b>CCG:</b> Understand the characteristics, structure, and functions of organisms.

<p><b>Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand economic, cultural, and environmental factors that influence changes in population, and evaluate the consequences of the resulting increases or decreases in population.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
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	<p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<b>Possible Connections to Career-Related Learning Standards:</b>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>



<b>Johnson-Swanson Memorial Tree Farm</b>	
<b>Description:</b>	Tree farm located near Silverton, OR available for educational visitations or service learning projects.
<b>Program Offered By:</b>	World Forestry Center (non-profit)
<b>Contact Information:</b>	Rick Zen, Education Director 503-488-2103 <a href="http://www.worldforestrycenter.org/treefarms/tf_johnsonswanson.php">http://www.worldforestrycenter.org/treefarms/tf_johnsonswanson.php</a>
<b>Location:</b>	Silverton, OR
<b>Target Audience:</b>	Groups of all ages
<b>Group Size:</b>	Varies depending on class size
<b>Program activities:</b>	Outdoor activities
<b>Cost:</b>	Free
<b>Transportation:</b>	Must be provided. Schools can apply for transportation reimbursement through OFRI.
<b>Length of time:</b>	Varies
<b>Pre or Post Preparation work:</b>	Teachers need to make travel arrangements and apply for travel reimbursements. They also need to make reservations.
<b>Number of times presented/yr:</b>	Currently only open by arrangement.
<b>Partners:</b>	Donations from private citizens and landowners
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.3(1)</b> Identify major physical features and describe how they are represented on maps, globes, and other tools.</p>

	<p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(3)</b> Use other visual representations to locate, identify, and distinguish physical and human features of places and regions.</p> <p><b>SS.05.3.0.7(1)</b> Identify and give examples of issues related to population increases and decreases.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative</p>

	<p>impacts of population increases or decreases.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p>

	<p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.A.1(1)</b> Describe, explain, and compare the structure and functions of cells in organisms.</p> <p><b>SC.CIM.2.A.1(3)</b> Identify unique structures in cells from plants, animals, and prokaryotes.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.B.1(6)</b> Recognize the existence of technology that can alter and/or determine inherited traits.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask</p>

	<p>questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.1(1)</b> Understand and use geographic information using a variety of scales, patterns of distribution, and arrangement.</p> <p><b>SS.CIM.3.0.6(1)</b> Understand how worldwide transportation and communication patterns have affected the flow and interactions of people, ideas, and products.</p> <p><b>SS.CIM.3.0.6(3)</b> Understand how communication and transportation technologies contribute to trade and cultural convergence.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p>



	<p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand economic, cultural, and environmental factors that influence changes in population, and evaluate the consequences of the resulting increases or decreases in population.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine</p>

<b>Sets:</b>	Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources
<b>Possible Connections to Career-Related Learning Standards:</b>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>



<b>The Hinkle Creek Paired Watershed Study</b>	
<b>Description:</b>	10 year research project studying effects of interactions of modern intensive forest management with watershed health, water quality, and fisheries. The site is an ideal setting for research- and issue-based educational programs.
<b>Program Offered By:</b>	Watersheds Research Cooperative and OSU Forest Engineering Department (university)
<b>Contact Information:</b>	Watersheds Research Cooperative, Javier Goirigolzorri 541-957-9001 <a href="mailto:rms@rosenet.net">rms@rosenet.net</a>
<b>Location:</b>	25 miles northeast of Roseburg
<b>Target Audience:</b>	Students, educators, natural resource professionals, landowners, public leaders, and non-profits
<b>Program Activities:</b>	Field trips, tours, observations, and demonstrations
<b>Cost:</b>	Free
<b>Transportation:</b>	Must be provided. Transportation can be reimbursed by OFRI for those who apply.
<b>Length of time:</b>	Varies
<b>Pre or Post Preparation work:</b>	Teachers need to make travel arrangements and contact the Outreach Coordinator for arrangement.
<b>Number of times presented/yr:</b>	All year
<b>Partners:</b>	OSU, Roseburg Forest Products, BLM, USGS, OFRI, OWEB, Umpqua Fisheries Enhancement Derby
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to,

	<p>read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>E.03.1.F.1(3)</b> Interpret information from diagrams, charts, and graphs.</p> <p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p>
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	<p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(2)</b> Use the features of informational texts, such as formats, graphics, diagrams, illustrations, charts, maps, and organizational devices to find information and support understanding.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p>

	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(4)</b> Understand how human activities are affected by the physical environment.</p>
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	<p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>E.08.1.F.1(3)</b> Understand and explain the use of a complex mechanical device by following technical directions.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their</p>

	<p>physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p>
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	<p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(2)</b> Use maps, charts, graphs, and photographs to analyze spatial distributions and patterns.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks;</p>

	<p>biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.1.G.1(2)</b> Clarify understanding of informational texts by creating sophisticated outlines, graphic organizers, diagrams, logical notes, or summaries.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in</p>
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	<p>the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p>

	<p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Environmental Administration and Planning and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action</p>

	<p>to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Salmon Watch</b>	
<b>Description:</b>	Natural resource experts and volunteers assist teams of students at 4 learning stations established on the river's edge. Students learn about macro-invertebrates, water quality, the riparian area, and salmon life cycle.
<b>Program Offered By:</b>	The North Umpqua Foundation (non-profit)
<b>Contact Information:</b>	Robin Hartmann 541-672-3694 <a href="mailto:robinhartmann@msn.com">robinhartmann@msn.com</a>  <a href="http://www.northumpqua.org/projects/projects.html#educate">http://www.northumpqua.org/projects/projects.html#educate</a>
<b>Location:</b>	Program views spawning spring Chinook on the North Umpqua River (at either Boulder Creek Campground, Glide Loop Road, or below Soda Springs Dam) or views spawning fall Chinook on Cow Creek, depending on which fish are spawning at the time of the field trip.
<b>Target Audience:</b>	Grades 4-12
<b>Group Size:</b>	Usually 15-30
<b>Program activities:</b>	Field trip, hands-on activities, and students develop a service project to benefit the community and river.
<b>Cost:</b>	One \$35 fee per classroom
<b>Transportation:</b>	Bus transportation costs are paid by Oregon Trout
<b>Length of time:</b>	4-5 hours
<b>Pre or Post Preparation work:</b>	In the summer, training is offered for adult volunteers who help at each river-side learning station. Oregon Trout has a full curriculum, available to teachers, which includes materials to prepare students before and after the field trip, including for community service projects as a next step.
<b>Number of times presented/yr:</b>	Mid-September through November. Six to ten field trips per year.
<b>Partners:</b>	Oregon Trout pays for bus costs and substitute teachers as needed.
<b>Possible Connections to Fifth Grade Standards:</b>	<b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases. <b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment. <b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics. <b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.

	<p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(7)</b> Identify and explain how random variations in species can be preserved through natural selection.</p>



	<p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>
<b>Possible Connections to CIM Standards:</b>	<p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(6)</b> Recognize that, over time, natural selection may result in development of a new species or subspecies.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>
<b>Possible Connections to Common Curriculum</b>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p>

<p><b>Goals:</b></p>	<p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Environmental Services Cluster:</b> Waste Water and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management and Fish and Wildlife Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks.</p> <p><b>Teamwork:</b> Identify different types of teams and roles</p>

	<p>within each type of team; describe why each role is important to effective team work. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in a work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>
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# Field Trips

<b>Education Outreach</b>	
<b>Description:</b>	Program responds to requests from the public to provide talks and presentations on a variety of topics (e.g. forestry, wildlife, fisheries, archaeology, etc.)
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	Joe Ross, Supervisory Multi-Resource Specialist 541-464-3248 Joseph_Ross@blm.gov
<b>Location:</b>	classes, clubs, or field locations throughout Douglas County
<b>Target Audience:</b>	K-12 grade, Teachers
<b>Group Size:</b>	Maximum of 50
<b>Program activities:</b>	Field trips/ classroom visits by BLM staff
<b>Cost:</b>	None
<b>Transportation:</b>	Provided by school or organization
<b>Length of time:</b>	Depends on specific program desired
<b>Pre or Post Preparation work:</b>	None needed
<b>Number of times presented/yr:</b>	5-10
<b>Partners:</b>	None
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p>

	<p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(5)</b> Identify constraints on human activity caused by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SS.08.3.0.4(4)</b> Recognize relationships between the physical and cultural characteristics of a place or region.</p> <p><b>SS.08.3.0.8(6)</b> Understand how climatic events or climate change affect human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence</p>

	<p>human activity.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p>
<b>Possible Connections to CIM Standards:</b>	<p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(13)</b> Explain the rock cycle in terms of constructive (crustal deformation, volcanic eruption, and sediment deposition) and destructive (weathering and erosion) forces in land formation.</p>
<b>Possible Connections to Common Curriculum Goals:</b>	<p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Explain risks and benefits in personal and</p>

	<p>community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Science/Horticulture</p> <p><b>Natural Resource Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork.</p> <p><b>Career Development:</b> Research and analyze career and educational information.</p>







## Learning Opportunities Booklet

<b>Description:</b>	<p>Flexible programs on a variety of topics offered by BLM speakers for schools and clubs—approximately 30 different programs are offered. Topics include:</p> <ul style="list-style-type: none"> <li>• Archeology at North Bank Habitat Area</li> <li>• Fire’s Historic and Present Role on Forest Ecosystems</li> <li>• An Exploration of Water</li> <li>• Fisheries</li> <li>• An Exploration of Soil</li> <li>• An Exploration of Plants</li> <li>• Map and Compass</li> <li>• Math in Forestry</li> <li>• The Butterfly</li> <li>• The Butterfly (Field Session)</li> <li>• The Marvel of Feathers</li> <li>• Wings, Wings, Wings</li> <li>• Neotropical Birds (Field Session)</li> <li>• The Marbled Murrelet</li> <li>• Feet, Feet, Feet, Feet</li> <li>• The Forests of Douglas County</li> <li>• Iridescence: What is it?</li> <li>• In Search of Iridescence (Field Session)</li> <li>• The Del Norte Salamander (Field Session)</li> <li>• Fleas of the Pacific Northwest</li> <li>• Flies Everywhere</li> <li>• Mosquitoes: What good are they?</li> <li>• Silk</li> <li>• Itsi-Bitsi Spider</li> <li>• Wasps: Not as bas as you think, but treat with respect</li> <li>• Animal Skulls, Skins, and Tracks</li> <li>• The China Ditch and Hydraulic Placer Mining in Southern Oregon</li> <li>• Cascadia: Geology from Roseburg to Crater Lake</li> </ul>
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	<p>Joe Ross, Supervisory Multi-Resource Specialist            541-464-3248  <a href="mailto:Joseph_Ross@blm.gov">Joseph_Ross@blm.gov</a></p>
<b>Location:</b>	Programs available for classes, organizations, or field locations

	throughout Douglas County
<b>Target Audience:</b>	Grades 3-adult
<b>Group Size:</b>	50 maximum (some programs may be appropriate for large assemblies; check with presenter)
<b>Program Activities:</b>	Talks, slide shows, field sessions
<b>Cost:</b>	None
<b>Transportation:</b>	Provided by school or organization
<b>Length of time:</b>	Depends on specific program desired. There is information on each program that details time length at the Bureau of Land Management.
<b>Pre or Post Preparation work:</b>	None needed
<b>Number of times presented/yr:</b>	Year round
<b>Partners:</b>	Agencies, universities, non-profits
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p>

	<p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence</p>

	<p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p>

	<p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Discovery Center at World Forestry Center</b>	
<b>Description:</b>	1st floor of the museum shows how forests have systems, structure, and cycles. 2nd floor highlights "People and Forests" and how they interact around the world. There is gallery space devoted to temporary exhibits that explore art, history, and culture from around the world.
<b>Program Offered By:</b>	World Forestry Center (nonprofit educational institution)
<b>Contact Information:</b>	Rick Zen, Education Director 503-488-2103
<b>Location:</b>	Portland
<b>Target Audience:</b>	All ages
<b>Group Size:</b>	Varies (minimum 1:5 chaperone/student ratio for most programs. Students must be accompanied by adults at all times.)
<b>Program Activities:</b>	Indoor activities and exhibits
<b>Cost:</b>	Museum Self-Guided Exploration costs \$3.50 and chaperones are free. There is a \$1 parking fee per vehicle.
<b>Transportation:</b>	Oregon Forest Resources Institute provides transportation funds to support Oregon classroom teachers' forest education efforts.
<b>Length of time:</b>	All day field trip- many presentations are 90 minutes long.
<b>Pre or Post Preparation work:</b>	Teachers wanting transportation reimbursement must make arrangements before going to the museum and reservations to the museum 4-6 weeks in advance. Students and chaperones need to wear name tags to represent their school or group. Lunch is not provided at the museum and food is not permitted inside. There is a picnic area in the adjacent park or reservations for a lunch room can be made in advance.
<b>Number of times presented/yr:</b>	Open all year

<b>Partners:</b>	Timber industry, educational community, and many others
<b>Possible Connections to Third Grade Standards:</b>	<p><b>A.03.2.0.1(1)</b> Recognize essential elements, organizational principles and aesthetic effects in works of art.</p> <p><b>A.03.2.0.2(1)</b> Identify and describe personal preferences connected with viewing or listening to a work of art using terminology that conveys knowledge of the arts.</p> <p><b>A.03.2.0.3(1)</b> Identify the disciplines used in an integrated work of art.</p> <p><b>A.03.3.0.1(1)</b> Identify an event or condition that influenced a work of art.</p> <p><b>A.03.3.0.2(1)</b> Identify social, historical and cultural characteristics in a work of art.</p> <p><b>A.03.3.0.4(1)</b> Describe how the arts serve a variety of purposes in the student's life, community and culture.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how</p>



	<p>peoples' lives are affected by the physical environment.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>A.05.2.0.1(1)</b> Identify essential elements, organizational principles and aesthetic criteria that can be used to analyze works of art.</p> <p><b>A.05.2.0.2(1)</b> Describe personal preferences and identify how essential elements and organizational principles in a work of art contribute to those preferences.</p> <p><b>A.05.2.0.3(1)</b> Describe how essential elements and organizational principles from various arts disciplines are used in an integrated work of art.</p> <p><b>A.05.3.0.1(1)</b> Identify and describe the influence of events and/or conditions on works of art.</p> <p><b>A.05.3.0.2(1)</b> Identify and relate common and unique characteristics in works of art that reflect social, historical, and cultural contexts.</p> <p><b>A.05.3.0.3(1)</b> Describe how works of art from various historic periods reflect the artist's environment, society and culture.</p> <p><b>A.05.3.0.4(1)</b> Describe how the arts serve a variety of purposes and needs in other communities and cultures.</p> <p><b>A.05.3.0.4(2)</b> Describe how the arts have influenced various communities and cultures.</p> <p><b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant</p>

	<p>and animal structures and their functions.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate</p>
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	<p>major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(4)</b> Understand how human activities are affected by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.1(1)</b> Interpret data and chronological relationships presented in timelines and narratives.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>A.08.2.0.1(1)</b> Use knowledge of essential elements, organizational principles and aesthetic criteria to describe works of art and identify how the elements and principles contribute to the aesthetic effect.</p> <p><b>A.08.2.0.2(1)</b> Describe personal preferences for works of art using aesthetic criteria and identify how essential elements and organizational principles contribute to the aesthetic effect.</p> <p><b>A.08.2.0.3(1)</b> Explain the distinctive ways that essential elements and organizational principles from various arts disciplines are used in an integrated work of art and identify their impact on that work.</p> <p><b>A.08.3.0.1(1)</b> Distinguish the influence of events and conditions on works of art.</p> <p><b>A.08.3.0.2(1)</b> Identify and relate works</p>

	<p>of art from different societies, time periods and cultures, emphasizing their common and unique characteristics.</p> <p><b>A.08.3.0.3(1)</b> Explain how works of art from around the world reflect the artist's environment, society and culture.</p> <p><b>A.08.3.0.4(1)</b> Explain how the arts serve a variety of purposes, needs and values in different communities and cultures.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p>
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	<p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.3(1)</b> Identify the location of major mountain ranges, deserts, rivers, cultural regions and countries in the world.</p> <p><b>SS.08.3.0.4(1)</b> Identify and compare physical and human characteristics of major regions and significant places in the world.</p> <p><b>SS.08.3.0.4(3)</b> Identify, locate, and compare the cultural characteristics of places and regions.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.4.A.1(1)</b> Represent and interpret data and chronological relationships from history, using timelines and narratives.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>A.CIM.2.0.1(1)</b> Use knowledge of essential elements, organizational principles and aesthetic criteria to explain the artistic merit and aesthetic effect of a work of art.</p>

	<p><b>A.CIM.2.0.2(1)</b> Explain personal preferences for works of art based on an analysis of how the essential elements and organizational principles contribute to the work's artistic merit.</p> <p><b>A.CIM.2.0.3(1)</b> Explain the roles of essential elements and organizational principles from various arts disciplines in an integrated work of art and identify how they contribute to the aesthetic effect, overall idea and impact of the work.</p> <p><b>A.CIM.3.0.1(1)</b> Explain the influence of events and conditions on an artist's work.</p> <p><b>A.CIM.3.0.2(1)</b> Describe and distinguish works of art from different societies, time periods, and cultures, emphasizing their common and unique characteristics.</p> <p><b>A.CIM.3.0.3(1)</b> Explain how works of art reflect the artist's personal experience, environment, society and culture and apply this knowledge to one's own work.</p> <p><b>A.CIM.3.0.4(1)</b> Explain the connections among the arts, career opportunities, and quality of life in the context of personal, practical, community and cultural needs.</p> <p><b>A.CIM.3.0.4(2)</b> Explain the influence of the arts on human behavior, community life and cultural traditions.</p> <p><b>SC.CIM.2.A.1(2)</b> Describe how biological systems can maintain equilibrium (homeostasis).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how</p>
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	<p>humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.3(1)</b> Locate and identify places, regions, and geographic features that have played prominent roles in historical or contemporary issues and events.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give</p>
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	<p>examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.4.A.1(1)</b> Reconstruct, interpret, and represent the chronology of significant events, developments, and narratives from history.</p> <p><b>SS.CIM.4.A.2(1)</b> Compare and contrast institutions and ideas in history, noting cause and effect relationships.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Apply critical analysis to works of art.</p> <p><b>CCG:</b> Respond to works of art and give reasons for preferences.</p> <p><b>CCG:</b> Understand the interrelationships among art forms.</p> <p><b>CCG:</b> Understand how events and conditions influence the arts.</p> <p><b>CCG:</b> Distinguish works of art from different societies, time periods and cultures.</p> <p><b>CCG:</b> Understand how the arts can reflect the environment and personal experiences within a society or culture, and apply to one's own work.</p> <p><b>CCG:</b> Understand the place of the arts within, and their influences on, society.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p>



	<p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Interpret and reconstruct chronological relationships.</p> <p><b>CCG:</b> Analyze cause and effect relationships, including multiple causalities.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments within and across eras of world history.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p>

	<p><b>Environmental Services Cluster:</b> Environmental Administration and Planning, Water Quality</p> <p><b>Natural Resources and Management Cluster:</b> Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p> <p><b>Visual, Performing, and Media Arts Cluster:</b> Interactive Media, Visual Arts</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical</p>

	<p>skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Oregon Museum of Science and Industry</b>	
<b>Description:</b>	Scientific, educational, and cultural resource center dedicated to improving the public's understanding of science and technology. OMSI offers exhibits, programs, and experiences that are presented in an entertaining and participatory fashion.
<b>Program Offered By:</b>	Oregon Museum of Science and Industry (non-profit)
<b>Contact Information:</b>	503-797-4661 www.oms.edu
<b>Location:</b>	Portland
<b>Target Audience:</b>	Teachers, students, public
<b>Group Size:</b>	Varies-groups larger than 12 receive discounts
<b>Program Activities:</b>	field trips to the museum, exhibits, reserved labs, science festivals, after school programs, traveling science day camps, teacher workshops, and a planetarium
<b>Cost:</b>	Group rates of 12 students or more \$60. Schools can apply for financial aid through OMSI's Educational Endowment. Schools with 50% or more of their students on free or reduced lunch programs are eligible for financial assistance or contact OMSI at 503-797-4649 to receive a copy by mail.
<b>Transportation:</b>	Must be provided
<b>Length of time:</b>	Varies depending on which program students participate in
<b>Pre or Post Preparation work:</b>	Teachers can all Group Registration at 503-797-4661 between 8am and 4pm, Monday-Friday, fax worksheets to 503-239-7800, mail the completed worksheet to: OMSI/Group Registration, 1945 SE Water Ave., Portland, OR 97214, or email <a href="mailto:groups@oms.edu">groups@oms.edu</a> . Reservations must be made at least 10 days in advance for to be eligible for group rates. Students must bring their own lunch. There is

	an area available for lunch.
<b>Number of times presented/yr:</b>	Open all year
<b>Partners:</b>	Comcast and Southwest.com
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.1.B.1(1)</b> Describe an object's position and how to affect its movement.</p> <p><b>SC.03.1.C.1(1)</b> Identify common types and uses of energy.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.3.B.1(1)</b> Identify and trace the movement of objects in the sky.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>SC.05.1.A.1(1)</b> Identify substances as they exist in different states of matter.</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among</p>

solids, liquids, and gases.

**SC.05.1.A.1(3)** Identify unique properties of each state of matter.

**SC.05.1.A.2(1)** Describe the ability of matter to change state by heating and cooling.

**SC.05.1.A.2(2)** Recognize that heating and cooling cause changes in states of matter.

**SC.05.1.A.2(3)** Identify changes in states of matter seen in the environment.

**SC.05.1.B.1(1)** Describe and compare the motion of objects.

**SC.05.1.B.1(2)** Recognize and describe the motion of an object in terms of one or more forces acting on it.

**SC.05.1.B.1(3)** Identify examples of magnetism and gravity exerting force on an object.

**SC.05.1.B.1(4)** Recognize that magnets attract and repel each other and other materials.

**SC.05.1.B.1(5)** Recognize that things on or near Earth are pulled toward it by Earth's gravity.

**SC.05.1.C.1(1)** Identify forms of various types of energy and their effects on matter.

**SC.05.1.C.1(2)** Identify various forms of energy including heat, light, sound, and electricity.

**SC.05.1.C.1(3)** Describe examples of energy transfer.

**SC.05.1.C.1(5)** Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines.

**SC.05.1.C.1(6)** Identify examples of energy transfer in the environment.

**SC.05.2.A.1(1)** Group or classify organisms based on a variety of characteristics.

**SC.05.2.A.1(2)** Classify a variety of living things into groups using various characteristics.

**SC.05.2.A.1(3)** Describe the function of organ systems.

**SC.05.2.A.1(5)** Describe basic plant and animal structures and their functions.

**SC.05.2.A.1(6)** Associate specific structures with their functions in the survival of the organism.

**SC.05.2.B.1(1)** Describe the life cycle of an organism.

**SC.05.2.B.1(2)** Describe the life cycle of common organisms.

**SC.05.2.C.1(1)** Describe the relationship between characteristics of specific habitats and the organisms that live there.

**SC.05.2.C.1(3)** Identify the producers, consumers, and decomposers in a given habitat.

**SC.05.2.C.1(4)** Recognize how all animals depend upon plants whether or not they eat the plants directly.

**SC.05.2.C.1(6)** Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.

**SC.05.3.A.1(1)** Identify properties and uses of Earth materials.

**SC.05.3.A.1(2)** Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.

**SC.05.3.A.1(3)** Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.

**SC.05.3.A.1(4)** Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.

**SC.05.3.A.1(5)** Recognize that discarded products contribute to the problem of waste disposal.

**SC.05.3.A.2(1)** Describe patterns of seasonal weather.

**SC.05.3.A.2(2)** Describe weather in

	<p>measurable quantities including temperature, wind direction, wind speed, and precipitation.</p> <p><b>SC.05.3.A.2(4)</b> Identify causes of Earth surface changes.</p> <p><b>SC.05.3.A.2(6)</b> Identify effects of rapid changes on Earth's surface features including earthquakes and volcanoes.</p> <p><b>SC.05.3.B.1(1)</b> Describe the Earth's place in the solar system and the patterns of movement of objects within the solar system using pictorial models.</p> <p><b>SC.05.3.B.1(2)</b> Describe Earth's position and movement in the solar system.</p> <p><b>SC.05.3.B.1(3)</b> Recognize that the rotation of the Earth on its axis every 24 hours produces the night-and-day cycle.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(1)</b> Compare properties of specific substances.</p> <p><b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.1.A.2(2)</b> Distinguish between</p>



	<p>examples of chemical changes and physical changes.</p> <p><b>SC.08.1.A.2(3)</b> Describe processes that will separate the components of physical mixtures.</p> <p><b>SC.08.1.A.2(4)</b> Describe events that accompany chemical changes, but not physical changes.</p> <p><b>SC.08.1.B.1(1)</b> Explain interactions between force and matter and relationships among force, mass, and motion.</p> <p><b>SC.08.1.B.1(2)</b> Recognize and describe the motion of an object based on its mass and the force exerted on it.</p> <p><b>SC.08.1.B.1(3)</b> Predict the change in direction or speed of an object by changing the forces acting on it.</p> <p><b>SC.08.1.B.1(4)</b> Explain inertia.</p> <p><b>SC.08.1.B.1(5)</b> Recognize that every object exerts gravitational force on every other object.</p> <p><b>SC.08.1.B.1(6)</b> Describe the effect of gravitational force on objects at the Earth's surface.</p> <p><b>SC.08.1.C.1(1)</b> Compare forms and behaviors of various types of energy.</p> <p><b>SC.08.1.C.1(2)</b> Distinguish between the forms of energy including heat, chemical, mechanical, and gravitational potential energy.</p> <p><b>SC.08.1.C.1(3)</b> Describe and explain various energy transfers and resulting transformations.</p> <p><b>SC.08.1.C.1(4)</b> Trace the flow of energy transformations in a system.</p> <p><b>SC.08.1.C.1(5)</b> Explain the principle that energy is conserved, neither created nor destroyed.</p> <p><b>SC.08.1.C.1(6)</b> Identify how technological advances have changed humankind's use of energy.</p> <p><b>SC.08.2.A.1(1)</b> Describe and explain the relationship and interaction of organ systems.</p> <p><b>SC.08.2.A.1(2)</b> Identify organ systems</p>
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at work during a particular activity and describe their effect on each other.

**SC.08.2.A.1(4)** Identify differences and similarities between plant and animal cells.

**SC.08.2.A.1(5)** Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.

**SC.08.2.A.1(6)** Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.

**SC.08.2.B.1(1)** Describe how the traits of an organism are passed from generation to generation.

**SC.08.2.B.1(2)** Distinguish between asexual and sexual reproduction.

**SC.08.2.B.1(3)** Identify traits inherited through genes and those resulting from interactions with the environment.

**SC.08.2.C.1(1)** Identify and describe the factors that influence or change the balance of populations in their environment.

**SC.08.2.C.1(2)** Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.

**SC.08.2.C.1(3)** Identify populations of organisms within an ecosystem by the function that they serve.

**SC.08.2.C.1(4)** Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.

**SC.08.2.C.1(5)** Explain the importance of niche to an organism's ability to avoid direct competition for resources.

**SC.08.2.C.1(6)** Describe and explain the theory of natural selection as a

	<p>mechanism for evolution.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(1)</b> Explain the water cycle and its relationship to weather and climatic patterns.</p> <p><b>SC.08.3.A.2(3)</b> Identify factors that cause or affect weather patterns.</p> <p><b>SC.08.3.A.2(4)</b> Identify factors that affect the rate of evaporation, condensation, and cloud formation.</p> <p><b>SC.08.3.A.2(5)</b> Identify the difference between weather and climate.</p> <p><b>SC.08.3.A.2(8)</b> Recognize the solid Earth is layered with a lithosphere, a hot convecting mantle, and a dense metallic core.</p> <p><b>SC.08.3.A.2(9)</b> Identify the processes that result in different kinds of landforms.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(14)</b> Describe that the total amount of Earth material stays the same as its forms change in the rock cycle.</p> <p><b>SC.08.3.B.1(1)</b> Explain the relationship of the Earth's motion to the day, season, year, phases of the moon, and eclipses.</p> <p><b>SC.08.3.B.1(2)</b> Explain the relationship between the cycle of seasons and the tilt of the Earth on its axis.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and</p>
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	<p>display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.1(1)</b> Describe properties of elements and their relationship to the periodic table.</p> <p><b>SC.CIM.1.A.1(2)</b> Explain atoms and their base components (protons, neutrons, and electrons) as a basis for all matter.</p> <p><b>SC.CIM.1.A.1(3)</b> Read and interpret the periodic table, recognizing the relationship of the chemical and physical properties of the elements to their position on the periodic table.</p> <p><b>SC.CIM.1.A.1(4)</b> Recognize that the historical development of atomic theory demonstrates how scientific knowledge changes over time, and how those changes have had an impact on society.</p> <p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.1.A.2(4)</b> Describe chemical reactions in terms of reactants and products.</p> <p><b>SC.CIM.1.A.2(5)</b> Describe the factors that affect the rate of chemical reactions.</p> <p><b>SC.CIM.1.B.1(1)</b> Describe and explain the effects of multiple forces acting on an object.</p> <p><b>SC.CIM.1.B.1(3)</b> Recognize that equal and opposite forces occur when one object exerts a force on another.</p>

**SC.CIM.1.B.1(5)** Recognize that gravity is a universal force.

**SC.CIM.1.B.1(6)** Describe the relationship of mass and distance to gravitational force.

**SC.CIM.1.C.1(1)** Describe differences and similarities between kinds of waves, including sound, seismic, and electromagnetic, as a means of transmitting energy.

**SC.CIM.1.C.1(4)** Describe and analyze examples of conservation of energy.

**SC.CIM.1.C.1(5)** Recognize that heat energy is a by-product of most energy transformations.

**SC.CIM.1.C.1(6)** Describe ways in which energy can be transferred, including chemical reactions, nuclear reactions, and light waves.

**SC.CIM.1.C.1(7)** Explain the difference between potential and kinetic energy.

**SC.CIM.2.A.1(1)** Describe, explain, and compare the structure and functions of cells in organisms.

**SC.CIM.2.A.1(3)** Identify unique structures in cells from plants, animals, and prokaryotes.

**SC.CIM.2.A.1(6)** Distinguish between active and passive transport, including diffusion and osmosis, explaining the mechanics of each.

**SC.CIM.2.A.1(7)** Describe photosynthesis as a chemical process and part of the carbon cycle.

**SC.CIM.2.A.1(8)** Explain how the development of tools and technology, including microscopes, has aided in the understanding of cells and microbes.

**SC.CIM.2.B.1(1)** Explain laws of heredity and their relationship to the structure and function of DNA.

**SC.CIM.2.B.1(2)** Describe the structure of DNA and the way that DNA functions to control protein

synthesis.

**SC.CIM.2.B.1(4)** Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in organisms.

**SC.CIM.2.B.1(6)** Recognize the existence of technology that can alter and/or determine inherited traits.

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

**SC.CIM.2.C.1(4)** Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.

**SC.CIM.2.C.1(5)** Analyze how living things have changed over geological time, using fossils and other scientific evidence.

**SC.CIM.2.C.1(6)** Recognize that, over time, natural selection may result in development of a new species or subspecies.

**SC.CIM.2.C.1(8)** Explain how biological evolution can account for the diversity of species developed over time.

**SC.CIM.2.C.1(9)** Explain the relationship between genetics, mutations, and biological evolution.

**SC.CIM.2.C.1(10)** Explain how our understanding of evolution has changed over time.

**SC.CIM.3.A.1(1)** Describe how the importance and use of resources has changed over time with changes in economic and technological systems.

**SC.CIM.3.A.1(2)** Predict consequences of increased consumption of renewable and non-

renewable resources.

**SC.CIM.3.A.2(1)** Analyze the relationship between global energy transfer and climate.

**SC.CIM.3.A.2(2)** Describe the effect of various gases in the atmosphere on the amount of energy retained by the Earth system.

**SC.CIM.3.A.2(4)** Describe how differential heating of the Earth's surface, atmosphere, and oceans produces wind and ocean currents.

**SC.CIM.3.A.2(6)** Describe methods of determining ages of rocks and fossils.

**SC.CIM.3.A.2(7)** Use rock sequences and fossil evidence to determine geologic history.

**SC.CIM.3.A.2(9)** Describe how earthquakes, volcanic eruptions, mountain building, and continental movements result from slow plate motions.

**SC.CIM.3.A.2(11)** Identify how volcanic eruptions and impacts of huge rocks from space can cause widespread effects on climate.

**SC.CIM.3.B.1(1)** Explain how mass and distance affect the interaction between Earth and other objects in space.

**SC.CIM.3.B.1(2)** Recognize that the sun's gravitational pull holds the Earth and other planets in their orbits, just as the planets' gravitational pull keeps their moons in orbit around them.

**SC.CIM.3.B.1(3)** Explain that the force of gravity between Earth and other objects in space depends only upon their masses and the distances between them.

**SC.CIM.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.

**SC.CIM.4.B.1(1)** Design a scientific

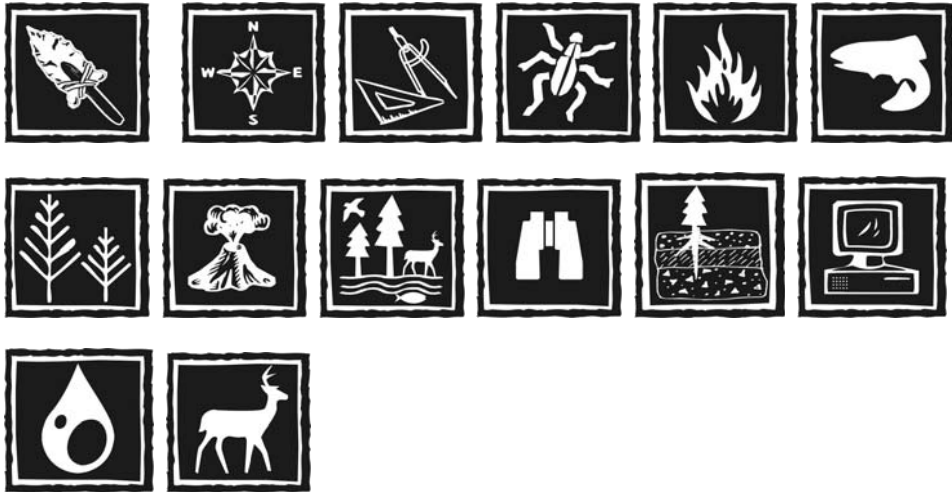
	<p>investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand fundamental forces, their forms, and their effects on motion.</p> <p><b>CCG:</b> Understand energy, its transformations, and interactions with matter.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p> <p><b>CCG:</b> Understand the Earth's place in the solar system and the universe.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection</p>



	<p>of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Sciences/Horticulture, and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Natural Resources Management:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>

	<p><b>Visual, Performing, and Media Arts Cluster:</b> Audio and Video Technologies, Interactive Media, Technical Design and Production, and Visual Arts</p> <p><b>Health Research and Biotechnology:</b> Biotechnology Research and Development</p> <p><b>Engineering Cluster:</b> Aerospace Systems, Bio/Medical Systems, Chemical/Nuclear Systems, Civil and Infrastructure, Industrial/Manufacturing Systems, and Mechanical Systems</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork.</p>

	<p>Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Identify parts of organizations and systems and how they fit together. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal and characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Umpqua Discovery Center</b>	
<b>Description:</b>	The Umpqua Discovery Center is an educational and cultural resource for all ages making active, innovative contributions to preserving the Oregon "Tidewater Community" experience.
<b>Program Offered By:</b>	Umpqua Discovery Center (non-profit)
<b>Contact Information:</b>	Portia Harris 541-271-4816 info@umpquadiscoverycenter.com
<b>Location:</b>	Reedsport
<b>Target Audience:</b>	Public
<b>Group Size:</b>	Varies
<b>Program Activities:</b>	Interactive exhibits and programs focusing on the natural and cultural history of the "Tidewater Country" of the Oregon Coast
<b>Cost:</b>	8 for adults, \$4 for kids ages 6-15, \$7 for seniors
<b>Transportation:</b>	Must be provided
<b>Length of time:</b>	Varies
<b>Pre or Post Preparation work:</b>	Teachers will need to make transportation arrangements and contact the UDC to inform of the size of the group coming to visit. Teachers need to inform UDC of the programs they desire during visit.
<b>Number of times presented/yr:</b>	Open 7 days a week year round except Thanksgiving, Christmas, and New Year's Day
<b>Partners:</b>	Confederated Tribes of Coos, Lower Umpqua, & Siuslaw Indians; USDA Forest Service; Bureau of Land Management; NOAA
<b>Possible Connections to Third Grade Standards:</b>	<b>A.03.3.0.1(1)</b> Identify an event or condition that influenced a work of art. <b>A.03.3.0.3(1)</b> Describe how art from the student's community reflects the artist's environment and culture. <b>A.03.3.0.4(1)</b> Describe how the arts serve a variety of purposes in the student's life, community and culture. <b>A.03.3.0.4(2)</b> Recognize how the arts

	<p>can influence an individual's life.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SS.03.1.0.4(1)</b> Identify rights that people have in their communities.</p> <p><b>SS.03.1.0.5(1)</b> Identify ways that people can participate in their communities and the responsibilities of participation.</p> <p><b>SS.03.1.0.7(1)</b> Distinguish local and world issues.</p> <p><b>SS.03.3.0.2(1)</b> Understand the purpose of maps, globes, and other geographic tools.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p> <p><b>SS.03.4.D.2(1)</b> Understand events from local history.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>A.05.3.0.1(1)</b> Identify and describe the influence of events and/or conditions on works of art.</p> <p><b>A.05.3.0.2(1)</b> Identify and relate common and unique characteristics in works of art that reflect social, historical, and cultural contexts.</p> <p><b>A.05.3.0.4(1)</b> Describe how the arts serve a variety of purposes and needs in</p>

	<p>other communities and cultures.</p> <p><b>A.05.3.0.4(2)</b> Describe how the arts have influenced various communities and cultures.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SS.05.1.0.5(1)</b> Understand how citizens can learn about public issues.</p> <p><b>SS.05.3.0.1(1)</b> Define basic geography vocabulary such as concepts of location, direction, distance, scale, movement, and region using appropriate words and diagrams.</p> <p><b>SS.05.3.0.1(2)</b> Know and use basic map elements to answer geographic questions or display geographic information.</p> <p><b>SS.05.3.0.2(2)</b> Use maps and charts to interpret geographic information.</p> <p><b>SS.05.3.0.2(3)</b> Use other visual representations to locate, identify, and distinguish physical and human features of places and regions.</p> <p><b>SS.05.3.0.3(1)</b> Locate and identify on maps the continents of the world, the 50 states of the United States, and the major physical features of Oregon.</p>
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	<p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.6(1)</b> Identify patterns of migration and cultural interaction in the United States.</p> <p><b>SS.05.3.0.6(3)</b> Explain how migrations affect the culture of emigrants and native populations.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative impacts of population increases or decreases.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.1(1)</b> Interpret data and chronological relationships presented in timelines and narratives.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p> <p><b>SS.05.4.A.3(1)</b> Understand how history can be organized using themes, geography, or chronology.</p> <p><b>SS.05.4.D.1(1)</b> Understand how individuals changed or significantly influenced the course of Oregon state history.</p> <p><b>SS.05.4.D.2(1)</b> Understand how individuals changed or significantly influenced the course of local history.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>A.08.3.0.1(1)</b> Distinguish the influence of events and conditions on works of art.</p> <p><b>A.08.3.0.2(1)</b> Identify and relate works of art from different societies, time periods and cultures, emphasizing their common and unique characteristics.</p>

	<p><b>A.08.3.0.3(1)</b> Explain how works of art from around the world reflect the artist's environment, society and culture.</p> <p><b>A.08.3.0.4(1)</b> Explain how the arts serve a variety of purposes, needs and values in different communities and cultures.</p> <p><b>A.08.3.0.4(2)</b> Explain the influence of the arts on individuals, communities and cultures in various time periods.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SS.08.3.0.1(2)</b> Use maps, charts, and graphs to understand patterns of movement over time and space.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.6(3)</b> Recognize and identify patterns of migration streams in U.S. history.</p> <p><b>SS.08.3.0.7(1)</b> Identify economic, cultural, and environmental factors that affect population, and predict how the population would change as a result.</p>
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	<p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.4.A.1(1)</b> Represent and interpret data and chronological relationships from history, using timelines and narratives.</p> <p><b>SS.08.4.A.1(2)</b> Compare and contrast historical interpretations.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.</p> <p><b>SS.08.4.D.1(1)</b> Understand how various groups of people were affected by events and developments in Oregon state history.</p> <p><b>SS.08.4.D.1(3)</b> Understand the interactions and contributions of the various people and cultures that have lived in or migrated to the area that is now Oregon from post-American Revolution until 1900.</p> <p><b>SS.08.4.D.2(1)</b> Understand the lasting influence of events and developments in local history.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p>
<b>Possible Connections to CIM</b>	<b>A.CIM.3.0.1(1)</b> Explain the influence of

**Standards:**

events and conditions on an artist's work.

**A.CIM.3.0.2(1)** Describe and distinguish works of art from different societies, time periods, and cultures, emphasizing their common and unique characteristics.

**A.CIM.3.0.3(1)** Explain how works of art reflect the artist's personal experience, environment, society and culture and apply this knowledge to one's own work.

**A.CIM.3.0.4(1)** Explain the connections among the arts, career opportunities, and quality of life in the context of personal, practical, community and cultural needs.

**A.CIM.3.0.4(2)** Explain the influence of the arts on human behavior, community life and cultural traditions.

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

**SC.CIM.2.C.1(5)** Analyze how living things have changed over geological time, using fossils and other scientific evidence.

**SC.CIM.3.A.1(1)** Describe how the importance and use of resources has changed over time with changes in economic and technological systems.

**SC.CIM.3.A.2(6)** Describe methods of determining ages of rocks and fossils.

**SC.CIM.3.A.2(7)** Use rock sequences and fossil evidence to determine geologic history.

**SC.CIM.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.

**SS.CIM.1.0.5(1)** Understand the civic responsibilities of U.S. citizens and how they are met.

**SS.CIM.1.0.5(2)** Identify the

	<p>responsibilities of citizens in the United States and understand what an individual can do to meet these responsibilities.</p> <p><b>SS.CIM.3.0.3(1)</b> Locate and identify places, regions, and geographic features that have played prominent roles in historical or contemporary issues and events.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.7(1)</b> Analyze and evaluate the impact of economic, cultural or environmental factors that result in changes to population of cities, countries, or regions.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.4.A.1(1)</b> Reconstruct, interpret, and represent the chronology of significant events, developments, and narratives from history.</p> <p><b>SS.CIM.4.A.1(4)</b> Interpret timelines, charts and graphs illustrating chronological relationships.</p> <p><b>SS.CIM.4.D.2(1)</b> Understand the causes, characteristics and impact, and lasting influence of political, economic, and social developments in local history.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p>
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	<p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand how events and conditions influence the arts.</p> <p><b>CCG:</b> Understand how the arts can reflect the environment and personal experiences within a society or culture, and apply to one's own work.</p> <p><b>CCG:</b> Understand the place of the arts within, and their influences on, society.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand participatory responsibilities of citizens in the community (voluntarism) and in the political process (becoming informed about public issues and candidates,</p>

	<p>joining political parties/interest groups/associations, communicating with public officials, voting, influencing lawmaking through such processes as petitions/initiatives).</p> <p><b>CCG:</b> Understand the spatial concepts of location, distance, direction, scale, movement, and region.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand economic, cultural, and environmental factors that influence changes in population, and evaluate the consequences of the resulting increases or decreases in population.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Interpret and reconstruct chronological relationships.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments in the history of one's family, local community, and culture.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and</p>

	Recreation and Cultural Resources <b>Visual, Performing and Media Arts Cluster:</b> Interactive Media and Visual Arts
<b>Possible Connections to Career-Related Learning Standards:</b>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Read technical/instructional materials for information and apply to specific tasks.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>



<b>Alder Creek Children's Forest</b>	
<b>Description:</b>	Students develop recommendations for managing forests by consulting with woodland owners, professional foresters, and industrial foresters. The program is a student-based terrestrial and aquatic inventory of the Alder-Jordan Creek watershed, intended to establish a baseline for watershed management, restoration, and monitoring.
<b>Program Offered By:</b>	Alder Creek Children's Forest (non-profit)
<b>Contact Information:</b>	ACCF Office at 541-839-4379 Alan Baumann, Site Manager, at 541-957-3446 <a href="mailto:abaumann@fs.fed.us">abaumann@fs.fed.us</a> <a href="http://aldercreek.org/about/index.html">http://aldercreek.org/about/index.html</a>
<b>Location:</b>	Accessed from I-5 in southern Douglas County 1 mile west of Canyonville-Riddle Road in the 2300 acre Alder-Jordan Creek watershed
<b>Target Audience:</b>	6-12 grade, Teachers
<b>Group Size:</b>	Small group size 5-10, large group size 25-30
<b>Program Activities:</b>	Outdoor study, field research, instructional stations, games, teacher workshop, Fall Forum, and Spring Forest Fair
<b>Cost:</b>	None
<b>Transportation:</b>	OFRI can provide transportation reimbursement
<b>Length of time:</b>	Full day
<b>Pre or Post Preparation work:</b>	Teachers need to apply for transportation reimbursement and call to make schedule arrangements.
<b>Number of times presented/yr:</b>	At least 12 on a monthly basis-2nd Fridays Try to provide each student in south county to come and visit at least once every school year. The Fall Forum is in October and Spring Forest Fair is in May.
<b>Partners:</b>	USFS, Cow Creek Band (Umpqua Tribe), others-Hands on the Land site, BLM
<b>Possible Connections to Eighth Grade Standards:</b>	<b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment. <b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs. <b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve. <b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.

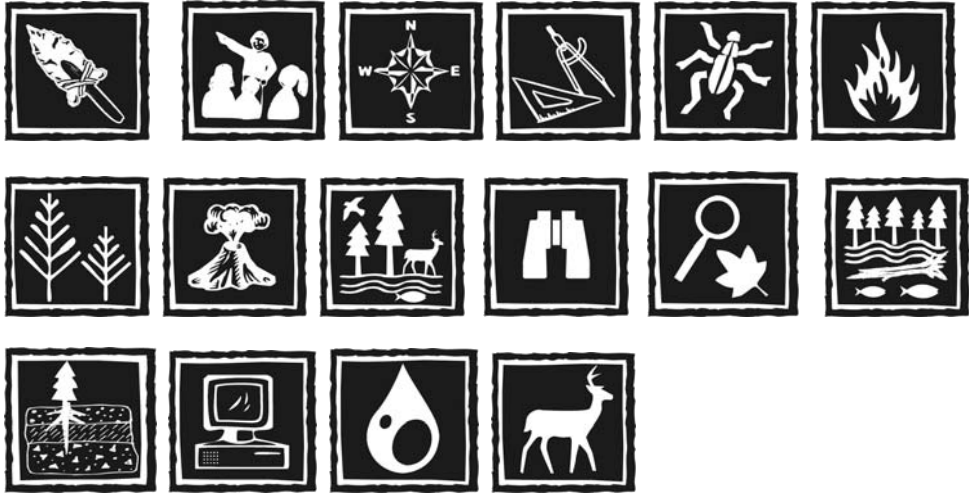


	<p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.3(1)</b> Locate and identify on maps and globes the regions of the world and their prominent physical features.</p> <p><b>SS.08.3.0.4(4)</b> Recognize relationships between the physical and cultural characteristics of a place or region.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them</p>

	<p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Forming the Question/Hypothesis: Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Designing the Investigation: Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Collecting and Presenting Data: Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p>

	<p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Environmental Science Cluster:</b> Environmental Administration and Planning and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress,</p>

appearance, and personal hygiene appropriate for the work environment and situation.  
**Career Development:** Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.



<b>Douglas County School Forestry Tour</b>	
<b>Description:</b>	Tour that introduces 5 <sup>th</sup> graders to forest management and products, tree identification, wildlife, fisheries, fire, and archaeology
<b>Program Offered By:</b>	OSU Extension Office (university)
<b>Contact Information:</b>	Elissa Wells, Forestry Instructor 541-672-4461 Elissa.Wells@oregonstate.edu
<b>Location:</b>	Glide Educational Forest at Glide Transfer Site
<b>Target Audience:</b>	5th grade students
<b>Group Size:</b>	14-30 students
<b>Program Activities:</b>	Field trips, hands-on learning, other highly interactive instruction methods, and booklet of supplemental classroom activities
<b>Cost:</b>	None
<b>Transportation:</b>	Oregon Forest Resource Institute (OFRI) reimburses bus costs
<b>Length of time:</b>	9:30am-2pm
<b>Pre or Post Preparation work:</b>	30 minute pre-preparation work: contacting OSU Extension to register, bus arrangements, and other logistics. There are optional pre/post activity ideas to use with the classes that can be used for up to 10 hours of instruction, if desired.
<b>Number of times presented/yr:</b>	2nd week of May
<b>Partners:</b>	Agencies, non-profits, colleges, businesses
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.2.A.1(2)</b> Describe the basic needs of living things. <b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics. <b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there. <b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.
<b>Possible Connections to Fifth Grade Standards:</b>	<b>SC.05.1.C.1(5)</b> Identify ways to produce heat including light, burning, electricity, friction, and as a by-product of mechanical and electrical machines. <b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics. <b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics. <b>SC.05.2.C.1(1)</b> Describe the relationship between

	<p>characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SS.05.3.0.4(2)</b> Identify and locate major landforms, bodies of water, vegetation, and climate found in regions of the United States.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(5)</b> Identify constraints on human activity caused by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms,</p>

	<p>vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<b>Possible Connections to Career Related Learning Standards:</b>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication.</p> <p><b>Teamwork:</b> Demonstrate skills that improve team effectiveness.</p>



<b>Mildred Kanipe Memorial Park</b>	
<b>Description:</b>	Students learn how to restore the park by tree planting, noxious weed control, trail reconstruction, wetland restoration, and stream bank stabilization. There is a discussion/background history and students typically go on an interpretive hike looking at past restoration efforts and potential future projects or ecological points of interest.
<b>Program Offered By:</b>	Douglas County Soil and Water Conservation District (agency)
<b>Contact Information:</b>	Jim Lee, Project Manager 541-957-5061 jim.lee@oacd.org
<b>Location:</b>	Mildred Kanipe Memorial Park
<b>Target Audience:</b>	Students in 3-12 grade
<b>Group Size:</b>	Varies depending on classroom size
<b>Program Activities:</b>	Restoration instruction and hands-on learning experience
<b>Cost:</b>	Free
<b>Transportation:</b>	The class usually provides their own transportation, although the District may be able to provide some compensation.
<b>Length of time:</b>	All day
<b>Pre or Post Preparation work:</b>	There is no formal pre or post lesson plan required although the OSU extension video and article called, "Life on the edge, improving riparian function," is a good introduction for students.
<b>Number of times presented/yr:</b>	All year with different groups
<b>Partners:</b>	EPA and Title 3 Grant; 10 Community Groups
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic needs of living things. <b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.



	<p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.2(1)</b> Understand the purpose of maps, globes, and other geographic tools.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that</p>

	<p>live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.3.A.1(5)</b> Recognize that discarded products contribute to the problem of waste disposal.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.1(2)</b> Know and use basic map elements to answer geographic questions or display geographic information.</p> <p><b>SS.05.3.0.2(1)</b> Examine and understand how to prepare maps, charts, and other visual representations to locate places and interpret geographic information.</p> <p><b>SS.05.3.0.2(3)</b> Use other visual</p>
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	<p>representations to locate, identify, and distinguish physical and human features of places and regions.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(4)</b> Understand how human activities are affected by the physical environment.</p> <p><b>SS.05.3.0.8(5)</b> Identify constraints on human activity caused by the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to</p>

	<p>environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(11)</b> Give examples of landform changes that occur at different rates.</p> <p><b>SC.08.3.A.2(13)</b> Explain the rock cycle in terms of constructive (crustal deformation, volcanic eruption, and sediment deposition) and destructive (weathering and erosion) forces in land formation.</p> <p><b>SC.08.3.A.2(14)</b> Describe that the total amount of Earth material stays the same as its forms change in the rock cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p>
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	<p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p>

	<p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and</p>
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analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.

**SS.CIM.3.0.1(1)** Understand and use geographic information using a variety of scales, patterns of distribution, and arrangement.

**SS.CIM.3.0.1(2)** Understand the advantages and disadvantages of using various geographic representations to depict and solve geographic problems.

**SS.CIM.3.0.2(1)** Interpret and evaluate information using complex geographic representations.

**SS.CIM.3.0.8(1)** Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.

**SS.CIM.3.0.8(2)** Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.

**SS.CIM.3.0.8(3)** Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.

**SS.CIM.3.0.8(4)** Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.

**SS.CIM.3.0.8(5)** Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.

**SS.CIM.5.0.1(1)** Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.

**SS.CIM.5.0.3(1)** Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.

	<p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Forming the Question/Hypothesis: Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Designing the Investigation: Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Collecting and Presenting Data: Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyzing Data and Interpreting Results: Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p>



	<p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Agribusiness, Plant Science/Horticulture, and Power, Structure, and Technology.</p> <p><b>Environmental Sciences Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality.</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife</p>

	<p>Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources.</p> <p><b>Construction Cluster:</b> Construction, Design/Pre-Construction, and Maintenance/Operations.</p> <p><b>Engineering Cluster:</b> Architectural Systems, Civil and Infrastructure Systems, and Mechanical Systems.</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of</p>

	<p>team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Asses personal characteristics related to educational and career goals. Research and analyze career and educational information. Demonstrate job-seeking skills.</p>
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<b>Oregon Natural Resources Research Institute</b>	
<b>Description:</b>	Goal of the program is to increase the interest and enthusiasm that students have for the study of math and science, through interaction with professionals in a variety of scientific disciplines. The program is meant to be a resource that aids students in reaching the benchmarks set forth in the state standards of science.
<b>Program Offered By:</b>	Oregon Natural Resources Research Institute (non-profit)
<b>Contact Information:</b>	Bob Craft 541-680-7938, bcraft@smotis.com  Lenny Schussel 541-679-4997 lenny@howdt.com
<b>Location:</b>	Statewide
<b>Target Audience:</b>	All students
<b>Group Size:</b>	Up to 25, optimum 5-10
<b>Program Activities:</b>	Research projects, visiting lecturer, and online school enrichment knowledge base
<b>Cost:</b>	Free
<b>Transportation:</b>	Worked out through school transportation provider.
<b>Length of time:</b>	Semester or full year
<b>Pre or Post Preparation work:</b>	Teacher referral
<b>Number of times presented/yr:</b>	Available upon request
<b>Partners:</b>	Touch A Life Learning Partnership, Wildlife Safari, BLM, Wolf Creek Job Corps, and other organizations
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties. <b>SC.03.1.A.2(1)</b> Describe changes that occur in matter. <b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.

	<p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.A.1(1)</b> Identify substances as they exist in different states of matter.</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.1(3)</b> Identify unique properties of each state of matter.</p> <p><b>SC.05.1.A.2(1)</b> Describe the ability of matter to change state by heating and cooling.</p> <p><b>SC.05.1.A.2(2)</b> Recognize that heating and cooling cause changes in states of matter.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.B.1(2)</b> Describe the life cycle</p>

	<p>of common organisms.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.3.A.1(5)</b> Recognize that discarded products contribute to the problem of waste disposal.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p>
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	<p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(1)</b> Compare properties of specific substances.</p> <p><b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.1.A.2(2)</b> Distinguish between examples of chemical changes and physical changes.</p> <p><b>SC.08.1.A.2(3)</b> Describe processes that will separate the components of physical mixtures.</p> <p><b>SC.08.1.A.2(4)</b> Describe events that accompany chemical changes, but not physical changes.</p> <p><b>SC.08.1.A.2(5)</b> Explain how our understanding of the nature of matter and chemical reactions has changed over time.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most</p>

	<p>ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.1(1)</b> Describe properties of elements and their relationship to the periodic table.</p> <p><b>SC.CIM.1.A.1(2)</b> Explain atoms and their base components (protons, neutrons, and electrons) as a basis for</p>



all matter.

**SC.CIM.1.A.1(3)** Read and interpret the periodic table, recognizing the relationship of the chemical and physical properties of the elements to their position on the periodic table.

**SC.CIM.1.A.2(1)** Analyze the effects of various factors on physical changes and chemical reactions.

**SC.CIM.1.A.2(2)** Describe how transformations among solids, liquids, and gases occur (change of state).

**SC.CIM.1.A.2(3)** Identify factors that can influence change of state, including temperature, pressure, and concentration.

**SC.CIM.1.A.2(4)** Describe chemical reactions in terms of reactants and products.

**SC.CIM.1.A.2(5)** Describe the factors that affect the rate of chemical reactions.

**SC.CIM.2.A.1(7)** Describe photosynthesis as a chemical process and part of the carbon cycle.

**SC.CIM.2.B.1(1)** Explain laws of heredity and their relationship to the structure and function of DNA.

**SC.CIM.2.B.1(4)** Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in organisms.

**SC.CIM.2.B.1(6)** Recognize the existence of technology that can alter and/or determine inherited traits.

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

**SC.CIM.2.C.1(4)** Explain how the balance of resources will change with

	<p>the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(7)</b> Recognize that natural selection and its evolutionary consequences provide an explanation for the fossil record as well as an explanation for the molecular similarities among varied species.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p>

	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p>
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	<p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Sciences/Horticulture, and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p> <p><b>Information and Communications Technology (ICT) Cluster:</b> Information Support and Services and Programming and Software Development</p> <p><b>Computer Systems Cluster:</b> Network Systems, Software Engineering, and Telecommunications</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with</p>

	<p>colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Write instructions, technical reports, and business communications clearly and accurately. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain appropriate tools and technologies appropriate for the workplace. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information. Demonstrate job-seeking skills.</p>
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<b>Natural Resource Education Program</b>	
<b>Description:</b>	Classes include earth science, freshwater macroinvertebrates, chemical water quality monitoring, wetlands invasive species and remediation, forestry, and stream studies.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Christine Spencer, Director of Education 541-679-6761x260 <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Wildlife Safari
<b>Target Audience:</b>	High school students
<b>Group Size:</b>	Varies depending on class size
<b>Program Activities:</b>	Field-trip service
<b>Cost:</b>	Free--transport & equipment included
<b>Transportation:</b>	Provided by Wildlife Safari
<b>Length of time:</b>	All Day
<b>Pre or Post Preparation work:</b>	Teachers need to contact Wildlife Safari to set up program at their school.
<b>Number of times presented/yr:</b>	Varies depending on response from schools.
<b>Partners:</b>	Bureau of Land Management
<b>Possible Connections to CIM Standards:</b>	<p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.1.A.2(4)</b> Describe chemical reactions in terms of reactants and products.</p> <p><b>SC.CIM.1.A.2(5)</b> Describe the factors that affect the rate of chemical reactions.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p>

	<p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources.</p> <p><b>SC.CIM.3.A.2(1)</b> Analyze the relationship between global energy transfer and climate.</p> <p><b>SC.CIM.3.A.2(2)</b> Describe the effect of various gases in the atmosphere on the amount of energy retained by the Earth system.</p> <p><b>SC.CIM.3.A.2(3)</b> Describe how solar radiation and the amount that reaches Earth is affected by stratospheric ozone.</p> <p><b>SC.CIM.3.A.2(4)</b> Describe how differential heating of the Earth's surface, atmosphere, and oceans produces wind and ocean currents.</p> <p><b>SC.CIM.3.A.2(5)</b> Analyze evidence of ongoing evolution of the Earth system.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.3.A.2(9)</b> Describe how earthquakes, volcanic eruptions, mountain building, and continental movements result from slow plate</p>
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	<p>motions.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare the affect on the environment.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the relationships</p>

	<p>among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that</p>
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	<p>exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Identify and analyze an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Write instructions, technical reports, and business communications clearly and accurately.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p>

	<p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Describe the changing nature of work, workplaces, and work processes on individuals, organizations, and systems. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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## The ZooSchool

<b>Description:</b>	School groups enjoy visiting the Wildlife Safari for scientific field trips. The Education Department gives guided tours for students and teachers. As the groups travel through the entire park, the staff relates each individual species and habitat to the lesson being learned in the students' class. If the group is small, events such as Sika Deer feeds, Hippo feeds, or Elephant encounters are offered. Each class also gets the opportunity to touch our Education animal ambassadors and receive a private presentation.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Christine Spencer, Director of Education 541-679-6761x260 <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Wildlife Safari
<b>Target Audience:</b>	Ages 4-12
<b>Group Size:</b>	20 maximum
<b>Program Activities:</b>	Tour and live show
<b>Cost:</b>	\$6.00 per student \$4.00 for members
<b>Transportation:</b>	Not available
<b>Length of time:</b>	All day
<b>Pre or Post Preparation work:</b>	None
<b>Number of times presented/yr:</b>	All year
<b>Partners:</b>	Varied
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p>

<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems</p> <p><b>Natural Resources Management Cluster:</b> Fish and Wildlife Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Employment Foundations:</b> Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>



<b>Jackson Bottoms Wetland Preserve</b>	
<b>Description:</b>	Offers a wide range of educational programs for all ages. A new Wetlands Education Center provides interactive exhibits, indoor multipurpose classroom, volunteer works space, and restrooms.
<b>Program Offered By:</b>	Jackson Bottoms Wetland Preserve
<b>Contact Information:</b>	Sarah Pinnock 503-681-6278 <a href="mailto:sarahp@ci.hillsboro.or.us">sarahp@ci.hillsboro.or.us</a>
<b>Location:</b>	Hillsboro, OR
<b>Target Audience:</b>	Grades K-12
<b>Group Size:</b>	Varies depending on class size.
<b>Program Activities:</b>	Active participatory learning opportunities
<b>Cost:</b>	Call for rates.
<b>Transportation:</b>	OFRI may provide busing to those who apply
<b>Length of time:</b>	All day
<b>Pre or Post Preparation work:</b>	Teachers need to apply for buses through OFRI, make other travel arrangements, and other logistics associated with field trips at their school.
<b>Number of times presented/yr:</b>	All year M-S 10am-4pm
<b>Partners:</b>	OFRI
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations.</p>



Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.

**SC.03.4.B.1(1)** Plan a simple investigation.

**SC.03.4.C.1(1)** Collect data from an investigation.

**SC.03.4.D.1(1)** Use the data collected from an investigation to explain the results.

**SS.03.3.0.3(1)** Identify major physical features and describe how they are represented on maps, globes, and other tools.

**SS.03.3.0.4(1)** Identify physical characteristics of places and compare them.

**SS.03.5.0.1(1)** Identify an issue or problem that can be studied.

**SS.03.5.0.2(1)** Gather information relating to an issue or problem.

**SS.03.5.0.4(1)** Identify how people or other living things might be affected by an event, issue, or problem.

**E.03.1.C.1(1)** Read regular words with several syllables.

**E.03.1.D.1(1)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.

**E.03.1.E.1(1)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as

	<p>student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.2(1)</b> Describe patterns of seasonal weather.</p> <p><b>SC.05.4.A.1(1)</b> Make observations.</p>

Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.

**SC.05.4.B.1(1)** Design a simple scientific investigation to answer questions or test hypotheses.

**SC.05.4.C.1(1)** Collect, organize, and summarize data from investigations.

**SC.05.4.D.1(1)** Summarize, analyze, and interpret data from investigations.

**SS.05.3.0.1(1)** Define basic geography vocabulary such as concepts of location, direction, distance, scale, movement, and region using appropriate words and diagrams.

**SS.05.3.0.3(4)** Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.

**SS.05.3.0.8(1)** Understand how physical environments are affected by human activities.

**SS.05.3.0.8(2)** Understand how and why people alter the physical environment.

**SS.05.3.0.8(3)** Describe how human activity can impact the environment.

**SS.05.3.0.8(5)** Identify constraints on human activity caused by the physical environment.

**SS.05.3.0.8(6)** Understand how the physical environment presents opportunities for economic and recreational activity.

**E.05.1.F.1(2)** Use the features of informational texts, such as formats, graphics, diagrams, illustrations, charts, maps, and organizational devices to find information and support understanding.

**E.05.1.F.1(4)** Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).

**E.05.3.L.1(1)** Write research reports

	<p>about ideas, issues, or events:</p> <ul style="list-style-type: none"> <li>• Frame questions that direct the investigation.</li> <li>• Establish a main idea or topic.</li> <li>• Use a variety of information sources, including firsthand interviews, reference materials, and electronic resources to locate information to support the topic.</li> <li>• Cite references appropriately.</li> </ul>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore</p>

strategies for addressing this problem.

**SC.08.3.A.2(2)** Explain the water cycle.

**SC.08.3.A.2(6)** Explain how geography affects climate.

**SC.08.3.A.2(9)** Identify the processes that result in different kinds of landforms.

**SC.08.3.A.2(10)** Identify factors affecting water flow, soil erosion, and deposition.

**SC.08.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.

**SC.08.4.B.1(1)** Design a scientific investigation to answer questions or test hypotheses.

**SC.08.4.C.1(1)** Collect, organize, and display sufficient data to support analysis.

**SC.08.4.D.1(1)** Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.

**SS.08.3.0.1(1)** Understand fundamental geography vocabulary such as concepts of distance, latitude, longitude, interdependence, accessibility, and connections.

**SS.08.3.0.2(2)** Use maps, charts, graphs, and photographs to analyze spatial distributions and patterns.

**SS.08.3.0.8(1)** Understand how human modification of the physical environment in a place affects both that place and other places.

**SS.08.3.0.8(3)** Understand how clearing vegetation affects the physical environment of a place and other places.

**SS.08.3.0.8(4)** Understand how changes in a physical environment affect human activity.

	<p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.G.1(2)</b> Clarify understanding of informational texts by creating detailed outlines, graphic organizers, diagrams, logical notes, or summaries.</p> <p><b>E.08.3.L.1(1)</b> Write research reports:</p> <ul style="list-style-type: none"> <li>• Specify a thesis.</li> <li>• Use a variety of primary and secondary sources, and distinguish the nature and value of each.</li> <li>• Include important ideas, concepts, and direct quotations from significant information sources, and paraphrase and summarize different perspectives on the topic, as appropriate.</li> <li>• Organize and display information on charts, tables, maps, and graphs.</li> <li>• Document sources.</li> </ul>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p>

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

**SC.CIM.2.C.1(4)** Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.

**SC.CIM.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.

**SC.CIM.4.B.1(1)** Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.

**SC.CIM.4.C.1(1)** Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.

**SC.CIM.4.D.1(1)** Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.

**SS.CIM.3.0.2(1)** Interpret and evaluate information using complex geographic representations.

**SS.CIM.3.0.8(4)** Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.

**SS.CIM.3.0.8(5)** Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.

**E.CIM.1.F.1(1)** Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical

	<p>documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>E.CIM.1.G.1(1)</b> Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.</p> <p><b>E.CIM.3.L.1(1)</b> Write analytical essays and research reports:</p> <ul style="list-style-type: none"> <li>• Gather evidence in support of a thesis, including information on all relevant perspectives.</li> <li>• Convey information and ideas from primary and secondary sources accurately and coherently.</li> <li>• Make distinctions between the relative value and significance of specific data, facts, and ideas.</li> <li>• Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.</li> <li>• Anticipate and address readers' potential misunderstandings, biases, and expectations.</li> <li>• Use technical terms and notations accurately.</li> <li>• Document sources.</li> </ul>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p>



	<p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the spatial concepts of location, distance, direction, scale, movement, and region.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p>
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	<p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Demonstrate general understanding of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Write narrative, expository, and persuasive texts, using a variety of written forms—including journals, essays, short stories, poems, research reports, research papers, business and technical writing—to express ideas appropriate to audience and purpose across the subject areas.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Environmental Planning and Administration and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve</p>

	<p>problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Larch Mountain Environmental Education Site</b>	
<b>Description:</b>	This forest site contains old-growth characteristics with Douglas fir and western hemlock along with younger planted trees. There is a trailhead with limited parking, a vault type restroom, designated trails and 2 open-air, 24-foot shelters with picnic tables. This site is in a primitive, natural setting and can be used for habitat, stream, soils, and forest ecology activities. Staff assistance is available for planning and developing science-based field trips, or you can plan your own activities.
<b>Program Offered By:</b>	Bureau of Land Management (agency)
<b>Contact Information:</b>	Scott Brayton Bureau of Land Management 503-375-5638 <a href="mailto:scott_brayton@or.blm.gov">scott_brayton@or.blm.gov</a>  <a href="http://www.or.blm.gov/salem/html/rec/larch.htm">www.or.blm.gov/salem/html/rec/larch.htm</a>
<b>Location:</b>	Corbett, OR
<b>Target Audience:</b>	Grades K-12
<b>Group Size:</b>	Varies depending on size of class
<b>Program activities:</b>	Field trip, outdoor program
<b>Cost:</b>	Free
<b>Transportation:</b>	OFRI may provide busing to those who apply.
<b>Length of time:</b>	Varies depending on activities
<b>Pre or Post Preparation work:</b>	Contact BLM before visiting to make site reservations.
<b>Number of times presented/yr:</b>	Varies
<b>Partners:</b>	OFRI
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.03.1.D.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Draw upon a variety of

	<p>comprehension strategies as needed-re-reading, self-correcting, summarizing, class and group discussions, generating and responding to essential questions, making predictions, and comparing information from several sources.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>
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	<p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship</p>

	<p>between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(1)</b> Examine and understand how to prepare maps, charts, and other visual representations to locate places and interpret geographic information.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and</p>
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	<p>recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and</p>



	<p>chemical changes.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment</p>
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	<p>in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.E.1(7)</b> Understand technical vocabulary in subject area reading.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p>

	<p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.2(2)</b> Use a variety of geographic representations to analyze information and draw conclusions about geographic issues.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue,</p>
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	<p>problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p>

	<p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular</p>

	<p>attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Port Blakely Tree Farms</b>	
<b>Description:</b>	Offers an interactive forestry experience in which students identify trees, observe signs of wildlife, investigate tree growth, and hunt for insects as they traverse an ADA accessible trail. The trail features a variety of forest types including a plantation, riparian area, and mature forest. Picnic shelter and restrooms available.
<b>Program Offered By:</b>	Port Blakely (private company)
<b>Contact Information:</b>	Cindy Quam 503-399-8085 <a href="mailto:cquam@portblakely.com">cquam@portblakely.com</a>
<b>Location:</b>	Molalla, OR
<b>Target Audience:</b>	Grades 3-6
<b>Group Size:</b>	Varies depending on size of class
<b>Program activities:</b>	Field trip, outdoor program
<b>Cost:</b>	Free
<b>Transportation:</b>	OFRI may provide busing to those who apply.
<b>Length of time:</b>	Varies depending on activities
<b>Pre or Post Preparation work:</b>	Teachers need to apply for busing through OFRI and make reservations to use the outdoor classroom area.
<b>Number of times presented/yr:</b>	Varies
<b>Partners:</b>	OFRI
<b>Possible Connections to Third Grade Standards:</b>	<p><b>E.03.1.C.1(1)</b> Read regular words with several syllables.</p> <p><b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.03.1.D.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Draw upon a variety of comprehension strategies as needed-re-reading, self-correcting, summarizing, class and group discussions, generating and responding to essential questions, making predictions, and comparing information</p>

from several sources.

**E.03.1.E.1(1)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards)

Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.

**E.03.1.F.1(1)** Read written directions, signs, captions, warning labels, and informational books.

**SC.03.1.A.1(1)** Describe objects according to their physical properties.

**SC.03.1.A.2(1)** Describe changes that occur in matter.

**SC.03.2.A.1(1)** Recognize characteristics that are similar and different between organisms.

**SC.03.2.A.1(2)** Describe the basic needs of living things.

**SC.03.2.B.1(1)** Describe how related plants and animals have similar characteristics.

**SC.03.2.C.1(1)** Describe a habitat and the organisms that live there.

**SC.03.2.C.1(2)** Identify how some animals gather and store food, defend themselves, and find shelter.

**SC.03.3.A.1(1)** Recognize physical differences in Earth materials.

**SC.03.4.A.1(1)** Make observations.

Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.

**SC.03.4.B.1(1)** Plan a simple investigation.

**SC.03.4.C.1(1)** Collect data from an investigation.

**SC.03.4.D.1(1)** Use the data collected from an investigation to explain the results.

**SS.03.3.0.4(1)** Identify physical



	<p>characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their</p>

	<p>functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(1)</b> Examine and understand how to prepare maps, charts, and other visual representations to locate places and interpret geographic information.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical</p>
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	<p>environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address</p>

	<p>questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management</b></p>

	<p><b>Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>



<b>Science in the Forest</b>	
<b>Description:</b>	Comprehensive experiential science inquiry education program that uses the forest to deepen and enliven science curriculum with cutting edge classroom activities and rigorous, hands-on outdoor field studies. The educational goal is to accommodate the full range of learning abilities, cultures, and ages through a flexible science program that actively engages participants in the science inquiry process. Students are challenged to use their creative and critical higher order thinking skills, cultivate interest and skills in science and math.
<b>Program Offered By:</b>	Wolfree Inc (non-profit)
<b>Contact Information:</b>	Wolfree 503-239-1820 <a href="mailto:wolfree@beoutside.com">wolfree@beoutside.com</a>
<b>Location:</b>	Northwest and Central Oregon
<b>Target Audience:</b>	Grades 5-12
<b>Group Size:</b>	Varies depending on size of class
<b>Program activities:</b>	Field trip, outdoor program
<b>Cost:</b>	Free
<b>Transportation:</b>	OFRI may provide busing to those who apply.
<b>Length of time:</b>	Varies depending on activities
<b>Pre or Post Preparation work:</b>	Teachers need to apply for busing through OFRI. <a href="http://www.beoutside.org/pdf/ChaperoneGuidelines.05-06/OFRI-SITFbusform.05-06.pdf">http://www.beoutside.org/pdf/ChaperoneGuidelines.05-06/OFRI-SITFbusform.05-06.pdf</a>
<b>Number of times presented/yr:</b>	Varies
<b>Partners:</b>	OFRI
<b>Possible Connections to Fifth Grade Standards:</b>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p>

	<p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(1)</b> Examine and understand how to prepare maps, charts, and other visual representations to locate places and interpret geographic information.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and</p>
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	<p>recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy</p>

	<p>then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<b>Possible Connections</b>	<b>E.CIM.1.C.1(1)</b> Read at an independent and

**to CIM Standards:**

instructional reading level appropriate to grade level.

**E.CIM.1.E.1(1)** Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.

**E.CIM.1.E.1(7)** Understand technical vocabulary in subject area reading.

**SC.CIM.1.A.2(2)** Describe how transformations among solids, liquids, and gases occur (change of state).

**SC.CIM.2.A.1(7)** Describe photosynthesis as a chemical process and part of the carbon cycle.

**SC.CIM.2.C.1(1)** Describe and analyze the effect of species, including humans, on an ecosystem.

**SC.CIM.2.C.1(2)** Predict outcomes of changes in resources and energy flow in an ecosystem.

**SC.CIM.2.C.1(3)** Explain how humans and other species can impact an ecosystem.

**SC.CIM.2.C.1(4)** Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.

**SC.CIM.4.A.1(1)** Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.

**SC.CIM.4.B.1(1)** Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.

**SC.CIM.4.C.1(1)** Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.

**SC.CIM.4.D.1(1)** Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.

**SS.CIM.3.0.2(2)** Use a variety of geographic representations to analyze information and draw conclusions about geographic issues.

**SS.CIM.3.0.8(1)** Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.

**SS.CIM.3.0.8(2)** Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.

**SS.CIM.3.0.8(4)** Identify and give examples of

	<p>changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and</p>

	<p>stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, and Forestry and Forest Products</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills</p>

	<p>that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Environmental Education Programs</b>	
<b>Description:</b>	Environmental education programs that teach environmental and biological subjects that meet bench marks set by the state and include subjects such as habitat, tracking, birds, aquatic life, insects, watershed ecology, pollination, plant adaptation, journaling, and more.
<b>Program Offered By:</b>	Oregon Garden (non-profit)
<b>Contact Information:</b>	Fran Gray, Environmental Education Coordinator 503-874-8248  <a href="http://www.oregongarden.org/index.html">http://www.oregongarden.org/index.html</a>
<b>Location:</b>	Silverton, OR
<b>Target Audience:</b>	K-12 students, home groups
<b>Group Size:</b>	Varies depending on class
<b>Program activities:</b>	Hands-on learning, outdoor activities, field trip
<b>Cost:</b>	\$60 per program (1.5 hours), \$3 per student admission into garden, and chaperones are admitted free. There is a 5th grade grant program available to all 5th grade classes in OR. The grant covers transportation, cost of program, cost of admission into garden, and bus driver for one visit a year.
<b>Transportation:</b>	Must be provided by schools except 5th grade grant winners.
<b>Length of time:</b>	Programs range from 45-90 minutes
<b>Pre or Post Preparation work:</b>	Teachers need to register for a program and make travel arrangements
<b>Number of times presented/yr:</b>	Open all year except holidays
<b>Partners:</b>	City of Silverton, private companies, and non-profits
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key

	<p>skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p> <p><b>E.03.1.D.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Point to or clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.03.1.D.1(5)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Read longer selections and books independently.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>E.03.1.F.1(3)</b> Interpret information from diagrams, charts, and graphs.</p> <p><b>E.03.1.G.1(4)</b> Summarize major points from informational text.</p> <p><b>E.03.1.H.1(3)</b> Ask how, why, and what-if questions in interpreting informational texts.</p> <p><b>E.03.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing, use diagrams and charts to develop ideas, and make a list or notebook of ideas.</p> <p><b>E.03.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key</p>
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	<p>skills that support classroom instruction of the standards) With some guidance, use all aspects of the writing process (e.g., prewriting, drafting, conferencing, revising, editing) in producing compositions and reports.</p> <p><b>E.03.3.A.1(7)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Present and discuss own writing with other students, and respond helpfully to other students' compositions.</p> <p><b>E.03.3.B.1(1)</b> Write appropriately for purpose and audience.</p> <p><b>E.03.3.B.1(2)</b> Create a single paragraph with a topic sentence, simple supporting facts and details, and a concluding sentence.</p> <p><b>E.03.3.B.1(3)</b> Use vivid adjectives and action verbs.</p> <p><b>E.03.3.B.1(5)</b> Write correctly complete sentences of statement, command, question or exclamation.</p> <p><b>E.03.3.C.1(7)</b> Notice when words are not correct, and use a variety of strategies to correct (e.g., word lists, dictionary).</p> <p><b>E.03.3.D.1(1)</b> Use subjects and verbs that are in agreement (we are instead of we is).</p> <p><b>E.03.3.G.1(1)</b> Write legibly in cursive and manuscript, leaving space between letters in a word, words in a sentence, and between words and the edges of the paper.</p> <p><b>E.03.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p>
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	<p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p> <p><b>SS.03.4.D.2(1)</b> Understand events from local history.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.2(1)</b> Gather information relating to an issue or problem.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Students:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and</p>

	<p>contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(1)</b> Read textbooks, biographical sketches, letters, diaries, directions, procedures, magazines, news stories, and almanacs.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>E.05.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.05.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.</p> <p><b>E.05.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose-</p>
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	<p>personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.05.3.A.1(9)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections of specific errors.</p> <p><b>E.05.3.B.1(6)</b> To achieve clarity of meaning and to enhance flow and rhythm, correctly use prepositional phrases, appositives, main clauses, and subordinate clauses.</p> <p><b>E.05.3.D.1(3)</b> Ensure that verbs agree with their subjects.</p> <p><b>E.05.3.G.1(1)</b> Write legibly in cursive or manuscript.</p> <p><b>E.05.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p>
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	<p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.2(1)</b> Describe patterns of seasonal weather.</p> <p><b>SC.05.3.A.2(5)</b> Identify effects of wind and water on Earth materials using appropriate models.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.6(1)</b> Identify patterns of migration and cultural interaction in the United States.</p> <p><b>SS.05.3.0.6(2)</b> Understand how physical geography affects the routes, flow, and destinations of migration.</p> <p><b>SS.05.3.0.6(3)</b> Explain how migrations affect the culture of emigrants and native populations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the</p>
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	<p>physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p> <p><b>SS.05.4.A.3(1)</b> Understand how history can be organized using themes, geography, or chronology.</p> <p><b>SS.05.4.C.1(3)</b> Understand the impact of early European exploration on Native Americans and on the land.</p> <p><b>SS.05.4.D.1(1)</b> Understand how individuals changed or significantly influenced the course of Oregon state history.</p> <p><b>SS.05.4.D.2(1)</b> Understand how individuals changed or significantly influenced the course of local history.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the</p>

	<p>Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.G.1(1)</b> Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.</p> <p><b>E.08.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.</p> <p><b>E.08.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.08.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose—personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.08.3.A.1(9)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections</p>
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	<p>of specific errors.</p> <p><b>E.08.3.B.1(4)</b> Use descriptive language that clarifies and enhances ideas by establishing tone and mood through figurative language, sensory images, and comparisons.</p> <p><b>E.08.3.B.1(5)</b> To present a lively and effective personal style, use varied sentence types (simple, compound, complex, and compound-complex) and sentence openings.</p> <p><b>E.08.3.C.1(1)</b> Use correct spelling conventions.</p> <p><b>E.08.3.D.1(1)</b> Use consistent verb tenses.</p> <p><b>E.08.3.D.1(2)</b> Correctly use frequently misused words (e.g., among, between; fewer, less; bring, take; and good, well).</p> <p><b>E.08.3.F.1(1)</b> Use correct capitalization.</p> <p><b>E.08.3.G.1(1)</b> Write legibly.</p> <p><b>E.08.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of</p>
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	<p>organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(1)</b> Explain the water cycle and its relationship to weather and climatic patterns.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.6(3)</b> Recognize and identify patterns of migration streams in U.S. history.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.</p> <p><b>SS.08.4.C.1(4)</b> Understand the effects of</p>
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	<p>19th century westward migration, the idea of Manifest Destiny, European immigration, and rural to urban migration on indigenous populations and newcomers in the United States.</p> <p><b>SS.08.4.D.1(1)</b> Understand how various groups of people were affected by events and developments in Oregon state history.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus</p>

	<p>routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.CIM.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.CIM.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose- personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.CIM.3.B.1(3)</b> Use precise language, action verbs, sensory details, and appropriate modifiers.</p> <p><b>E.CIM.3.C.1(1)</b> Produce writing that shows accurate spelling.</p> <p><b>E.CIM.3.D.1(3)</b> Demonstrate an understanding of proper English usage, including the consistent use of verb tenses and forms.</p> <p><b>E.CIM.3.G.1(1)</b> Write legibly.</p> <p><b>E.CIM.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.CIM.2.A.1(3)</b> Identify unique structures in cells from plants, animals, and prokaryotes.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p>
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	<p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.4.D.1(1)</b> Understand the causes, characteristics, and impact of political, economic, and social developments in Oregon state history.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<b>Possible Connections to</b>	<b>CCG:</b> Analyze words, recognize words,

**Common Curriculum Goals:**

and learn to read grade-level text fluently across the subject areas.

**CCG:** Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.

**CCG:** Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.

**CCG:** Pre-write, draft, revise, edit, and publish across the subject areas.

**CCG:** Understand the characteristics, structure, and functions of organisms.

**CCG:** Understand the transmission of traits in living things.

**CCG:** Understand the relationships among living things and between living things and their environments.

**CCG:** Formulate and express scientific questions or hypotheses to be investigated.

**CCG:** Design safe and ethical scientific investigations to address questions or hypotheses.

**CCG:** Conduct procedures to collect, organize, and display scientific data.

**CCG:** Analyze scientific information to develop and present conclusions.

**CCG:** Understand that any collection of things that have an influence on one another can be thought of as a system.

**CCG:** Understand that both patterns of change and stability are important in the natural world.

**CCG:** Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.

**CCG:** Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.

**CCG:** Understand the relationship that exists between science and technology.

**CCG:** Analyze the causes of human migration (e.g., density, food and water

	<p>supply, transportation and communication systems) and its effects (e.g., impact on physical and human systems).</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments within and across eras of U.S. history.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to</p>

	<p>effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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## Rediscovery Forest Education Program

<b>Description:</b>	The Rediscovery Forest is a demonstration forest that gives students hands-on opportunities to engage in activities involving tree biology, wildlife habitat, plant identification and forest ecology and management in the Oregon Garden Rediscovery Forest. A wide range of forestry topics are available to meet individual classroom needs. The forestry program is structured to meet Oregon Department of Education benchmarks and content standards.
<b>Program Offered By:</b>	Oregon Forest Resources Institute (non-profit)
<b>Contact Information:</b>	Julie Woodward 503-584-7259 <a href="mailto:woodward@ofri.com">woodward@ofri.com</a>  <a href="http://www.oregongarden.org/index.html">http://www.oregongarden.org/index.html</a>
<b>Location:</b>	Silverton, OR
<b>Target Audience:</b>	K-12 students, home groups, etc.
<b>Group Size:</b>	Varies depending on class
<b>Program activities:</b>	Hands-on learning, outdoor activities, field trip
<b>Cost:</b>	OFRI covers the program cost, admission to the Garden, and transportation costs. Participants must submit a request form and an additional transportation reimbursement form. After a review of applications, participants will be contacted with details of their trip.
<b>Transportation:</b>	Participants may be reimbursed for their travel. Participants must submit a transportation reimbursement form.
<b>Length of time:</b>	Varies depending on program
<b>Pre or Post Preparation work:</b>	Teachers need to register for a program and make travel arrangements.
<b>Number of times presented/yr:</b>	Open all year except holidays
<b>Partners:</b>	The Oregon Garden, Chemeketa Community College, private companies, non-profits, and municipalities
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables.



	<p><b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p> <p><b>E.03.1.D.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Point to or clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.03.1.D.1(5)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Read longer selections and books independently.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>E.03.1.F.1(3)</b> Interpret information from diagrams, charts, and graphs.</p> <p><b>E.03.1.G.1(4)</b> Summarize major points from informational text.</p> <p><b>E.03.1.H.1(3)</b> Ask how, why, and what-if questions in interpreting informational texts.</p> <p><b>E.03.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key</p>
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	<p>skills that support classroom instruction of the standards) Discuss ideas for writing, use diagrams and charts to develop ideas, and make a list or notebook of ideas.</p> <p><b>E.03.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) With some guidance, use all aspects of the writing process (e.g., prewriting, drafting, conferencing, revising, editing) in producing compositions and reports.</p> <p><b>E.03.3.A.1(7)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Present and discuss own writing with other students, and respond helpfully to other students' compositions.</p> <p><b>E.03.3.B.1(1)</b> Write appropriately for purpose and audience.</p> <p><b>E.03.3.B.1(2)</b> Create a single paragraph with a topic sentence, simple supporting facts and details, and a concluding sentence.</p> <p><b>E.03.3.B.1(3)</b> Use vivid adjectives and action verbs.</p> <p><b>E.03.3.B.1(5)</b> Write correctly complete sentences of statement, command, question or exclamation.</p> <p><b>E.03.3.C.1(7)</b> Notice when words are not correct, and use a variety of strategies to correct (e.g., word lists, dictionary).</p> <p><b>E.03.3.D.1(1)</b> Use subjects and verbs that are in agreement (we are instead of we is).</p> <p><b>E.03.3.G.1(1)</b> Write legibly in cursive and manuscript, leaving space between letters in a word, words in a sentence, and between words and the edges of the paper.</p> <p><b>E.03.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar</p>
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	<p>characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.3.A.2(1)</b> Identify daily and seasonal weather changes.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p> <p><b>SS.03.4.D.2(1)</b> Understand events from local history.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.2(1)</b> Gather information relating to an issue or problem.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Students:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p>

	<p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(1)</b> Read textbooks, biographical sketches, letters, diaries, directions, procedures, magazines, news stories, and almanacs.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>E.05.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.05.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and</p>
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	<p>collaboratively.</p> <p><b>E.05.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose- personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.05.3.A.1(9)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections of specific errors.</p> <p><b>E.05.3.B.1(6)</b> To achieve clarity of meaning and to enhance flow and rhythm, correctly use prepositional phrases, appositives, main clauses, and subordinate clauses.</p> <p><b>E.05.3.D.1(3)</b> Ensure that verbs agree with their subjects.</p> <p><b>E.05.3.G.1(1)</b> Write legibly in cursive or manuscript.</p> <p><b>E.05.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p>
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	<p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.2(1)</b> Describe patterns of seasonal weather.</p> <p><b>SC.05.3.A.2(5)</b> Identify effects of wind and water on Earth materials using appropriate models.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.6(1)</b> Identify patterns of migration and cultural interaction in the United States.</p> <p><b>SS.05.3.0.6(2)</b> Understand how physical geography affects the routes, flow, and destinations of migration.</p> <p><b>SS.05.3.0.6(3)</b> Explain how migrations affect the culture of emigrants and native populations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human</p>
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	<p>activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.4.A.2(1)</b> Identify cause and effect relationships in a sequence of events.</p> <p><b>SS.05.4.A.3(1)</b> Understand how history can be organized using themes, geography, or chronology.</p> <p><b>SS.05.4.C.1(3)</b> Understand the impact of early European exploration on Native Americans and on the land.</p> <p><b>SS.05.4.D.1(1)</b> Understand how individuals changed or significantly influenced the course of Oregon state history.</p> <p><b>SS.05.4.D.2(1)</b> Understand how individuals changed or significantly influenced the course of local history.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting key</p>

	<p>skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.G.1(1)</b> Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.</p> <p><b>E.08.3.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Discuss ideas for writing with classmates, teachers, and other writers, and develop drafts alone and collaboratively.</p> <p><b>E.08.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.08.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose—personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.08.3.A.1(9)</b> Skill To Support the Standard: (For the purpose of noting key</p>
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	<p>skills that support classroom instruction of the standards) Edit and proofread one's own writing, as well as that of others, using the writing conventions, and, for example, an editing checklist or list of rules with specific examples of corrections of specific errors.</p> <p><b>E.08.3.B.1(4)</b> Use descriptive language that clarifies and enhances ideas by establishing tone and mood through figurative language, sensory images, and comparisons.</p> <p><b>E.08.3.B.1(5)</b> To present a lively and effective personal style, use varied sentence types (simple, compound, complex, and compound-complex) and sentence openings.</p> <p><b>E.08.3.C.1(1)</b> Use correct spelling conventions.</p> <p><b>E.08.3.D.1(1)</b> Use consistent verb tenses.</p> <p><b>E.08.3.D.1(2)</b> Correctly use frequently misused words (e.g., among, between; fewer, less; bring, take; and good, well).</p> <p><b>E.08.3.F.1(1)</b> Use correct capitalization.</p> <p><b>E.08.3.G.1(1)</b> Write legibly.</p> <p><b>E.08.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from</p>
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	<p>interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(1)</b> Explain the water cycle and its relationship to weather and climatic patterns.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.6(3)</b> Recognize and identify patterns of migration streams in U.S. history.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical</p>
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	<p>environment of a place and other places.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.</p> <p><b>SS.08.4.C.1(4)</b> Understand the effects of 19th century westward migration, the idea of Manifest Destiny, European immigration, and rural to urban migration on indigenous populations and newcomers in the United States.</p> <p><b>SS.08.4.D.1(1)</b> Understand how various groups of people were affected by events and developments in Oregon state history.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the</p>

	<p>subject areas.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.CIM.3.A.1(3)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Identify audience and purpose.</p> <p><b>E.CIM.3.A.1(4)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Choose the form of writing that best suits the intended purpose—personal letter, letter to the editor, review, poem, report, or narrative.</p> <p><b>E.CIM.3.B.1(3)</b> Use precise language, action verbs, sensory details, and appropriate modifiers.</p> <p><b>E.CIM.3.C.1(1)</b> Produce writing that shows accurate spelling.</p> <p><b>E.CIM.3.D.1(3)</b> Demonstrate an understanding of proper English usage, including the consistent use of verb tenses and forms.</p> <p><b>E.CIM.3.G.1(1)</b> Write legibly.</p> <p><b>E.CIM.3.H.1(1)</b> Personal Narrative</p> <p><b>SC.CIM.2.A.1(3)</b> Identify unique structures in cells from plants, animals, and prokaryotes.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p>
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	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.4.D.1(1)</b> Understand the causes, characteristics, and impact of political, economic, and social developments in Oregon state history.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and</p>
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	<p>both short- and long-term effects.  <b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.  <b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.  <b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.  <b>CCG:</b> Pre-write, draft, revise, edit, and publish across the subject areas.  <b>CCG:</b> Understand the characteristics, structure, and functions of organisms.  <b>CCG:</b> Understand the transmission of traits in living things.  <b>CCG:</b> Understand the relationships among living things and between living things and their environments.  <b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.  <b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.  <b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.  <b>CCG:</b> Analyze scientific information to develop and present conclusions.  <b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.  <b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.  <b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.  <b>CCG:</b> Describe how daily choices of individuals, taken together, affect global</p>

	<p>resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Analyze the causes of human migration (e.g., density, food and water supply, transportation and communication systems) and its effects (e.g., impact on physical and human systems).</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand and interpret events, issues, and developments within and across eras of U.S. history.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and</p>

	<p>summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Magness Memorial Tree Farm</b>	
<b>Description:</b>	An outdoor education site for school and youth groups. Groups can choose to go at their own pace and take a self-guided tour or get personalized attention with the "Walks and Talks" program designed to complement topics being studied in the classroom. Each of the educational programs and tours has been designed to correlate with age-appropriate state and national curriculum guidelines.
<b>Program Offered By:</b>	World Forestry Center (non-profit)
<b>Contact Information:</b>	Rick Zen, Education Director 503-488-2103 <a href="http://www.worldforestrycenter.org/treefarms/tf_magnesstreefarm.php">http://www.worldforestrycenter.org/treefarms/tf_magnesstreefarm.php</a>
<b>Location:</b>	Located 20 miles south of Portland near Wilsonville, Oregon
<b>Target Audience:</b>	Groups of all ages
<b>Group Size:</b>	Varies depending on class size
<b>Program activities:</b>	Demonstration Forest, outdoor education site, and guided tours
<b>Cost:</b>	Free and open to the public daily. Fees are charged for education classes and rental of facilities: \$4.50 for students and chaperones are free
<b>Transportation:</b>	Must be provided. Schools can apply for transportation reimbursement through OFRI.
<b>Length of time:</b>	Open all year.
<b>Pre or Post Preparation work:</b>	Teachers need to make travel arrangements and apply for travel reimbursements. They also need to make reservations. Both forms can be filled out online.
<b>Number of times presented/yr:</b>	Open all year.
<b>Partners:</b>	Donations from private citizens and landowners
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these</p>

	<p>observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.3(1)</b> Identify major physical features and describe how they are represented on maps, globes, and other tools.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p>

	<p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.2(3)</b> Use other visual representations to locate, identify, and distinguish physical and human features of places and regions.</p> <p><b>SS.05.3.0.7(1)</b> Identify and give examples of issues related to population increases and decreases.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative impacts of population increases or decreases.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of</p>

	<p>energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.A.1(1)</b> Describe, explain, and compare the structure and functions of cells in organisms.</p> <p><b>SC.CIM.2.A.1(3)</b> Identify unique structures in cells from plants, animals, and prokaryotes.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p>

	<p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.B.1(6)</b> Recognize the existence of technology that can alter and/or determine inherited traits.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.1(1)</b> Understand and use geographic information using a variety of scales, patterns of distribution, and arrangement.</p> <p><b>SS.CIM.3.0.6(1)</b> Understand how worldwide transportation and communication patterns have affected the flow and interactions of people, ideas, and products.</p> <p><b>SS.CIM.3.0.6(3)</b> Understand how communication and transportation technologies contribute to trade and cultural convergence.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in</p>
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	<p>human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>

	<p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand economic, cultural, and environmental factors that influence changes in population, and evaluate the consequences of the resulting increases or decreases in population.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and</p>

	<p>technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Johnson-Swanson Memorial Tree Farm</b>	
<b>Description:</b>	Tree farm located near Silverton, OR available for educational visitations or service learning projects.
<b>Program Offered By:</b>	World Forestry Center (non-profit)
<b>Contact Information:</b>	Rick Zen, Education Director 503-488-2103 <a href="http://www.worldforestrycenter.org/treefarms/tf_johnsonswanson.php">http://www.worldforestrycenter.org/treefarms/tf_johnsonswanson.php</a>
<b>Location:</b>	Silverton, OR
<b>Target Audience:</b>	Groups of all ages
<b>Group Size:</b>	Varies depending on class size
<b>Program activities:</b>	Outdoor activities
<b>Cost:</b>	Free
<b>Transportation:</b>	Must be provided. Schools can apply for transportation reimbursement through OFRI.
<b>Length of time:</b>	Varies
<b>Pre or Post Preparation work:</b>	Teachers need to make travel arrangements and apply for travel reimbursements. They also need to make reservations.
<b>Number of times presented/yr:</b>	Currently only open by arrangement.
<b>Partners:</b>	Donations from private citizens and landowners
<b>Possible Connections to Third Grade Standards:</b>	<p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p>

	<p><b>SS.03.3.0.3(1)</b> Identify major physical features and describe how they are represented on maps, globes, and other tools.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.A.1(6)</b> Associate specific structures with their functions in the survival of the organism.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p>

	<p><b>SS.05.3.0.2(3)</b> Use other visual representations to locate, identify, and distinguish physical and human features of places and regions.</p> <p><b>SS.05.3.0.7(1)</b> Identify and give examples of issues related to population increases and decreases.</p> <p><b>SS.05.3.0.7(2)</b> Identify and give examples of positive and negative impacts of population increases or decreases.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p>

	<p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.A.1(1)</b> Describe, explain, and compare the structure and functions of cells in organisms.</p> <p><b>SC.CIM.2.A.1(3)</b> Identify unique structures in cells from plants, animals, and prokaryotes.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.B.1(6)</b> Recognize the existence of technology that can alter and/or determine inherited traits.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p>

	<p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.1(1)</b> Understand and use geographic information using a variety of scales, patterns of distribution, and arrangement.</p> <p><b>SS.CIM.3.0.6(1)</b> Understand how worldwide transportation and communication patterns have affected the flow and interactions of people, ideas, and products.</p> <p><b>SS.CIM.3.0.6(3)</b> Understand how communication and transportation technologies contribute to trade and cultural convergence.</p> <p><b>SS.CIM.3.0.8(1)</b> Understand human modifications of the physical environment and analyze their global impacts and consequences for human activity.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of</p>
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	<p>view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms,</p>

	<p>vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p> <p><b>CCG:</b> Understand economic, cultural, and environmental factors that influence changes in population, and evaluate the consequences of the resulting increases or decreases in population.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p> <p><b>CCG:</b> Explain various perspectives on an event or issue and the reasoning behind them.</p> <p><b>CCG:</b> Identify and analyze an issue.</p> <p><b>CCG:</b> Select a course of action to resolve an issue.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related</p>

to educational and career goals. Research and analyze career and educational information.





<b>The Hinkle Creek Paired Watershed Study</b>	
<b>Description:</b>	10 year research project studying effects of interactions of modern intensive forest management with watershed health, water quality, and fisheries. The site is an ideal setting for research- and issue-based educational programs.
<b>Program Offered By:</b>	Watersheds Research Cooperative and OSU Forest Engineering Department (university)
<b>Contact Information:</b>	Watersheds Research Cooperative, Javier Goirigolzorri 541-957-9001 <a href="mailto:rms@rosenet.net">rms@rosenet.net</a>
<b>Location:</b>	25 miles northeast of Roseburg
<b>Target Audience:</b>	Students, educators, natural resource professionals, landowners, public leaders, and non-profits
<b>Program Activities:</b>	Field trips, tours, observations, and demonstrations
<b>Cost:</b>	Free
<b>Transportation:</b>	Must be provided. Transportation can be reimbursed by OFRI for those who apply.
<b>Length of time:</b>	Varies
<b>Pre or Post Preparation work:</b>	Teachers need to make travel arrangements and contact the Outreach Coordinator for arrangements.
<b>Number of times presented/yr:</b>	All year
<b>Partners:</b>	OSU, Roseburg Forest Products, BLM, USGS, OFRI, OWEB, Umpqua Fisheries Enhancement Derby
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to,

	<p>read, and understand a wide variety of grade-level informational and narrative (story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(1)</b> Read written directions, signs, captions, warning labels, and informational books.</p> <p><b>E.03.1.F.1(3)</b> Interpret information from diagrams, charts, and graphs.</p> <p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p>
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	<p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(2)</b> Use the features of informational texts, such as formats, graphics, diagrams, illustrations, charts, maps, and organizational devices to find information and support understanding.</p> <p><b>E.05.1.F.1(4)</b> Follow multiple-step directions (e.g., for completing an experiment or an activity or for using a product).</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p>

	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p> <p><b>SS.05.3.0.8(4)</b> Understand how human activities are affected by the physical environment.</p>
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	<p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>E.08.1.F.1(3)</b> Understand and explain the use of a complex mechanical device by following technical directions.</p> <p><b>SC.08.1.A.1(3)</b> Recognize that substances may be grouped by their</p>

	<p>physical properties.</p> <p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.2.A.1(4)</b> Identify differences and similarities between plant and animal cells.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p>
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	<p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(2)</b> Use maps, charts, graphs, and photographs to analyze spatial distributions and patterns.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks;</p>

	<p>biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.1.G.1(2)</b> Clarify understanding of informational texts by creating sophisticated outlines, graphic organizers, diagrams, logical notes, or summaries.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in</p>
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	<p>the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them.</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.</p> <p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Understand structure and properties of matter.</p> <p><b>CCG:</b> Understand chemical and physical changes.</p> <p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p>

	<p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Environmental Administration and Planning and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action</p>

	<p>to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Salmon Watch</b>	
<b>Description:</b>	Natural resource experts and volunteers assist teams of students at 4 learning stations established on the river's edge. Students learn about macro-invertebrates, water quality, the riparian area, and salmon life cycle.
<b>Program Offered By:</b>	The North Umpqua Foundation (non-profit)
<b>Contact Information:</b>	Robin Hartmann 541-672-3694 <a href="mailto:robinhartmann@msn.com">robinhartmann@msn.com</a>  <a href="http://www.northumpqua.org/projects/projects.html#educate">http://www.northumpqua.org/projects/projects.html#educate</a>
<b>Location:</b>	Program views spawning spring Chinook on the North Umpqua River (at either Boulder Creek Campground, Glide Loop Road, or below Soda Springs Dam) or views spawning fall Chinook on Cow Creek, depending on which fish are spawning at the time of the field trip.
<b>Target Audience:</b>	Grades 4-12
<b>Group Size:</b>	Usually 15-30
<b>Program activities:</b>	Field trip, hands-on activities, and students develop a service project to benefit the community and river.
<b>Cost:</b>	One \$35 fee per classroom
<b>Transportation:</b>	Bus transportation costs are paid by Oregon Trout
<b>Length of time:</b>	4 to 5 hours
<b>Pre or Post Preparation work:</b>	In the summer, training is offered for adult volunteers who help at each river-side learning station. Oregon Trout has a full curriculum, available to teachers, which includes materials to prepare students before and after the field trip, including for community service projects as a next step.
<b>Number of times presented/yr:</b>	Mid-September through November. Six to ten field trips per year.
<b>Partners:</b>	Oregon Trout pays for bus costs and substitute teachers as needed.
<b>Possible Connections to Fifth Grade Standards:</b>	<b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases. <b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment. <b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics. <b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics. <b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.

	<p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(2)</b> Use drawings or models to represent a series of food chains for specific habitats.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>SC.08.1.A.1(4)</b> Use the concept of density to evaluate which objects will float or sink in water.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(7)</b> Identify and explain how random variations in species can be preserved through natural selection.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures</p>

	<p>adapt to environmental change.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(6)</b> Recognize that, over time, natural selection may result in development of a new species or subspecies.</p> <p><b>SC.CIM.2.C.1(8)</b> Explain how biological evolution can account for the diversity of species developed over time.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or</p>

	<p>hypotheses to be investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Environmental Services Cluster:</b> Waste Water and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management and Fish and Wildlife Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Assess the consequences of the alternatives. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, press, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is</p>



	<p>important to effective team work. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Select, apply, and maintain tools and technologies appropriate for the workplace. Explain and follow health and safety practices in a work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>
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## Home school Program

<b>Description:</b>	Wildlife Safari’s Education Department offers a series of five classes for home school groups. Classes are held once a month. These classes provide an exciting field trip to the Wildlife Safari, while the students learn one of five lessons. Over the course of five months, children gain knowledge in Classifications & Adaptations, Habitats & Conservation, Scientific Inquiry, Animal Care & Training, and Career Discovery. During the classes, groups are guided through the park and utilize animals from the drive-thru, Village, and Education. Private encounters are held with Village and Education animals. Along with animal encounters, our Education staff also gives a short classroom lecture, which includes worksheets and crafts pertaining to the topic being taught.
<b>Program Offered By:</b>	Wildlife Safari (non-profit)
<b>Contact Information:</b>	Heidi, Education Department (541) 679-6761 ext. 221. <a href="mailto:wildlifesafari_spence@yahoo.com">wildlifesafari_spence@yahoo.com</a>
<b>Location:</b>	Wildlife Safari
<b>Target Audience:</b>	Ages 4-12
<b>Group Size:</b>	25 maximum
<b>Program Activities:</b>	Information sessions and activities at the park
<b>Cost:</b>	\$6.00 per student \$4.00 for members
<b>Transportation:</b>	Not available
<b>Length of time:</b>	2 hours
<b>Pre or Post Preparation work:</b>	Interested parties need to call Wildlife Safari to register for the classes.
<b>Number of times presented/yr:</b>	All year- 2 or 4 hour sessions
<b>Partners:</b>	Varies
<b>Possible Connections to Third Grade Standards:</b>	<b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms. <b>SC.03.2.A.1(2)</b> Describe the basic needs of living things. <b>SC.03.2.B.1(1)</b> Describe how related

	<p>plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(2)</b> Classify a variety of living things into groups using various characteristics.</p> <p><b>SC.05.2.B.1(2)</b> Describe the life cycle of common organisms.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p> <p><b>SC.05.2.C.1(5)</b> Explain the relationship between animal behavior and species survival.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.2.C.1(7)</b> Describe how adaptations help a species survive.</p> <p><b>SC.05.2.C.1(8)</b> Describe changes to the environment that have caused the population of some species to change.</p> <p><b>SC.05.2.C.1(9)</b> Identify conditions that might cause a species to become endangered or extinct.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific</p>

	investigations.
<b>Possible Connections to Common Curriculum Goals:</b>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the transmission of traits in living things.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Formulate and express scientific questions or hypotheses to be investigated.</p>
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Agriculture Cluster:</b> Animal Science Systems</p> <p><b>Natural Resources Management Cluster:</b> Fish and Wildlife Resources</p>
<b>Possible Connections to Career-Related Learning Standards:</b>	<p><b>Personal Management:</b> Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Communication:</b> Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Identify parts of organizations and systems and how they fit together. Describe the changing nature of work, workplaces, and work processes on individuals, organizations, and systems. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow health and safety practices in the work environment. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals.</p>



# **Teacher Workshops**

<b>Project Learning Tree</b>	
<b>Description:</b>	A workshop designed for teachers to implement various topics in natural resources into their curriculum. The topics the curriculum cover ranges from forests, wildlife, water, community planning, waste management, biodiversity, risk, and energy.
<b>Program Offered By:</b>	Project Learning Tree (non-profit)
<b>Contact Information:</b>	Susan Sahnaw 541-737-3005,  Debbie Anderson, Facilitator 541-957-3466 <a href="mailto:danderson01@fs.fed.us">danderson01@fs.fed.us</a>  <a href="http://www.plt.org/">http://www.plt.org/</a>
<b>Location:</b>	Douglas County area
<b>Target Audience:</b>	teachers, parents, community leaders, or other educators who work with pre K-12 students
<b>Program Activities:</b>	Educator Workshops
<b>Cost:</b>	None
<b>Transportation:</b>	Participants must provide their own transportation
<b>Length of time:</b>	8 hours
<b>Pre or Post Preparation work:</b>	Teachers need to register to participate in the workshop.
<b>Number of times presented/yr:</b>	2 workshops a year
<b>Partners:</b>	Oregon Forestry Education Program (OFEP) through Oregon State University, Oregon Forest Resources Institute (OFRI), and American Forest Foundation (AFF)
<b>Possible Connections to Third Grade Standards:</b>	<p><b>E.03.3.I.1(1)</b> Write narratives:</p> <ul style="list-style-type: none"> <li>• Provide a context within which an action takes place.</li> <li>• Include well-chosen details to develop the plot.</li> <li>• With some guidance, provide insight into why the selected incident is memorable.</li> </ul> <p><b>E.03.3.J.1(1)</b> Write descriptive pieces about people, places, things, or experiences:</p> <ul style="list-style-type: none"> <li>• Develop a unified main idea.</li> <li>• Use details to support the main idea.</li> </ul>

**E.03.3.J.1(2)** Write letters, thank-you notes, and invitations:

- With assistance, determine the knowledge and interests of the audience and establish a purpose and context.
- Include the date, proper salutation, body, closing, and signature.

**E.03.3.J.1(3)** Write brief reports:

- Include observations and information from two or more sources.
- Use diagrams, charts, or illustrations that are appropriate to the text.

**E.03.3.J.1(4)** Write brief responses to literary text:

- Include what the text is about.
- Include personal response to text supported by reasons.

**E.03.4.B.1(1)** Retell in own words and explain what has been said by a speaker.

**E.03.4.B.1(2)** Connect and relate prior experiences, insights, and ideas to those of a speaker (e.g., through mapping, graphic organization).

**E.03.4.B.1(3)** Answer questions completely and with appropriate elaboration.

**E.03.4.B.1(4)** Identify the sound elements of literary language, including rhymes, repeated sounds, and instances of naming something by using a sound associated with it (such as hiss or buzz). **H.03.5.0.1(1)** Recognize the importance of variety and moderation in food selection and consumption.

**M.03.2.C.1(2)**

Represent and interpret data using tally charts, pictographs, and bar graphs, including identifying the mode and range.

**SC.03.1.A.1(1)** Describe objects according to their physical properties.

**SC.03.1.A.2(1)** Describe changes that occur in matter.

**SC.03.1.C.1(1)** Identify common types and uses of energy.

**SC.03.2.A.1(1)** Recognize characteristics that are similar and different between organisms.

**SC.03.2.A.1(2)** Describe the basic needs of living things.

**SC.03.2.B.1(1)** Describe how related plants and animals have similar characteristics.

**SC.03.2.C.1(1)** Describe a habitat and the organisms that live there.

**SC.03.2.C.1(2)** Identify how some animals gather and store food, defend themselves, and find shelter.



	<p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials. <b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.1(1)</b> View and draw simple maps and pictures to locate, describe, and show movement among places.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.4.A.1(1)</b> Understand calendar time sequences and chronological sequences within narratives.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.2.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Demonstrate listening comprehension of more complex literary text through class and/or small group interpretive discussions.</p> <p><b>E.05.2.B.1(2)</b> Identify the main events of the plot, their causes, and the influence of specific events on future actions.</p> <p><b>E.05.2.C.1(3)</b> Identify the theme, understanding that theme refers to the lesson, moral, or meaning of a selection, whether it is implied or stated directly.</p> <p><b>E.05.2.C.1(4)</b> Draw inferences, conclusions or generalizations about text, and support them with textual evidence and prior knowledge.</p> <p><b>E.05.2.D.1(3)</b> Differentiate among the different types of fiction, and apply knowledge of the major characteristics of each (e.g., folklore, mystery, science fiction, adventure, fantasy).</p> <p><b>H.05.5.0.1(2)</b> Describe how media, cultural and family influences encourage healthy eating practices.</p> <p><b>M.05.2.C.1(1)</b> Design investigations to address a question and recognize how data collection methods affect the nature of a set of data.</p> <p><b>M.05.2.C.1(2)</b> Understand basic concepts of sampling (e.g.,</p>

	<p>larger samples yield better results, the need for representative samples).</p> <p><b>M.05.2.C.1(3)</b> Represent and interpret data using tables, circle graphs, bar graphs, and line graphs or plots (first quadrant).</p> <p><b>M.05.2.C.1(4)</b> Compare different representations of the same data and evaluate how well each representation shows important aspects of the data (e.g., circle and bar graphs, histograms with different widths).</p> <p><b>M.05.2.C.1(5)</b> Evaluate the appropriateness of representations of categorical and numeric data (e.g., categorical: types of lunch food, and numerical: heights of students in a class).</p> <p><b>M.05.2.D.1(1)</b> Analyze data from tables and bar graphs using mean, median, mode, and range, and draw conclusions.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>H.08.5.0.1(1)</b> Explain the importance of variety and moderation in food selection and consumption.</p> <p><b>M.08.2.C.1(1)</b> Collect and display data as lists, tables, and plots using appropriate technology (e.g., graphing calculators, computer software).</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.1.C.1(3)</b> Describe and explain various energy transfers and resulting transformations.</p> <p><b>SC.08.1.C.1(4)</b> Trace the flow of energy transformations in a system.</p> <p><b>SC.08.1.C.1(5)</b> Explain the principle that energy is conserved, neither created nor destroyed.</p> <p><b>SC.08.2.A.1(3)</b> Describe and explain the structure and functions of an organism in terms of cells, tissues, and organs.</p> <p><b>SC.08.2.A.1(5)</b> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(2)</b> Distinguish between asexual and sexual reproduction.</p> <p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p>

	<p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(4)</b> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host.</p> <p><b>SC.08.2.C.1(6)</b> Describe and explain the theory of natural selection as a mechanism for evolution.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(3)</b> Identify factors that cause or affect weather patterns.</p> <p><b>SC.08.3.A.2(4)</b> Identify factors that affect the rate of evaporation, condensation, and cloud formation.</p> <p><b>SC.08.3.A.2(9)</b> Identify the processes that result in different kinds of landforms.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.3.A.2(11)</b> Give examples of landform changes that occur at different rates.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.1.0.2(3)</b> Understand how laws are made and enforced at the federal, state, and local levels.</p> <p><b>SS.08.1.0.5(1)</b> Understand how citizens can make their voices heard in the political process.</p> <p><b>SS.08.1.0.5(2)</b> Identify and give examples of ways that citizens can let their opinions be known in the political process.</p> <p><b>SS.08.1.0.6(2)</b> Identify and give examples of how groups and organizations can influence government policy or</p>
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	<p>decisions and describe how these actions can lead to such influence.</p> <p><b>SS.08.1.0.7(1)</b> Understand how actions of the U.S. government affect citizens of both the United States and other countries.</p> <p><b>SS.08.2.0.1(1)</b> Understand incentives in a market economy that influence individuals and businesses in allocating resources (time, money, labor, and natural resources).</p> <p><b>SS.08.2.0.1(2)</b> Know that people respond predictably to positive and negative incentives.</p> <p><b>SS.08.2.0.2(3)</b> Distinguish between "needs" and "wants" in the U.S. and other countries of the world, and the impact of the media.</p> <p><b>SS.08.3.0.1(1)</b> Understand fundamental geography vocabulary such as concepts of distance, latitude, longitude, interdependence, accessibility, and connections.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.7(1)</b> Identify economic, cultural, and environmental factors that affect population, and predict how the population would change as a result.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(4)</b> Understand how changes in a physical environment affect human activity.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p> <p><b>SS.08.3.0.8(6)</b> Understand how climatic events or climate change affect human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.4.A.1(1)</b> Represent and interpret data and chronological relationships from history, using timelines and narratives.</p> <p><b>SS.08.4.A.1(3)</b> Identify and create chronologies of events.</p> <p><b>SS.08.4.A.2(1)</b> Distinguish between cause and effect relationships and events that happen or occur concurrently</p>
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	<p>or sequentially.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.2(1)</b> Gather, interpret, use, and document information from multiple sources, distinguishing facts from opinions and recognizing points of view.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>E.CIM.1.H.1(4)</b> Analyze implicit relationships, such as cause-and-effect, sequence-time relationships, comparisons, classifications, and generalizations.</p> <p><b>E.CIM.1.I.1(4)</b> Compare and contrast information on the same topic after reading several passages or articles.</p> <p><b>E.CIM.1.I.1(8)</b> Generate relevant questions about readings on issues that can be researched.</p> <p><b>E.CIM.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>M.CIM.1.B.1(4)</b> Develop and use strategies to estimate the results of real number computations, determine the amount of error, and judge the reasonableness of results.</p> <p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on</p>

	<p>physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.C.1(4)</b> Describe and analyze examples of conservation of energy.</p> <p><b>SC.CIM.1.C.1(6)</b> Describe ways in which energy can be transferred, including chemical reactions, nuclear reactions, and light waves.</p> <p><b>SC.CIM.1.C.1(7)</b> Explain the difference between potential and kinetic energy.</p> <p><b>SC.CIM.1.C.1(8)</b> Analyze the flow of energy through a system by applying the law of conservation of energy.</p> <p><b>SC.CIM.2.A.1(1)</b> Describe, explain, and compare the structure and functions of cells in organisms.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.2(1)</b> Analyze the relationship between global energy transfer and climate.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.</p> <p><b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p> <p><b>SS.CIM.4.A.1(1)</b> Reconstruct, interpret, and represent the</p>
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	<p>chronology of significant events, developments, and narratives from history.</p> <p><b>SS.CIM.4.A.1(4)</b> Interpret timelines, charts and graphs illustrating chronological relationships.</p> <p><b>SS.CIM.5.0.1(1)</b> Define, research, and explain an event, issue, problem, or phenomenon and its significance to society.</p> <p><b>SS.CIM.5.0.2(1)</b> Gather, analyze, use, and document information from various sources, distinguishing facts, opinions, inferences, biases, stereotypes, and persuasive appeals.</p> <p><b>SS.CIM.5.0.2(2)</b> Understand what it means to be a critical consumer of information.</p> <p><b>SS.CIM.5.0.3(1)</b> Analyze an event, issue, problem, or phenomenon from varied or opposed perspectives or points of view.</p> <p><b>SS.CIM.5.0.4(1)</b> Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.</p> <p><b>SS.CIM.5.0.5(1)</b> Propose, compare, and judge multiple responses, alternatives, or solutions; then reach a defensible, supported conclusion.</p>
<p><b>Possible Connections to CCG:</b></p>	<p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Demonstrate general understanding of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Develop an interpretation of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Examine content and structure of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Listen to text and read text to make connections and respond to a wide variety of literature of varying complexity.</p> <p><b>CCG:</b> Demonstrate general understanding of grade-level literary text.</p> <p><b>CCG:</b> Develop an interpretation of grade-level literary text.</p>

	<p><b>CCG:</b> Examine content and structure of grade-level literary text.</p> <p><b>CCG:</b> Write narrative, expository, and persuasive texts, using a variety of written forms—including journals, essays, short stories, poems, research reports, research papers, business and technical writing—to express ideas appropriate to audience and purpose across the subject areas.</p> <p><b>CCG:</b> Investigate topics of interest and importance across the subject areas, selecting appropriate media sources, using effective research processes, and demonstrating ethical use of resources and materials.</p> <p><b>CCG:</b> Communicate supported ideas across the subject areas using oral, visual, and multi-media forms in ways appropriate to topic, context, audience, and purpose; organize oral, visual, and multi-media presentations in clear sequence, making connections and transitions among ideas and elements; use language appropriate to topic, context, audience, and purpose; and demonstrate control of eye contact, speaking rate, volume, enunciation, inflection, gestures, and other non-verbal techniques.</p> <p><b>CCG:</b> Listen critically and respond appropriately across the subject areas.</p> <p><b>CCG:</b> Evaluate the significance and accuracy of information and ideas presented in oral, visual, and multi-media communications across the subject areas.</p> <p><b>CCG:</b> Understand numbers, ways of representing numbers, relationships among numbers, and number systems.</p> <p><b>CCG:</b> Compute fluently and make reasonable estimates.</p> <p><b>CCG:</b> Select and use appropriate statistical methods to analyze data.</p> <p><b>CCG:</b> Understand patterns, relations, and functions.</p> <p><b>CCG:</b> Understand measurable attributes of objects and the units, systems and processes of measurement.</p> <p><b>CCG:</b> Apply appropriate techniques, tools, and formulas to determine measurements.</p> <p><b>CCG:</b> Use visualization, spatial reasoning, and geometric modeling to solve problems.</p> <p><b>CCG:</b> Select, apply, and translate among mathematical representations to solve problems.</p> <p><b>CCG:</b> Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</p> <p><b>CCG:</b> Develop and evaluate inferences and predictions that are based on data.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p>
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	<p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Sciences/Horticulture, and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Energy Management, Environmental Administration and Planning, Hazardous Material Management, Waste Water, and Water Quality</p> <p><b>Food Science and Processing Cluster:</b> Quality Control, Nutrition, and Research</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive</p>

	<p>manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal and characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Alder Creek Children's Forest</b>	
<b>Description:</b>	Offers a Summer Area Teachers Institute to help teachers recognize forests as an outdoor area to teach science and math.
<b>Program Offered By:</b>	Alder Creek Children's Forest (non-profit)
<b>Contact Information:</b>	ACCF Office at 541-839-4379 Alan Baumann, Site Manager, at 541-957-3446 <a href="mailto:abaumann@fs.fed.us">abaumann@fs.fed.us</a> <a href="http://aldercreek.org/about/index.html">http://aldercreek.org/about/index.html</a>
<b>Location:</b>	Canyonville Middle School, ACCF, and Alder-Jordan Creek watershed
<b>Target Audience:</b>	6-12 grade teachers
<b>Group Size:</b>	Small group size 5-10, large group size 25-30
<b>Program Activities:</b>	Outdoor study, field research, instructional stations, teacher workshop
<b>Cost:</b>	None
<b>Transportation:</b>	OFRI can provide transportation reimbursement
<b>Length of time:</b>	3 days
<b>Pre or Post Preparation work:</b>	Teachers need call to register.
<b>Number of times presented/yr:</b>	Once a year in the summer.
<b>Partners:</b>	USFS, Cow Creek Band (Umpqua Tribe), others-Hands on the Land site, BLM
<b>Possible Connections to Eighth Grade Standards:</b>	<p><b>SC.08.2.C.1(1)</b> Identify and describe the factors that influence or change the balance of populations in their environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(3)</b> Identify populations of organisms within an ecosystem by the function that they serve.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.2.C.1(8)</b> Describe how animal and plant structures adapt to environmental change.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources</p>

	<p>can be recycled and reused.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.3(1)</b> Locate and identify on maps and globes the regions of the world and their prominent physical features.</p> <p><b>SS.08.3.0.4(4)</b> Recognize relationships between the physical and cultural characteristics of a place or region.</p> <p><b>SS.08.3.0.8(1)</b> Understand how human modification of the physical environment in a place affects both that place and other places.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.1(2)</b> Predict consequences of increased consumption of renewable and non-renewable resources</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation</p> <p><b>SS.CIM.3.0.4(1)</b> Analyze changes in the physical and human characteristics of places and regions, and the effects of technology, migration, and urbanization on them</p> <p><b>SS.CIM.3.0.8(2)</b> Distinguish between renewable resources and non-renewable resources and the global consequences of mismanagement.</p> <p><b>SS.CIM.3.0.8(3)</b> Identify and understand different methods of extracting and using resources, and analyze and compare</p>

	<p>the affect on the environment.</p> <p><b>SS.CIM.3.0.8(4)</b> Identify and give examples of changes in a physical environment, and evaluate their impact on human activity in the environment.</p> <p><b>SS.CIM.3.0.8(5)</b> Identify and give examples of changes in human activity due to changes in the physical environment, and analyze the impact on both.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Understand the characteristics, structure, and functions of organisms.</p> <p><b>CCG:</b> Understand the relationships among living things and between living things and their environments.</p> <p><b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.</p> <p><b>CCG:</b> Forming the Question/Hypothesis: Formulate and express scientific questions or hypotheses to be investigated.</p> <p><b>CCG:</b> Designing the Investigation: Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Collecting and Presenting Data: Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that changes in scale influence the characteristics, properties, and relationships within a system.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p> <p><b>CCG:</b> Use maps and other geographic tools and technologies to acquire, process, and report information from a spatial perspective.</p> <p><b>CCG:</b> Locate major physical and human (cultural) features of the Earth.</p> <p><b>CCG:</b> Compare and analyze physical (e.g., landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g., population, land use, language, and religion) characteristics of places and regions.</p>

	<p><b>CCG:</b> Understand how people and the environment are interrelated.</p> <p><b>CCG:</b> Understand the geographic results of resource use and management programs and policies.</p> <p><b>CCG:</b> Define and clarify an issue so that its dimensions are well understood.</p>
<b>Possible Connections to Oregon Skill Sets:</b>	<p><b>Agriculture Cluster:</b> Animal Science Systems and Plant Sciences/Horticulture</p> <p><b>Environmental Science Cluster:</b> Environmental Administration and Planning and Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<b>Possible Connections to Career Related Learning Standards:</b>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation.</p> <p><b>Career Development:</b> Assess personal characteristics related to educational and career goals. Research and analyze career and educational information.</p>



<b>Oregon Teachers on Summer Assignment</b>	
<b>Description:</b>	Teachers work with company or agency mentors on forest management and/or environmental monitoring projects. ORTOSA offers a range of positions in such areas as water quality, forest inventory, manufacturing and habitat protection and monitoring where science, math and other topics taught in the classroom are applied. The positions are with private companies, public agencies and other organizations.
<b>Program Offered By:</b>	Oregon Forest Resources Institute (state agency)
<b>Contact Information:</b>	Norie Dimeo-Ediger 503-229-6718 X29 <a href="mailto:dimeo-ediger@ofri.com">dimeo-ediger@ofri.com</a>
<b>Location:</b>	Various locations throughout Oregon
<b>Target Audience:</b>	K-12 teachers
<b>Group Size:</b>	N/A
<b>Program Activities:</b>	Curriculum development workshops, hands-on environmental monitoring tasks
<b>Cost:</b>	Free and college credit is available. \$3000 stipend available for summer work.
<b>Transportation:</b>	Must be provided
<b>Length of time:</b>	6 weeks
<b>Pre or Post Preparation work:</b>	Teachers need to apply in March
<b>Number of times presented/yr:</b>	Once a year in summer
<b>Partners:</b>	Varies
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.1.C.1(1)</b> Read regular words with several syllables. <b>E.03.1.C.1(6)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level. <b>E.03.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of grade-level informational and narrative



	<p>(story) text including children's magazines and newspapers, dictionaries, other reference materials, online information, classic and contemporary literature, and poetry.</p> <p><b>E.03.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through orally-read stories and informational text as well as student-read stories and informational text.</p> <p><b>E.03.1.F.1(3)</b> Interpret information from diagrams, charts, and graphs.</p> <p><b>E.03.1.G.1(1)</b> Demonstrate comprehension by identifying answers to questions about the text.</p> <p><b>E.03.1.G.1(4)</b> Summarize major points from informational text.</p> <p><b>E.03.1.H.1(3)</b> Ask how, why, and what-if questions in interpreting informational texts.</p> <p><b>E.03.2.B.1(4)</b> Summarize major points from literary text.</p> <p><b>E.03.2.C.1(3)</b> Determine and discuss the underlying theme or author's message in literary text.</p> <p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend</p>
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	<p>themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.1(1)</b> View and draw simple maps and pictures to locate, describe, and show movement among places.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p> <p><b>SS.03.5.0.1(1)</b> Identify an issue or problem that can be studied.</p> <p><b>SS.03.5.0.2(1)</b> Gather information relating to an issue or problem.</p> <p><b>SS.03.5.0.3(1)</b> Identify and compare different ways of looking at an event, issue, or problem.</p> <p><b>SS.03.5.0.4(1)</b> Identify how people or other living things might be affected by an event, issue, or problem.</p> <p><b>SS.03.5.0.5(1)</b> Identify possible options or responses; then make a choice or express an opinion.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.C.1(2)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.05.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of</p>

	<p>informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.05.1.D.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Make connections to text, within text, and among texts across the subject areas.</p> <p><b>E.05.1.D.1(5)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand and draw upon a variety of comprehension strategies as needed—re-reading, self-correcting, summarizing, class and group discussions, generating and responding to essential questions, making predictions, and comparing information from several sources.</p> <p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.05.1.F.1(1)</b> Read textbooks, biographical sketches, letters, diaries, directions, procedures, magazines, news stories, and almanacs.</p> <p><b>E.05.1.F.1(2)</b> Use the features of informational texts, such as formats, graphics, diagrams, illustrations, charts, maps, and organizational devices to find information and support understanding.</p> <p><b>E.05.1.G.1(2)</b> Identify key facts and information after reading several passages or articles on the same topic.</p> <p><b>E.05.1.H.1(2)</b> Draw inferences, conclusions, or generalizations about</p>
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	<p>main ideas in text, and support them with textual evidence and prior knowledge.</p> <p><b>E.05.2.B.1(1)</b> Identify and/or summarize sequence of events, main ideas, and supporting details in literary selections.</p> <p><b>E.05.3.A.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Use a variety of strategies to prepare for writing, such as brainstorming, making lists, mapping, outlining, grouping related ideas, using graphic organizers, and taking notes.</p> <p><b>E.05.3.O.1(2)</b> Use effective note-taking techniques to ensure appropriate documentation of quoted as well as paraphrased material.</p> <p><b>E.05.4.B.1(1)</b> Ask relevant questions that seek information not already discussed.</p> <p><b>SC.05.1.A.1(2)</b> Distinguish among solids, liquids, and gases.</p> <p><b>SC.05.1.A.2(1)</b> Describe the ability of matter to change state by heating and cooling.</p> <p><b>SC.05.1.A.2(3)</b> Identify changes in states of matter seen in the environment.</p> <p><b>SC.05.2.A.1(1)</b> Group or classify organisms based on a variety of characteristics.</p> <p><b>SC.05.2.A.1(5)</b> Describe basic plant and animal structures and their functions.</p> <p><b>SC.05.2.B.1(1)</b> Describe the life cycle of an organism.</p> <p><b>SC.05.2.C.1(1)</b> Describe the relationship between characteristics of specific habitats and the organisms that live there.</p> <p><b>SC.05.2.C.1(3)</b> Identify the producers, consumers, and decomposers in a given habitat.</p>
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	<p><b>SC.05.2.C.1(4)</b> Recognize how all animals depend upon plants whether or not they eat the plants directly.</p> <p><b>SC.05.2.C.1(6)</b> Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.</p> <p><b>SC.05.3.A.1(1)</b> Identify properties and uses of Earth materials.</p> <p><b>SC.05.3.A.1(2)</b> Recognize that Earth materials are used in different ways based on differences in their physical and chemical properties.</p> <p><b>SC.05.3.A.1(3)</b> Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.</p> <p><b>SC.05.3.A.1(4)</b> Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.</p> <p><b>SC.05.4.A.1(1)</b> Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.</p> <p><b>SC.05.4.B.1(1)</b> Design a simple scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.05.4.C.1(1)</b> Collect, organize, and summarize data from investigations.</p> <p><b>SC.05.4.D.1(1)</b> Summarize, analyze, and interpret data from investigations.</p> <p><b>SS.05.3.0.1(1)</b> Define basic geography vocabulary such as concepts of location, direction, distance, scale, movement, and region using appropriate words and diagrams.</p> <p><b>SS.05.3.0.2(2)</b> Use maps and charts to interpret geographic information.</p> <p><b>SS.05.3.0.3(4)</b> Locate, identify, and know the significance of major mountains, rivers, and land regions of Oregon.</p> <p><b>SS.05.3.0.8(1)</b> Understand how physical environments are affected by</p>
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	<p>human activities.</p> <p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(6)</b> Understand how the physical environment presents opportunities for economic and recreational activity.</p> <p><b>SS.05.5.0.1(1)</b> Examine an event, issue, or problem through inquiry and research.</p> <p><b>SS.05.5.0.2(1)</b> Gather, use, and document information from multiple sources (e.g. print, electronic, human, primary, secondary).</p> <p><b>SS.05.5.0.3(1)</b> Identify and study two or more points of view of an event, issue, or problem.</p> <p><b>SS.05.5.0.4(1)</b> Identify characteristics of an event, issue, or problem, suggesting possible causes and results.</p> <p><b>SS.05.5.0.5(1)</b> Identify a response or solution and support why it makes sense, using support from research.</p>
<p><b>Possible Connections to Eighth Grade Standards:</b></p>	<p><b>E.08.1.C.1(1)</b> Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.08.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.08.1.D.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Make connections to text, within text, and among texts across the subject areas.</p> <p><b>E.08.1.D.1(6)</b> Skill To Support the Standard: (For the purpose of noting</p>

	<p>key skills that support classroom instruction of the standards) Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.</p> <p><b>E.08.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.08.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.08.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>E.08.1.G.1(2)</b> Clarify understanding of informational texts by creating detailed outlines, graphic organizers, diagrams, logical notes, or summaries.</p> <p><b>SC.08.1.A.1(1)</b> Compare properties of specific substances.</p> <p><b>SC.08.1.A.1(2)</b> Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</p> <p><b>SC.08.1.A.2(1)</b> Compare physical and chemical changes.</p> <p><b>SC.08.1.A.2(2)</b> Distinguish between examples of chemical changes and physical changes.</p> <p><b>SC.08.2.A.1(6)</b> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of</p>
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	<p>carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use.</p> <p><b>SC.08.2.B.1(1)</b> Describe how the traits of an organism are passed from generation to generation.</p> <p><b>SC.08.2.B.1(3)</b> Identify traits inherited through genes and those resulting from interactions with the environment.</p> <p><b>SC.08.2.C.1(2)</b> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs.</p> <p><b>SC.08.2.C.1(5)</b> Explain the importance of niche to an organism's ability to avoid direct competition for resources.</p> <p><b>SC.08.3.A.1(1)</b> Recognize that Earth materials are limited, and explore strategies for addressing this problem.</p> <p><b>SC.08.3.A.1(2)</b> Identify ways in which various resources can be recycled and reused.</p> <p><b>SC.08.3.A.2(2)</b> Explain the water cycle.</p> <p><b>SC.08.3.A.2(10)</b> Identify factors affecting water flow, soil erosion, and deposition.</p> <p><b>SC.08.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.</p> <p><b>SC.08.4.B.1(1)</b> Design a scientific investigation to answer questions or test hypotheses.</p> <p><b>SC.08.4.C.1(1)</b> Collect, organize, and display sufficient data to support analysis.</p> <p><b>SC.08.4.D.1(1)</b> Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.</p> <p><b>SS.08.3.0.2(1)</b> Read, interpret, and</p>
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	<p>understand how to construct geographic representations to analyze information, understand spatial relationships, and compare places.</p> <p><b>SS.08.3.0.8(2)</b> Understand how the process of urbanization affects the physical environment of a place, the cultural characteristics of a place, and the physical and human characteristics of the surrounding region.</p> <p><b>SS.08.3.0.8(3)</b> Understand how clearing vegetation affects the physical environment of a place and other places.</p> <p><b>SS.08.3.0.8(5)</b> Understand how changes in the physical environment can increase or diminish capacity to support human activity.</p> <p><b>SS.08.3.0.8(7)</b> Predict how changes in an ecosystem (not caused by human activity) might influence human activity.</p> <p><b>SS.08.5.0.1(1)</b> Clarify key aspects of an event, issue, or problem through inquiry and research.</p> <p><b>SS.08.5.0.2(1)</b> Gather, interpret, use, and document information from multiple sources, distinguishing facts from opinions and recognizing points of view.</p> <p><b>SS.08.5.0.3(1)</b> Examine a controversial event, issue, or problem from more than one perspective.</p> <p><b>SS.08.5.0.4(1)</b> Examine the various characteristics, causes, and effects of an event, issue, or problem.</p> <p><b>SS.08.5.0.5(1)</b> Consider two or more outcomes, responses, or solutions; identify their strengths and weaknesses; then conclude and justify which is the best.</p>
<p><b>Possible Connections to CIM Standards:</b></p>	<p><b>E.CIM.1.C.1(1)</b> Read at an independent and instructional reading level appropriate to grade level.</p> <p><b>E.CIM.1.D.1(1)</b> Skill To Support the Standard: (For the purpose of noting</p>

	<p>key skills that support classroom instruction of the standards) Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.</p> <p><b>E.CIM.1.D.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Make connections to text, within text, and among texts across the subject areas.</p> <p><b>E.CIM.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p> <p><b>E.CIM.1.F.1(1)</b> Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.</p> <p><b>E.CIM.1.F.1(2)</b> Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.</p> <p><b>E.CIM.1.I.1(8)</b> Generate relevant questions about readings on issues that can be researched.</p> <p><b>SC.CIM.1.A.2(1)</b> Analyze the effects of various factors on physical changes and chemical reactions.</p> <p><b>SC.CIM.1.A.2(2)</b> Describe how transformations among solids, liquids, and gases occur (change of state).</p> <p><b>SC.CIM.1.A.2(3)</b> Identify factors that</p>
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	<p>can influence change of state, including temperature, pressure, and concentration.</p> <p><b>SC.CIM.2.A.1(7)</b> Describe photosynthesis as a chemical process and part of the carbon cycle.</p> <p><b>SC.CIM.2.B.1(1)</b> Explain laws of heredity and their relationship to the structure and function of DNA.</p> <p><b>SC.CIM.2.C.1(1)</b> Describe and analyze the effect of species, including humans, on an ecosystem.</p> <p><b>SC.CIM.2.C.1(2)</b> Predict outcomes of changes in resources and energy flow in an ecosystem.</p> <p><b>SC.CIM.2.C.1(3)</b> Explain how humans and other species can impact an ecosystem.</p> <p><b>SC.CIM.2.C.1(4)</b> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</p> <p><b>SC.CIM.2.C.1(5)</b> Analyze how living things have changed over geological time, using fossils and other scientific evidence.</p> <p><b>SC.CIM.3.A.1(1)</b> Describe how the importance and use of resources has changed over time with changes in economic and technological systems.</p> <p><b>SC.CIM.3.A.2(6)</b> Describe methods of determining ages of rocks and fossils.</p> <p><b>SC.CIM.3.A.2(7)</b> Use rock sequences and fossil evidence to determine geologic history.</p> <p><b>SC.CIM.4.A.1(1)</b> Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.</p> <p><b>SC.CIM.4.B.1(1)</b> Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.</p> <p><b>SC.CIM.4.C.1(1)</b> Collect, organize, and display sufficient data to facilitate</p>
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	<p>scientific analysis and interpretation.  <b>SC.CIM.4.D.1(1)</b> Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.  <b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.  <b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.  <b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.  <b>CCG:</b> Examine content and structure of grade-level informational text across the subject areas.  <b>CCG:</b> Understand structure and properties of matter.  <b>CCG:</b> Understand chemical and physical changes.  <b>CCG:</b> Understand the characteristics, structure, and functions of organisms.  <b>CCG:</b> Understand the transmission of traits in living things.  <b>CCG:</b> Understand the relationships among living things and between living things and their environments.  <b>CCG:</b> Understand the properties and limited availability of the materials which make up the Earth.  <b>CCG:</b> Formulate and express scientific questions or hypotheses to be</p>

	<p>investigated.</p> <p><b>CCG:</b> Design safe and ethical scientific investigations to address questions or hypotheses.</p> <p><b>CCG:</b> Conduct procedures to collect, organize, and display scientific data.</p> <p><b>CCG:</b> Analyze scientific information to develop and present conclusions.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Plant Sciences/Horticulture</p> <p><b>Environmental Services Cluster:</b> Environmental Planning and Administration, Waste Water, and Water Quality</p> <p><b>Natural Resources Management:</b> Aquatic and Marine Management, Fish</p>

	and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical</p>

	<p>skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal and characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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<b>Oregon Forest Institute For Teachers (OFIT)</b>	
<b>Description:</b>	OFIT is an intensive 5 day summer forestry education program that provides K-12 teachers the knowledge, skills, and tools needed to develop materials and activities they can use in their classrooms to effectively teach their students about forest-related issues, concepts and practices. Participants receive free classroom materials.
<b>Program Offered By:</b>	Oregon Forestry Education Program (university)
<b>Contact Information:</b>	Susan Sahnaw 541-737-3005  Oregon Forestry Education, <a href="mailto:ofep@oregonstate.edu">ofep@oregonstate.edu</a>
<b>Location:</b>	North of Corvallis
<b>Target Audience:</b>	K-6 teachers
<b>Group Size:</b>	25 participants
<b>Program activities:</b>	Teacher workshop--indoor and outdoor settings
<b>Cost:</b>	Free and college credit is available. Lodging is provided for those traveling more than 60 miles and most meals. There is a \$100 cancellation fee if you cancel less than 2 weeks prior to the workshop.
<b>Transportation:</b>	Must be provided by participants
<b>Length of time:</b>	5 days
<b>Pre or Post Preparation work:</b>	Teachers need to have completed Project Learning Tree before taking this workshop. They also need to fill out a registration form.
<b>Number of times presented/yr:</b>	Summer--June 2006
<b>Partners:</b>	OFRI, OSU
<b>Possible Connections to Third Grade Standards:</b>	<b>E.03.3.I.1(1)</b> Write narratives: <ul style="list-style-type: none"> <li>• Provide a context within which an action takes place.</li> <li>• Include well-chosen details to develop the plot.</li> <li>• With some guidance, provide</li> </ul>



	<p>insight into why the selected incident is memorable.</p> <p><b>E.03.3.J.1(1)</b> Write descriptive pieces about people, places, things, or experiences:</p> <ul style="list-style-type: none"> <li>• Develop a unified main idea.</li> <li>• Use details to support the main idea.</li> </ul> <p><b>E.03.3.J.1(3)</b> Write brief reports:</p> <ul style="list-style-type: none"> <li>• Include observations and information from two or more sources.</li> <li>• Use diagrams, charts, or illustrations that are appropriate to the text.</li> </ul> <p><b>E.03.3.J.1(4)</b> Write brief responses to literary text:</p> <ul style="list-style-type: none"> <li>• Include what the text is about.</li> <li>• Include personal response to text supported by reasons.</li> </ul> <p><b>E.03.4.B.1(1)</b> Retell in own words and explain what has been said by a speaker.</p> <p><b>E.03.4.B.1(2)</b> Connect and relate prior experiences, insights, and ideas to those of a speaker (e.g., through mapping, graphic organization).</p> <p><b>E.03.4.B.1(3)</b> Answer questions completely and with appropriate elaboration.</p> <p><b>E.03.4.B.1(4)</b> Identify the sound elements of literary language, including rhymes, repeated sounds, and instances of naming something by using a sound associated with it (such as hiss or buzz).</p> <p><b>M.03.2.C.1(2)</b> Represent and interpret data using tally charts, pictographs, and bar graphs, including identifying the mode and range.</p> <p><b>SC.03.1.A.1(1)</b> Describe objects according to their physical properties.</p> <p><b>SC.03.1.A.2(1)</b> Describe changes that occur in matter.</p> <p><b>SC.03.1.C.1(1)</b> Identify common types</p>
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	<p>and uses of energy.</p> <p><b>SC.03.2.A.1(1)</b> Recognize characteristics that are similar and different between organisms.</p> <p><b>SC.03.2.A.1(2)</b> Describe the basic needs of living things.</p> <p><b>SC.03.2.B.1(1)</b> Describe how related plants and animals have similar characteristics.</p> <p><b>SC.03.2.C.1(1)</b> Describe a habitat and the organisms that live there.</p> <p><b>SC.03.2.C.1(2)</b> Identify how some animals gather and store food, defend themselves, and find shelter.</p> <p><b>SC.03.3.A.1(1)</b> Recognize physical differences in Earth materials.</p> <p><b>SC.03.4.A.1(1)</b> Make observations. Based on these observations, ask questions or form hypotheses, which can be explored through simple investigations.</p> <p><b>SC.03.4.B.1(1)</b> Plan a simple investigation.</p> <p><b>SC.03.4.C.1(1)</b> Collect data from an investigation.</p> <p><b>SC.03.4.D.1(1)</b> Use the data collected from an investigation to explain the results.</p> <p><b>SS.03.3.0.1(1)</b> View and draw simple maps and pictures to locate, describe, and show movement among places.</p> <p><b>SS.03.3.0.4(1)</b> Identify physical characteristics of places and compare them.</p> <p><b>SS.03.3.0.8(1)</b> Understand how peoples' lives are affected by the physical environment.</p>
<p><b>Possible Connections to Fifth Grade Standards:</b></p>	<p><b>E.05.1.E.1(1)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards) Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.</p>

	<p><b>E.05.2.A.1(2)</b> Skill To Support the Standard: (For the purpose of noting key skills that support classroom instruction of the standards)          Demonstrate listening comprehension of more complex literary text through class and/or small group interpretive discussions.</p> <p><b>E.05.2.B.1(2)</b> Identify the main events of the plot, their causes, and the influence of specific events on future actions.</p> <p><b>E.05.2.C.1(3)</b> Identify the theme, understanding that theme refers to the lesson, moral, or meaning of a selection, whether it is implied or stated directly.</p> <p><b>E.05.2.C.1(4)</b> Draw inferences, conclusions or generalizations about text, and support them with textual evidence and prior knowledge.</p> <p><b>M.05.2.C.1(1)</b> Design investigations to address a question and recognize how data collection methods affect the nature of a set of data.</p> <p><b>M.05.2.C.1(2)</b> Understand basic concepts of sampling (e.g., larger samples yield better results, the need for representative samples).</p> <p><b>M.05.2.C.1(3)</b> Represent and interpret data using tables, circle graphs, bar graphs, and line graphs or plots (first quadrant).</p> <p><b>M.05.2.C.1(4)</b> Compare different representations of the same data and evaluate how well each representation shows important aspects of the data (e.g., circle and bar graphs, histograms with different widths).</p> <p><b>M.05.2.C.1(5)</b> Evaluate the appropriateness of representations of categorical and numeric data (e.g., categorical: types of lunch food, and numerical: heights of students in a class).</p> <p><b>M.05.2.D.1(1)</b> Analyze data from</p>
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tables and bar graphs using mean, median, mode, and range, and draw conclusions.

**SC.05.1.A.1(2)** Distinguish among solids, liquids, and gases.

**SC.05.1.A.2(3)** Identify changes in states of matter seen in the environment.

**SC.05.2.A.1(1)** Group or classify organisms based on a variety of characteristics.

**SC.05.2.A.1(2)** Classify a variety of living things into groups using various characteristics.

**SC.05.2.C.1(1)** Describe the relationship between characteristics of specific habitats and the organisms that live there.

**SC.05.2.C.1(4)** Recognize how all animals depend upon plants whether or not they eat the plants directly.

**SC.05.2.C.1(6)** Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.

**SC.05.3.A.1(1)** Identify properties and uses of Earth materials.

**SC.05.3.A.1(3)** Recognize that soils vary in color, texture, components, reaction to water, and ability to support the growth of plants.

**SC.05.4.A.1(1)** Make observations. Ask questions or form hypotheses based on those observations, which can be explored through scientific investigations.

**SC.05.4.B.1(1)** Design a simple scientific investigation to answer questions or test hypotheses.

**SC.05.4.C.1(1)** Collect, organize, and summarize data from investigations.

**SC.05.4.D.1(1)** Summarize, analyze, and interpret data from investigations.

**SS.05.3.0.8(1)** Understand how physical environments are affected by human activities.

	<p><b>SS.05.3.0.8(2)</b> Understand how and why people alter the physical environment.</p> <p><b>SS.05.3.0.8(3)</b> Describe how human activity can impact the environment.</p>
<p><b>Possible Connections to Common Curriculum Goals:</b></p>	<p><b>CCG:</b> Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.</p> <p><b>CCG:</b> Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.</p> <p><b>CCG:</b> Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.</p> <p><b>CCG:</b> Demonstrate general understanding of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Develop an interpretation of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Examine content and structure of grade-level informational text across the subject areas.</p> <p><b>CCG:</b> Listen to text and read text to make connections and respond to a wide variety of literature of varying complexity.</p> <p><b>CCG:</b> Demonstrate general understanding of grade-level literary text.</p> <p><b>CCG:</b> Develop an interpretation of grade-level literary text.</p> <p><b>CCG:</b> Examine content and structure of grade-level literary text.</p> <p><b>CCG:</b> Write narrative, expository, and persuasive texts, using a variety of</p>

	<p>written forms—including journals, essays, short stories, poems, research reports, research papers, business and technical writing—to express ideas appropriate to audience and purpose across the subject areas.</p> <p><b>CCG:</b> Investigate topics of interest and importance across the subject areas, selecting appropriate media sources, using effective research processes, and demonstrating ethical use of resources and materials.</p> <p><b>CCG:</b> Communicate supported ideas across the subject areas using oral, visual, and multi-media forms in ways appropriate to topic, context, audience, and purpose; organize oral, visual, and multi-media presentations in clear sequence, making connections and transitions among ideas and elements; use language appropriate to topic, context, audience, and purpose; and demonstrate control of eye contact, speaking rate, volume, enunciation, inflection, gestures, and other non-verbal techniques.</p> <p><b>CCG:</b> Listen critically and respond appropriately across the subject areas.</p> <p><b>CCG:</b> Evaluate the significance and accuracy of information and ideas presented in oral, visual, and multi-media communications across the subject areas.</p> <p><b>CCG:</b> Understand numbers, ways of representing numbers, relationships among numbers, and number systems.</p> <p><b>CCG:</b> Compute fluently and make reasonable estimates.</p> <p><b>CCG:</b> Select and use appropriate statistical methods to analyze data.</p> <p><b>CCG:</b> Understand patterns, relations, and functions.</p> <p><b>CCG:</b> Understand measurable attributes of objects and the units, systems and processes of measurement.</p> <p><b>CCG:</b> Apply appropriate techniques,</p>
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	<p>tools, and formulas to determine measurements.</p> <p><b>CCG:</b> Use visualization, spatial reasoning, and geometric modeling to solve problems.</p> <p><b>CCG:</b> Select, apply, and translate among mathematical representations to solve problems.</p> <p><b>CCG:</b> Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</p> <p><b>CCG:</b> Develop and evaluate inferences and predictions that are based on data.</p> <p><b>CCG:</b> Understand that any collection of things that have an influence on one another can be thought of as a system.</p> <p><b>CCG:</b> Understand that both patterns of change and stability are important in the natural world.</p> <p><b>CCG:</b> Understand that science is a human endeavor practiced by individuals from many different cultures.</p> <p><b>CCG:</b> Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.</p> <p><b>CCG:</b> Describe the role of science and technology in local, national and global issues.</p> <p><b>CCG:</b> Describe how daily choices of individuals, taken together, affect global resource cycles, ecosystems and natural resource supplies.</p> <p><b>CCG:</b> Explain risks and benefits in personal and community health from a science perspective.</p> <p><b>CCG:</b> Understand the relationship that exists between science and technology.</p> <p><b>CCG:</b> Understand the process of technological design to solve problems and meet needs.</p>
<p><b>Possible Connections to Oregon Skill Sets:</b></p>	<p><b>Agriculture Cluster:</b> Animal Science Systems, Plant Sciences/Horticulture,</p>

	<p>and Power, Structure, and Technology</p> <p><b>Environmental Services Cluster:</b> Water Quality</p> <p><b>Natural Resources Management Cluster:</b> Aquatic and Marine Management, Fish and Wildlife Resources, Forestry and Forest Products, Geology and Mineral Industries, and Recreation and Cultural Resources</p>
<p><b>Possible Connections to Career-Related Learning Standards:</b></p>	<p><b>Personal Management:</b> Identify tasks that need to be done and initiate action to complete the tasks. Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality. Take responsibility for decisions and actions and anticipate consequences of decisions and actions. Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.</p> <p><b>Problem Solving:</b> Identify problems and locate information that may lead to solutions. Identify alternatives to solve problems. Select and explain a proposed solution and course of action. Develop a plan to implement the selected course of action. Assess results and take corrective action.</p> <p><b>Communication:</b> Locate, process, and convey information using traditional and technological tools. Listen attentively and summarize key elements of verbal and non-verbal communication. Give and receive feedback in a positive manner. Read technical/instructional materials for information and apply to specific tasks. Speak clearly, accurately, and in a manner appropriate for the intended audience when giving oral instructions, technical reports, and business communications.</p> <p><b>Teamwork:</b> Identify different types of teams and roles within each type of</p>



	<p>team; describe why each role is important to effective teamwork. Demonstrate skills that improve team effectiveness.</p> <p><b>Employment Foundations:</b> Apply academic knowledge and technical skills in a career context. Demonstrate dress, appearance, and personal hygiene appropriate for the work environment and situation. Explain and follow regulatory requirements, security procedures, and ethical practices.</p> <p><b>Career Development:</b> Assess personal and characteristics related to educational and career goals. Research and analyze career and educational information.</p>
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## **Additional Websites**

1. Environmental Education Association of Oregon  
<http://www.eeao.org/>
2. Oregon State Standards and Benchmarks  
<http://www.ode.state.or.us/teachlearn/real/standards/default.aspx>
3. North American Association for Environmental Education  
<http://naaee.org/pages/index.html>
4. Environmental Grantmaking Foundation  
<http://www.environmentalgrants.com/>
5. Hands on the Land  
<http://www.handsontheland.org/>
6. Project Learning Tree  
<http://www.plt.org/>
7. Oregon Forest Resources Institute  
[www.oregonforests.org](http://www.oregonforests.org)
8. Oregon Forestry Education Program  
<http://www.cof.orst.edu/ofep/links.shtml>
9. Youth Service America  
<http://www.ysa.org/>
10. Environmental Protection Agency Grants  
<http://www.epa.gov/enviroed/grants.html>