

OREGON ALIGNMENT FOR NIH SUPPLEMENT THE BRAIN: OUR SENSE OF SELF

| <b>THE BRAIN: OUR SENSE OF SELF</b>              |  |   |
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| <b>Oregon Science Content Standards: Grade 8</b> |  |   |
| <b>Lesson</b>                                    | <b>CCG</b>   | <b>Descriptor</b>   |
| 3  | SC.08.PS.06  | Describe and explain various energy transfers and resulting transformations.  |
| 2, 3, 4  | SC.08.LS.01.01                                     | Identify organ systems at work during a particular activity and describe their effect on each other.  |
| 4  | SC.08.LS.03.02                                     | Identify traits inherited through genes and those resulting from interactions with the environment.   |
| 4  | SC.08.LS.03.04                                     | Explain how our understanding of heredity has changed over time.  |
| 2, 3, 4  | SC.08.SI.01  | Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.             |
| 3  | SC.08.SI.02  | Design a scientific investigation to answer questions or test hypotheses.   |
| 2, 3, 4  | SC.08.SI.03  | Collect, organize, and display sufficient data to support analysis.   |
| 2, 3, 4  | SC.08.SI.04  | Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications. |
| 1, 2, 3, 4                                       | <b>Unifying Concepts and Processes</b>             | Understand that any collection of things that have an influence on one another can be thought of as a system.                                       |
| 2, 3, 4  | <b>Unifying Concepts and Processes</b>             | Understand that a model is a tentative scheme or structure with explanatory power.  |
| 2, 3, 4  | <b>Unifying Concepts and Processes</b>             | Understand that both patterns of change and stability are important in the natural world.   |
| 3, 4   | <b>History and Nature of Science</b>               | Understand that science is a human endeavor practiced by individuals from many different cultures.  |
| 2, 3, 4, 5                                       | <b>History and Nature of Science</b>               | Understand that scientific knowledge is subject to change based on new findings and results of scientific observation and experimentation.          |
| 2, 3, 4  | <b>History and Nature of Science</b>               | Understand that scientific knowledge distinguishes itself through the use of empirical standards, logical arguments and skepticism.                 |
| 2, 4, 5  | <b>Science in Personal and Social Perspectives</b> | Describe the role of science and technology in local, national and global issues.   |

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| 4, 5  | Science in Personal and Social Perspectives | Explain risks and benefits in personal and community health from a science perspective.   |
| 2, 4, 5   | Science and Technology                      | Understand the relationship that exists between science and technology.   |
| <b>Oregon Mathematics Content Standards: Grades 6 – 8</b> |   |   |
| <b>Grade 6</b>  |   |   |
| <b>Lesson</b>   | <b>CCG</b>                                  | <b>Descriptor</b>   |
| 4   | MA.06.CE.01                                 | Order, model, and compare positive rational numbers (fractions, decimals, and percentages).   |
| 4   | MA.06.CE.21                                 | Apply the associative, commutative, and distributive properties to simplify computations with positive rational numbers.  |
| 4   | MA.06.AR.01                                 | Represent, analyze, and determine rules for finding patterns involving positive rational numbers with tables, graphs, words, and when possible, symbolic rules. |
| 4   | MA.06.AR.06                                 | Model and solve contextualized problems using various representations such as graphs, tables, and equations.  |
| 4   | MA.06.AR.09                                 | Investigate how a change in one variable relates to a change in a second variable.  |
| 4   | MA.06.PS.01                                 | Interpret the concepts of a problem-solving task and translate them into mathematics.   |
| 4   | MA.06.PS.02                                 | Choose strategies that can work and then carry out the strategies chosen.   |
| 4   | MA.06.PS.04                                 | Use pictures, symbols, and/or vocabulary to convey the path to the identified solution.   |
| 4   | MA.06.PS.05                                 | Accurately solve problems using mathematics.  |
| <b>Grade 7</b>  |   |   |
| <b>Lesson</b>   | <b>CCG</b>                                  | <b>Descriptor</b>   |
| 4   | MA.07.CE.17                                 | Apply the associative, commutative, and distributive properties to simplify computations with rational numbers (with an emphasis on integers).                  |
| 4   | MA.07.SP.09                                 | Represent and interpret data using frequency distribution tables, box-and whisker-plots, stem-and-leaf plots, and single- and multiple-line graphs.             |
| 4   | MA.07.SP.14                                 | Use observations about differences between two or more samples to make conjectures about the populations from which the samples were taken.                     |
| 4   | MA.07.AR.01                                 | Represent, analyze, and determine rules for finding patterns involving integers with tables, graphs, words, and when possible, symbolic rules.                  |
| 4   | MA.07.AR.07                                 | Recognize and represent direct variation using tables, graphs, and equations.   |
| 4   | MA.07.AR.08                                 | Identify and sketch a graph that models a given situation.  |

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| 4 | <b>MA.07.AR.09</b> | Identify and describe how a change in one variable relates to a change in a second variable. |
| 4 | <b>MA.07.PS.01</b> | Interpret the concepts of a problem-solving task and translate them into mathematics.        |
| 4 | <b>MA.07.PS.02</b> | Choose strategies that can work and then carry out the strategies chosen.                    |
| 4 | <b>MA.07.PS.04</b> | Use pictures, symbols, and/or vocabulary to convey the path to the identified solution.      |
| 4 | <b>MA.07.PS.05</b> | Accurately solve problems using mathematics.   |

**Grade 8**

| <b>Lesson</b> | <b>CCG</b>         | <b>Descriptor</b>  |
|---------------|--------------------|--|
| 4             | <b>MA.08.CE.11</b> | Apply the associative, commutative, and distributive properties to simplify computations with rational numbers.  |
| 4             | <b>MA.08.SP.05</b> | Collect and display data as lists, tables, and plots using appropriate technology (e.g., graphing calculators, computer software).   |
| 4             | <b>MA.08.SP.07</b> | Estimate or predict the occurrence of future events using data.  |
| 4             | <b>MA.08.AR.01</b> | Represent, analyze and determine rules for finding patterns relating to linear functions, nonlinear functions, and arithmetic sequences with tables, graphs, and symbolic rules. |
| 4             | <b>MA.08.AR.16</b> | Determine when data represented in a table or graph represents a linear or nonlinear relationship.   |
| 4             | <b>MA.08.AR.19</b> | Analyze the nature of change in quantities in linear relationships represented by graphs, tables, or formulas.   |
| 4             | <b>MA.08.PS.01</b> | Interpret the concepts of a problem-solving task and translate them into mathematics.  |
| 4             | <b>MA.08.PS.02</b> | Choose strategies that can work and then carry out the strategies chosen.  |
| 4             | <b>MA.08.PS.03</b> | Use pictures, symbols, and/or vocabulary to convey the path to the identified solution.  |
| 4             | <b>MA.08.PS.04</b> | Accurately solve problems using mathematics.   |

**Oregon English/Language Arts Content Standards: Grades 6 – 8**

| <b>Lesson</b>      | <b>CCG</b>   | <b>Descriptor</b>  |
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| <b>All lessons</b> | <b>EL.06.RE.03<br/>EL.07.RE.02<br/>EL.08.RE.02</b> | 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. |
| <b>2, 3, 4, 5</b>  | <b>EL.06.RE.04<br/>EL.07.RE.03<br/>EL.08.RE.03</b> | Make connections to text, within text, and among texts across the subject areas.   |
| <b>2, 3, 4, 5</b>  | <b>EL.06.RE.05<br/>EL.07.RE.04<br/>EL.08.RE.04</b> | Demonstrate listening comprehension of more complex text through class and/or small group interpretive discussions across the subject areas.   |
| <b>1, 3, 4, 5</b>  | <b>EL.06.RE.06<br/>EL.07.RE.05<br/>EL.08.RE.05</b> | Match reading to purpose—location of information, full comprehension, and personal enjoyment.  |

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| 3, 4, 5    | <b>EL.06.RE.07</b><br><b>EL.07.RE.06</b><br><b>EL.08.RE.06</b> | 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. |
| 3, 4, 5    | <b>EL.06.RE.08</b><br><b>EL.07.RE.07</b><br><b>EL.08.RE.07</b> | Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct.  |
| 2, 3, 4, 5 | <b>EL.06.RE.09</b><br><b>EL.07.RE.08</b><br><b>EL.08.RE.08</b> | Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.   |
| 2, 3, 4, 5 | <b>EL.06.RE.10</b><br><b>EL.07.RE.09</b><br><b>EL.08.RE.09</b> | Develop vocabulary by listening to and discussing both familiar and conceptually challenging selections read aloud across the subject areas.  |
| 3, 4, 5    | <b>EL.07.RE.10</b><br><b>EL.08.RE.10</b>                       | Determine the meanings of words using contextual and structural clues.  |
| 3, 4, 5    | <b>EL.06.RE.11</b>   | Determine the meaning of unknown words or words with unusual meanings in informational and narrative text by using word, sentence, and paragraph clues.   |
| 1, 3, 4, 5 | <b>EL.06.RE.15</b><br><b>EL.07.RE.14</b><br><b>EL.08.RE.14</b> | Read textbooks, biographical sketches, letters, diaries, directions, procedures, magazines, essays, primary source historical documents, editorials, news stories, periodicals, bus routes, and catalogs.   |
| 1, 3, 4, 5 | <b>EL.06.RE.16</b><br><b>EL.07.RE.15</b>                       | Locate information in titles, tables of contents, chapter headings, illustrations, captions, glossaries, indexes, graphs, charts, diagrams, and tables to aid understanding of grade-level text.  |
| 2, 3, 4, 5 | <b>EL.08.RE.15</b>   | Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.  |
| 3, 4, 5    | <b>EL.06.RE.19</b><br><b>EL.07.RE.18</b><br><b>EL.08.RE.17</b> | Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.  |
| 3, 4, 5    | <b>EL.06.RE.20</b><br><b>EL.07.RE.19</b><br><b>EL.08.RE.18</b> | Clarify understanding of informational texts by creating simple (6 & 7) or detailed (8) outlines, graphic organizers, diagrams, logical notes, or summaries.  |
| 2, 3, 4, 5 | <b>EL.06.RE.23</b><br><b>EL.07.RE.23</b><br><b>EL.08.RE.21</b> | Infer the main idea when it is not explicitly stated, and support with evidence from the text.  |
| 2, 3, 4, 5 | <b>EL.06.RE.25</b><br><b>EL.07.RE.25</b>                       | Distinguish among facts, supported inferences, and opinions in text. (6) Differentiate between conclusions that are based on fact and those that are based on opinion. (7)  |
| 2, 3, 4, 5 | <b>EL.06.RE.26</b>   | Connect and clarify main ideas by identifying their relationships to multiple sources, known information and ideas, and related topics.   |
| 2, 3, 4, 5 | <b>EL.06.WR.10</b>   | Write for different purposes and to a specific audience or person, adjusting tone and style as necessary (6) to   |

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|                    | <b>EL.07.WR.10</b><br><b>EL.08.WR.10</b>                       | engage the interest of the reader (7). Create compositions that engage the reader, have a clear message, a coherent thesis, and end with a clear and well-supported conclusion. (8)  |
| <b>2, 3, 4, 5</b>  | <b>EL.06.WR.11</b>   | Write multi-paragraph compositions that: Engage the interest of the reader, state a clear purpose, use common organizational structures for providing information in writing, such as chronological order, cause-and-effect, similarity and difference, and posing and answering a question, develop the topic with supporting details and precise language, provide transitions to link paragraphs, and conclude with a detailed summary linked to the purpose of the composition.          |
| <b>2, 3, 4, 5</b>  | <b>EL.07.WR.11</b>   | Write multi-paragraph compositions-descriptions, explanations, comparison-and-contrast papers, problem and solution essays that: state the thesis or purpose, explain the situation, organize the composition clearly, following an organizational pattern appropriate to the type of composition-comparison and contrast; organization by categories; and arrangement by spatial order, order of importance, or climactic order, and provide evidence to support arguments and conclusions. |
| <b>2, 3, 4, 5</b>  | <b>EL.06.WR.17</b><br><b>EL.07.WR.17</b><br><b>EL.08.WR.17</b> | Spell correctly frequently misspelled words (their, they're, there / loose, lose, loss / choose, chose / through, threw / it's, its). (6) Spell correctly derivatives (words that come from a common base or root word) by applying the spellings of bases and affixes (prefixes and suffixes) (7) Use correct spelling conventions. (8)   |
| <b>2, 3, 4, 5</b>  | <b>EL.06.WR.22</b><br><b>EL.07.WR.25</b><br><b>EL.08.WR.23</b> | Write legibly.   |
| <b>5</b>           | <b>EL.06.WR.26</b><br><b>EL.07.WR.29</b><br><b>EL.08.WR.27</b> | Write persuasive compositions: State a clear position on a proposition or proposal; support the position with organized and relevant evidence; and anticipate and address reader concerns and counter-arguments.   |
| <b>2, 3, 4, 5</b>  | <b>EL.06.WR.27</b><br><b>EL.07.WR.30</b>                       | Write summaries: using formal paragraph structure, that contain the main ideas and most significant details using the student's own words, except for quotations (6); include the main ideas and most significant details, use the student's own words, except for quotations, and reflect underlying meaning, not just the superficial details (7).   |
| <b>2, 3, 4, 5</b>  | <b>EL.06.SL.01</b><br><b>EL.07.SL.01</b>                       | Develop a focus and point of view (6) to achieve particular purposes and to appeal to the background and interests of the audience.  |
| <b>2, 3, 4, 5</b>  | <b>EL.08.SL.01</b>   | Develop a focus and present information to achieve particular purposes by matching the message, vocabulary, voice modulation, expression, and tone to the audience and purpose.  |
| <b>2, 3, 4, 5</b>  | <b>EL.06.SL.02</b>   | Match the purpose, message, occasion, and delivery to the audience.  |
| <b>2, 3, 4, 5</b>  | <b>EL.06.SL.03</b><br><b>EL.07.SL.02</b>                       | Organize information: using supporting details, reasons, descriptions, and examples (6); arranging details, reasons, descriptions, and examples effectively and persuasively in relation to the audience (7).  |
| <b>2, 3, 4, 5</b>  | <b>EL.03.SL.03</b>   | Use credible and relevant information to convey message.   |
| <b>All lessons</b> | <b>EL.06.SL.07</b><br><b>EL.07.SL.05</b><br><b>EL.08.SL.06</b> | Use correct grammar consistently. (6 & 7) Use appropriate grammar. (8)   |
| <b>All lessons</b> | <b>EL.07.SL.07</b>   | Ask questions to obtain information, including evidence to support the speaker's claims and conclusions.   |
| <b>All lessons</b> | <b>EL.06.SL.11</b>   | Restate and execute multiple-step oral directions and instructions.  |

| <b>Oregon Health Education Content Standards: Grade 8</b> |                    |  |
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| <b>Lesson</b>   | <b>CCG</b>         | <b>Descriptor</b>  |
| <b>3, 4, 5</b>  | <b>HE.08.HS.03</b> | Analyze influences on health and well-being (e.g., culture, family, media, technology, peers, body image, emotions, and physical and social environments). |
| <b>4</b>  | <b>HE.08.HS.06</b> | Use a decision making model that will enhance health and well-being.   |
| <b>4, 5</b>   | <b>HE.08.HS.07</b> | Advocate to self, peers, family and community members, the benefits of health and safety enhancing practices.  |