

THE SCIENCE OF ENERGY BALANCE: CALORIE INTAKE AND PHYSICAL ACTIVITY

Oklahoma Priority Academic Student Skills – Science Processes and Inquiry – Grades 6, 7, 8

Lesson	Standard	Description
4	1.1	Identify qualitative and quantitative changes given conditions (e.g., temperature, mass, volume, time, position, length, quantity) before, during, and after an event.
2	1.2	Use appropriate tools (e.g., metric ruler, graduated cylinder, thermometer, balances, spring scales, stopwatches) when measuring objects, organisms, and/or events.
2, 4	1.3	Use appropriate System International (SI) units (i.e., grams, meters, liters, degrees Celsius, and seconds); and SI prefixes (i.e., micro-, milli-, centi-, and kilo-) when measuring objects, organisms, and/or events.
1, 2, 4	3.1	Ask questions about the world and design investigations that lead to scientific inquiry.
1, 2, 4	3.2	Evaluate the design of a scientific investigation.
1, 2, 4	3.3	Identify variables and/or controls in an experimental setup (i.e., tested, experimental, and measured variables).
1, 2, 3, 4	3.4	Identify a testable hypothesis for an experiment.
1, 2, 4	3.5	Design and conduct experiments.
2	3.6	Recognize potential hazards and practice safety procedures in all science activities.
1, 2, 3, 4	4.1	Report data in an appropriate method when given an experimental procedure or data.
1, 2, 3, 4	4.2	Interpret data tables, line, bar, trend, and/or circle graphs.
1, 2, 3, 4	4.3	Evaluate data to develop reasonable explanations, and/or predictions.
1, 2, 3, 4	4.4	Accept or reject hypotheses when given results of an investigation.
1, 2, 3, 4	4.5	Communicate scientific procedures and explanations.
1, 2, 3, 4	5.1	Use systematic observations, make accurate measurements, and identify and control variables.
1, 2, 3, 4	5.2	Use technology to gather data and analyze results of investigations.
1, 2, 3, 4	5.3	Review data, summarize data, and form logical conclusions.
All lessons	5.4	Formulate and evaluate explanations proposed by examining and comparing evidence, pointing out statements that go beyond evidence, and suggesting alternative explanations.

Oklahoma Priority Academic Student Skills – Science – Grades 6 & 7		
Lesson	Standard	Description
1, 2, 3	2.1	Energy exists in many forms such as, heat, light, electricity, mechanical motion, and sound. Energy can be transferred in various ways. (6)
1, 2	3.1	Cells are the building blocks of all organisms (both plants and animals). (6)
1, 2	2.1	Living systems are organized by levels of complexity (i.e., cells, tissues, organs, and/or systems). (7)
3, 4	3.1	Characteristics of an organism result from inheritance and from interactions with the environment. (7)
1, 2, 3, 4	4.1	Living organisms strive to maintain a constant internal environment (i.e., temperature regulation). (7)
All lessons	4.2	Living organisms have physical and/or behavioral responses to external stimuli (e.g., hibernation, migration, plant growth). (7)
Oklahoma Priority Academic Student Skills – Mathematics Process Standards – Grades 6, 7, 8		
Lesson	Standard	Description
1, 2, 3, 4	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
1, 2, 3, 4	1.2	Use technology to generate and analyze data to solve problems.
1, 2, 3, 4	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
1, 2, 3, 4	1.4	Evaluate results to determine their reasonableness.
1, 2, 3, 4	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
All lessons	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
1, 2, 3, 4	2.2	Reflect on and justify reasoning in mathematical problem solving (e.g., convince, demonstrate, formulate).
All lessons	3.1	Identify and extend patterns and use experiences and observations to make suppositions.
1, 2, 3, 4	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
1, 2, 3, 4	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).

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All lessons	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
Oklahoma Priority Academic Student Skills – Mathematics Content Standards – Grades 6, 7, 8		
Lesson	Standard	Description
2, 3	2.1	Multiply and divide fractions and mixed numbers to solve problems using a variety of methods. (6)
2	2.2	Convert, compare and order decimals (terminating and nonterminating), fractions and percents using a variety of methods. (6)
1, 2, 3	4.2	Compare and convert units within the same measurement system; express conversions using appropriate unit labels (e.g., square inches to square feet, centimeters to millimeters, hours to minutes); and compute measurements of combined units. (6)
1, 2, 3, 4	5.1	Collect, organize, and interpret data to solve problems (e.g., data from student experiments, tallies, Venn diagrams, tables, circle and bar graphs, spreadsheets). (6)
1, 2, 3	2.1.b	Use the basic operations on integers to solve problems. (7)
2, 3	2.2.b	Set up equivalent ratios, estimate and solve problems using ratio, proportions, and percents including percents greater than 100 and less than 1 (e.g., determine missing sides of similar figures, heart rate per minute, cost per pound, pay to hours worked overtime). (7)
1, 2, 3	4.2.a	Select and use appropriate tools for measurements in practical applications and make reasonable estimates of measurements in a particular situation using the appropriate unit. (7)
1, 2, 3	2.1.a	Compare and order rational numbers (positive and negative integers, fractions, decimals) in real-life situations. (8)
2, 3	2.1.c	Apply ratios and proportions to solve problems. (8)
1, 2, 3, 4	5.1	Select and apply appropriate formats (e.g., line plots, bar graphs, stem-and-leaf plots, scatter plots, histograms, circle graphs) to display collected data. (8)
1, 2, 3, 4	5.3	Determine how samples are chosen (random, limited, biased) to draw and support conclusions about generalizing a sample to a population (e.g., is the average height of a men’s college basketball team a good representative sample for height predictions?). (8)

Oklahoma Priority Academic Student Skills – Language Arts – Grades 6, 7, 8		
Lesson	Standard	Description
All lessons	3.2.a	Draw inferences and conclusions about text and support them with textual evidence and prior knowledge. (Reading)
All lessons	3.3.a	Summarize and paraphrase information including the main idea and significant supporting details of a reading selection. (6 & 7 – Reading) Determine the main (or major) idea and how those ideas are supported with specific details. (8 – Reading)
All lessons	3.3.b	Make generalizations based on information gleaned from text. (6 – Reading) Paraphrase and summarize text to recall, inform, or organize ideas. (8 – Reading)
All lessons	3.3.d	Support reasonable statements by reference to relevant aspects of text and examples. (7 – Reading)
All lessons	3.4.d	Problem/solution - offer observations, make connections, react, speculate, interpret, and raise questions in response to text. (8 – Reading)
All lessons	5.1.b	Access information from a variety of primary and secondary sources to gather information for research topics. (6 & 7 - Reading)
All lessons	1.2	Make generalizations based on information gleaned from text. (6 - Writing) Use details, examples, reasons, and evidence to develop an idea. (7 & 8 – Writing)
All lessons	1.4	Use precise word choices, including figurative language, that convey specific meaning and tone. (Writing)
All lessons	1.5	Use a variety of sentence structures, types, and lengths to contribute to fluency and interest. (Writing)
All lessons	2.2.d	Write research reports that: organize and display information on charts, tables, maps, and graphs. (8 – Writing)
All lessons	2.7	Write for different purposes and audiences, adjusting tone, style, and voice as necessary to make writing interesting. (6 - Writing)
All lessons	2.8	Write for different purposes and audiences, adjusting tone, style, and voice as necessary to make writing interesting. (7 & 8 - Writing)
All lessons	1.1	Identify the major ideas and supporting evidence in informative and persuasive messages. (Listening)
All lessons	1.2	Determine the purpose for listening (i.e., gaining information, solving problems; or for enjoying, appreciating, recalling, interpreting, applying, analyzing, evaluating, receiving directions, or learning concepts). (6 – Listening) Listen in order to identify and discuss topic, purpose, and perspective. (7 & 8 – Listening)
All lessons	2.1	Analyze purpose, audience, and occasion and consider this information in planning an effective presentation or response. (Listening)

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All lessons	2.4	Use level-appropriate vocabulary in speech (e.g., metaphorical language, sensory details, or specialized vocabulary). (7 & 8 – Listening)
Oklahoma Priority Academic Student Skills – Health and Safety Literacy – Grades 5 - 8		
Lesson	Standard	Description
3, 4	1.1	Analyze how environment and personal health are interrelated.
2, 3, 4, 5	1.2	Describe how lifestyle, pathogens, family history, and other risk factors are related to the cause or prevention of disease and other health problems.
2	1.4	Identify foods within each of the basic food groups and select appropriate servings and portions for his/her age and physical activity levels.
5	1.7	Describe the effects various diseases (e.g., cancer, diabetes) have on the body systems.
2, 3, 4, 5	1.13	Explain the relationship between caloric intake and level of activity in weight management and describe safe methods of weight control.
5	1.14	Identify individual and community responsibilities for protecting the environment and promoting community health and safety.
5	2.1	Analyze situations requiring professional health services.
5	2.4	Analyze how media influences the selection of health information and products.
3	3.6	Interpret physical and mental consequences of a poorly balanced diet and explain how diet choices, based upon fads, may provide inadequate nourishment and cause health problems.
1, 2, 5	3.8	Analyze a personal health assessment to determine strengths and risks.
2, 3, 4, 5	3.10	Identify the role exercise, nutrition, hygiene, and relationships play in basic personal health needs.
2, 3, 4, 5	6.3	Demonstrate the ability to apply a decision-making process to health and safety issues individually and collaboratively.
2, 3, 4, 5	6.4	Analyze how personal health goals are influenced by changing information, priorities, and responsibilities.
5	6.5	Develop a plan that identifies personal strengths, needs, and health risks.
2, 3, 4, 5	7.1	Interpret information and analyze personal opinions concerning health and safety issues.
3, 4, 5	7.2	Demonstrate the ability to work cooperatively when advocating for healthy and safe communities.
2, 3, 4, 5	7.3	Demonstrate the ability to influence and support others in making positive health and safety choices.
2, 3, 4, 5	7.4	Examine various methods for communicating health information and ideas.

