

SOUTH CAROLINA ALIGNMENT FOR NIH SUPPLEMENT THE SCIENCE OF ENERGY BALANCE: CALORIE INTAKE AND PHYSICAL ACTIVITY

THE SCIENCE OF ENERGY BALANCE: CALORIE INTAKE AND PHYSICAL ACTIVITY		
South Carolina Science Academic Standards – Grades 6 - 8		
Lesson	Standard	Indicator
2	6-1.1 7-1.1 8-1.6	Use appropriate tools and instruments safely and accurately when conducting a controlled scientific investigation.
1, 2, 3, 4	6-1.2	Differentiate between observation and inference during the analysis and interpretation of data.
1, 2, 3, 4	6-5.2	Explain how energy can be transformed from one form to another (including the two types of mechanical energy, potential and kinetic, as well as chemical and electrical energy) in accordance with the law of conservation of energy.
1, 3, 4	7-1.2	Generate questions that can be answered through scientific investigation.
4	7-1.3	Explain the reasons for testing one independent variable at a time in a controlled scientific investigation.
3, 4	7-1.5	Explain the relationships between independent and dependent variables in a controlled scientific investigation through the use of appropriate graphs, tables, and charts.
2, 3, 4	7-1.6	Critique a conclusion drawn from a scientific investigation.
4	7-2.7	Distinguish between inherited traits and those acquired from environmental factors.
2	7-3.1	Summarize the levels of structural organization within the human body (including cells, tissues, organs, and systems).
3, 4	8-1.2	Recognize the importance of a systematic process for safely and accurately conducting investigations.
3, 4	8-1.3	Construct explanations and conclusions from interpretations of data obtained during a controlled scientific investigation.
1, 2, 4	8-1.4	Generate questions for further study on the basis of prior investigations.
South Carolina Mathematics Academic Standards – Grades 6 - 8		
Number and Operations		
Lesson	Standard	Expectation
2, 4	I.A.1	Show the relationship among fractions, decimals, and percents. (6) Write and use the appropriate equivalent forms of whole numbers, fractions, decimals, and percents. (7) Solve real-world problems

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		involving fractions, decimals, and percents. (8)
1, 2, 3, 4	I.G.1	Use integers to describe real-world phenomena in order to develop meanings for integers. (6) Compare and order integers. (7)
1, 2, 3, 4	II.B.1	Apply the commutative, associative, and distributive properties to simplify computations with whole numbers, fractions, and decimals. (6) Apply the associative, commutative, and distributive properties for operations on integers, fractions, and decimals. (7) Apply the associative, commutative, and distributive properties to simplify expressions. (8)
2, 4	III.A.1	Select appropriate methods and tools to solve problems requiring the addition and subtraction of fractions and decimals. (6) Applying all operations to fractions, decimals, and integers, select appropriate methods and tools to solve problems. (7) Select appropriate methods and tools to solve problems requiring the use of rational numbers. (8)
1, 2, 3, 4	III.B.3	Add, subtract, multiply, and divide fractions (including decimals) to solve a variety of applied and mathematical problems. (6) Add, subtract, multiply, and divide integers to solve a variety of applied and mathematical problems. (7) Compute with rational numbers to solve a variety of applied and mathematical problems. (8)
Algebra		
1, 3, 4	I.B.1	Use different forms of representing information (e.g., graphical, symbolic, tabular). (7)
1, 4	II.B.1	Analyze quantitative changes by comparing and contrasting numerical patterns in tables with their respective graphs in the coordinate plane. (7)
1, 3, 4	III.A.1	Use graphs and tables to solve applied problems. (6)
1, 3, 4	IV.A.1	Use tables and graphs to model and analyze linear relationships between variables. (8)
Measurement		
2	I.A	Understand both metric and customary systems of measurement.
2	II.A.1	Using standard and nonstandard units of measure, estimate and then determine length, weight/mass, area, and volume/capacity. (6)
2	II.B	Select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision.
Data Analysis and Probability		
1, 4	I.A	Formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within one population. (6 & 7)

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1, 4	I.B	Select, create, and use appropriate graphical representations of data, including histograms, box plots, and scatterplots.
4	II.B	Discuss and understand the correspondence between data sets and their graphical representations, especially histograms, stem-and-leaf plots, box plots, and scatterplots.
1, 3, 4	III.A.1	Make inferences and predictions based on the analysis of sample data. (7)
1, 4	III.C.1	Formulate a hypothesis and then design and carry out an experiment to test it. (8)
1, 4	III.C.2	Formulate new areas of investigation based on the results of prior experiments. (8)
South Carolina Language Arts Academic Standards – Grades 6 - 8		
Lesson	Standard	Indicator
1, 2, 3, 4	6-R1.3 7-R1.3 8-R1.3	Demonstrate the ability to make connections between a text read independently and his or her prior knowledge, other texts, and the world.
All lessons	6-R1.4 7-R1.4 8-R1.4	Demonstrate the ability to summarize, and paraphrase texts (6); to summarize, paraphrase, analyze, and evaluate what he or she has read. (7 & 8)
All lessons	6-R1.8 7-R1.8 8-R1.8	Demonstrate the ability to draw conclusions and make inferences.
All lessons	6-R1.12 7-R1.12 8-R1.12	Demonstrate the ability to use graphic representations such as charts, graphs, pictures, and graphic organizers as information sources and as a means of organizing information and events logically.
All lessons	6-R1.14 7-R1.14 8-R1.14	Demonstrate the ability to compare and contrast his or her findings on a particular topic after having extracted that information from two or more pieces of graphic or written material.
1, 3, 4, 5	6-W1.3 7-W1.3 8-W1.3	Demonstrate the ability to develop an extended response around a central idea, using relevant supporting details.
1, 3, 4, 5	6-W1.6.1 7-W1.6.1 8-W1.6.1	Demonstrate the ability to write multiple-paragraph compositions, friendly letters, and expressive and informational pieces.

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1, 2, 3, 4	6-W2.1 7-W2.1 8-W2.1	Demonstrate the ability to use writing to explain and inform.
2, 4	6-W2.2 7-W2.2 8-W2.2	Demonstrate the ability to use writing to learn, entertain, and describe.
All lessons	6-W3.1 7-W3.1 8-W3.1	Demonstrate the ability to respond to texts both orally and in writing.
All lessons	6-W3.3 7-W3.3 8-W3.3	Demonstrate the ability to use texts to make connections and to support ideas in his or her own writing.
All lessons	6-W4.1 7-W4.1 8-W4.1	Demonstrate the ability to write legibly using print or cursive handwriting.
All lessons	6-C1.18 7-C1.17 8-C1.15	Begin/Continue/Demonstrate using critical analysis to formulate appropriate oral responses.
All lessons	6-C2.1 7-C2.1 8-C2.1	Demonstrate the ability to listen for meaning in conversations and discussions.
All lessons	6-C2.2 7-C2.2 8-C2.2	Demonstrate the ability to summarize conversations and discussions.
3, 4, 5	6-C2.3 7-C2.3 8-C2.3	Demonstrate the ability to distinguish between fact and opinion, to compare and contrast information and ideas, and to make inferences with regard to what he or she has heard.
2, 4, 5	6-C2.5 7-C2.5 8-C2.5	Demonstrate the ability to listen to record information as a member of a group.

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1, 4	6-C3.2 7-C3.2 8-C3.2	Demonstrate the ability to summarize information that he or she receives from nonprint sources.
4, 5	6-C3.4 7-C3.4 8-C3.4	Demonstrate the ability to make predictions, to distinguish between fact and opinion, to compare and contrast information and ideas, and to make inferences with regard to what he or she has viewed.
1, 4, 5	6-C3.11 7-C3.11 8-C3.11	Demonstrate the ability to make connections between nonprint sources and his or her prior knowledge, other sources, and the world.
1, 2, 3, 4	6-RS1.1 7-RS1.1 8-RS1.1	Demonstrate the ability to ask questions to guide his or her research inquiry.
1, 2, 3, 4	6-RS1.2 7-RS1.2 8-RS1.2	Begin/Continue/Demonstrate the ability to ask questions to investigate all aspects of a topic, including various viewpoints regarding it.

South Carolina Health Lifetime Wellness Standards – Grade 8

Lesson	Standard	Indicator
3, 4, 5	I.1.a	Describe how lifestyle behaviors, environment, genetics, and medical care influence health.
5	I.1.b	Explain how disease processes affect body systems.
5	I.1.c	Compare and contrast strategies for reducing the risks of communicable and chronic diseases.
3, 5	I.1.d	Describe the components of a personal health program.
3, 4, 5	I.2.a	Analyze the validity of health information, products, and services.
5	I.3.a	Demonstrate strategies for personal health maintenance and enhancement.
3	I.3.b	Demonstrate strategies for detection and treatment of common health problems and communicable and chronic diseases.
3, 5	I.4.a	Analyze the influence of peers, family, and mass media on health behaviors.
1, 3, 5	I.4.c	Analyze the influence of technology and the environment on personal health.
2, 3, 5	I.6.a	Predict how decisions regarding health behaviors have consequences for the self, for others, and for the environment.

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1, 2, 3, 5	I.6.b	Demonstrate the ability to assess personal health strengths and weaknesses.
5	I.6.c	Demonstrate the ability to develop and implement a personal health and wellness program.
5	I.7.a	Demonstrate the ability to influence and support others in promoting a healthy environment.
2, 3, 4, 5	I.7.b	Demonstrate the ability to use a variety of methods to disseminate valid health information.
2, 3, 4, 5	II.1.b	Describe the relationships of food selection to body composition, energy expenditure, and health.
3, 5	II.1.d	Describe the adverse effects of high dietary fat intake.
3	II.2.c	Describe situations requiring the intervention of professional nutrition services.
2, 3	II.3.b	Demonstrate the ability to make nutritive comparison.
2	II.3.c	Demonstrate the ability to select adequate amounts of appropriate foods to meet personal health needs.
3, 4, 5	II.4.a	Describe parent, family, peer, and environmental influences on food consumption.
2, 3, 4, 5	II.4.b	Analyze factors that influence nutrition behaviors (e.g., gender, age, costs, body image).
2, 3, 5	II.4.c	Analyze the influence of mass media, societal messages, and technology on nutrition behaviors.
2, 3, 4, 5	II.5.b	Demonstrate ways to communicate consideration and respect for self and others as related to body composition and shape, weight control, and dietary choices.
2, 5	II.6.b	Analyze personal nutrition practices as related to eating disorders and to the prevention of chronic disease.
All lessons	III.5.b	Demonstrate effective interpersonal communication skills.
3, 4, 5	III.6.b	Analyze how individual, family, and community values influence health-related decisions.
2, 5	III.6.c	Demonstrate the ability to assess one's personal strengths, needs, and health risks.
2, 3, 4, 5	III.7.a	Demonstrate the ability to influence and support others in making positive health choices.
5	IV.1.a	Explain the relationship between positive health behaviors and the prevention of injury and premature death.