



FOSS Full Option Science System

FOSS

Grades K-8

Correlated With

**WYOMING
CONTENT AND PERFORMANCE
STANDARDS FOR SCIENCE**

and

**WYOMING SCIENCE ACADEMIC CONTENT
STANDARDS FOR
STUDENTS WITH THE MOST SIGNIFICANT COGNITIVE
DISABILITIES.**



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WYOMING
CONTENT AND PERFORMANCE
STANDARDS FOR SCIENCE

CORRELATED WITH

FOSS (Full Option Science System)

GRADES K-8

This correlation shows representative examples of investigations and activities from the FOSS program that address the Science Content Standards. A citation does not reflect all of the investigations or activities that might address a particular standard or benchmark.

May 2009

GRADE SPAN K- 4

CONTENT STANDARD 1: CONCEPTS AND PROCESSES

In the context of unifying concepts and processes, students develop an understanding of scientific content through inquiry. Science is a dynamic process; concepts and content are best learned through inquiry and investigation. Concepts in LIFE SYSTEMS, EARTH and SPACE SYSTEMS, and PHYSICAL SYSTEMS are taught within the context of the following Unifying Concepts and Processes of Science:

- Systems, classification, order and organization
- Evidence, models, and explanations
- Cycles and change over time
- Measurement
- Form and function

<i>BENCHMARK GRADE 4</i>	<i>FOSS Investigations</i>
<p style="text-align: center;"><u>LIFE SYSTEMS</u></p> <p>SC4.1.1 <u>Characteristics of Organisms</u>: Students describe observable characteristics of living things, including structures that serve specific functions and everyday behaviors.</p>	<p>Animals Two by Two Investigation 1, Parts 1, 3-4, pp. 10-16, 22-29 Science Stories, pp. 5-21</p> <p>Trees Investigation 1, Parts 5-6, pp. 25-30 Investigation 3, Parts 1-2, pp. 10-14</p> <p>New Plants Investigation 1, Part 3, pp. 23-30 Investigation 2, Parts 1-3, pp. 8-28 Investigation 3, Parts 1-3, pp. 8-25 Science Stories, pp. 6-15, 40-43 FOSS Web, Activity: Watch It Grow</p> <p>Insects Investigation 1, Parts 1-2, pp. 8-21 Investigation 4, Parts 1-4, pp. 10-27 Science Stories, pp. 8-15</p> <p>Insects and Plants Investigation 2, Part 3, pp. 105-115 Investigation 3, Parts 1-3, pp. 129-151 Investigation 4, Parts 1-5, pp. 166-191 Science Resources, pp. 15-18, 30-33</p> <p>Plants and Animals Investigation 1, Parts 1-3, pp. 47-72 Investigation 2, Parts 1-3, pp. 87-108 Science Resources, pp. 4-7, 47-50</p> <p>Structures of Life Investigation 1, Parts 1-2, pp. 8-27 Investigation 2, Part 3, pp. 18-22 Investigation 4, Part 2, pp. 14-19 Science Stories, pp. 17-18, 41-42</p> <p>Human Body Investigation 1, Parts 1-2, pp. 8-20 Investigation 3, Parts 1-3, pp. 8-21 FOSS Web, Activity: Mr. Bones</p>

SC4.1.2 Life Cycles of Organisms: Students sequence life cycles of living things, and recognize that plants and animals resemble their parents.

SC4.1.3 Organisms and Their Environments: Students show connections between living things, their basic needs, and the environment.

EARTH AND SPACE SYSTEMS

SC4.1.4 Properties of Earth Materials: Students investigate water, air, rocks, and soils to compare basic properties of earth materials.

Animals Two by Two

Investigation 5, Parts 1-3, pp. 10-24
Science Stories, pp. 20-21
FOSS Web, Activity: Find the Parent

New Plants

Investigation 1, Parts 1-3, pp. 8-30

Insects

Investigations 1-5, All Parts
Science Stories, pp. 16-33

Insects and Plants

Investigation 1-5, all parts
Science Resources, pp. 37-55

Structures of Life

Investigation 2, Part 3, pp. 18-22
Science Stories, pp. 20-21
FOSS Web, Activity: Life Cycles

Trees

Investigation 1, Parts 2, 8, pp. 15-19, 35-37

Animals Two by Two

Investigation 2, Part 2, pp. 17-21
Investigation 3, Part 1, pp. 10-16
Science Stories, pp. 6, 10, 12, 16

New Plants

Investigation 1, Parts 2-3, pp. 13-30
Investigation 2, Parts 1-3, pp. 8-28
Science Stories, pp. 22-39

Insects

Investigation 3, Parts 1-3, pp. 8-26
Investigation 6, Parts 1-3, pp. 8-22

Insects and Plants

Investigation 2, Part 3, pp. 105-115
Investigation 3, Parts 1-3, pp. 129-151

Plants and Animals

Investigation 2, Parts 1-3, pp. 87-108
Investigation 3, Parts 1-2, pp. 120-134
Science Resources, pp. 3-7, 21-24, 28-45

Structures of Life

Investigation 1, Part 2, pp. 18-27
Investigation 2, Parts 1-3, p. 8-22
Investigation 3, Parts 1-4, pp. 8-30
Science Stories, pp. 17-19, 22-36

Pebbles, Sand and Silt

Investigation 1, Parts 1-3, pp. 8-21
Investigation 2, Parts 1-4, pp. 8-29
Investigation 4, Parts 1-3, pp. 8-25
Science Stories, p. 3-13, 20-23
FOSS Web, Activity: Find Earth Materials

Air and Weather

Investigation 1, Parts 1-6, pp. 8-38

SC4.1.5 Objects in the Sky: Students describe observable objects in the sky and their patterns of movement.

SC4.1.6 Changes in Earth and Sky: Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.

PHYSICAL SYSTEMS

SC4.1.7 Properties of Objects: Students classify objects by properties that can be observed, measured, and recorded, including color, shape, size, weight, volume, texture, and temperature.

Science Stories, pp. 3-6

Earth Materials

Investigation 1, Parts 1-3, pp. 8-29

Investigation 2, Parts 1-2, pp. 8-21

Science Stories, pp. 30-35

FOSS Web, Activity: Rock Database

Water

Investigation 1, Parts 1-2, pp. 8-18

Science Stories, pp. 1-3

Air and Weather

Investigation 2, Part 3, pp. 20-23

Investigation 4, Part 3, pp. 19-24

Science Stories, pp. 8, 11-12

Ideas and inventions

Science Stories, pp. 33-37

Sun, Moon and Stars

Investigation 1, Parts 1-2, pp. 42-64

Investigation 2, Parts 1-2, pp. 79-100

Investigation 3, Parts 1-2, pp. 114-130

Science Resources, pp. 1-39

Pebbles, Sand and Silt

Science Stories, pp. 10-15, 22-23, 26-31

Air and Weather

Investigation 2, Parts 1-4, pp. 8-27

Investigation 4, Parts 1-3, pp. 8-18

Science Stories, pp. 7-23

Earth Materials

Science Stories, pp. 5-7, 34-36

Ideas and Inventions

Science Stories, pp. 33-36

Water

Science Stories, pp. 14-16

Fabric

Investigation 1, Parts 1-2, pp. 6-15

Investigation 2, Parts 1-3, pp. 7-21

Wood and Paper

Investigation 1, Parts 1-3, pp. 8-23

Investigation 3, Parts 1-4, pp. 8-25

Pebbles, Sand and Silt

Investigation 1, Parts 1-3, pp. 8-21

Investigation 2, Parts 1-4, pp. 8-29

Investigation 3, Part 1, pp. 8-14

Science Stories, pp. 8-9

Solids and Liquids

Investigation 1, Parts 1-2, pp. 8-20

Investigation 2, Parts 1-3, pp. 10-27

Science Stories, pp. 3-12

Earth Materials

Investigation 1, Parts 1-2, pp. 8-23

Magnetism and Electricity

<p>SC4.1.8 <u>Changes in States of Matter</u>: Students demonstrate that the processes of heating and cooling can change matter from one state to another.</p> <p>SC4.1.9 <u>Physical Phenomena</u>: Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism.</p> <p>SC4.1.10 <u>Position and Motion of Objects</u>: Students demonstrate that pushing and pulling can change the position and motion of objects.</p>	<p>Investigation 1, Part 1, pp. 8-17 Water Investigation 1, Parts 1-2, pp. 8-18</p> <p>Solids and Liquids Investigation 2, Science Extension, p. 31 Science Stories, pp. 14-17 Water Investigation 2, Part 3, pp. 19-24 Investigation 3, Parts 1-4, pp. 8-26 Science Stories, pp. 13-16 FOSS Web, Activity: Evaporation Measurement Science Stories, pp. 32-33 Matter and Energy Investigation 4, Part 2, pp. 181-192 Science Resources, pp. 54-56</p> <p>Solids and Liquids Investigation 3, Science Extension, p. 31 Balance and Motion Science Stories, pp. 18-21 Magnetism and Electricity Investigations 1-5, All Parts Science Stories, pp. 1-37 FOSS Web, Activity: Electromagnets Physics of Sound Investigations 1-4, All Parts Science Stories, pp. 1-36 Ideas and Inventions Investigation 4, Parts 1-3, pp. 8-21 Science Stories, pp. 23-32 Matter and Energy Investigation 1, Parts 1-3, pp. 50-82 Investigation 2, Parts 1-2, pp. 93-102 Science Resources, pp. 1-31</p> <p>Fabric Investigation 1, Parts 4-6, pp. 20-33 Wood and Paper Investigation 1, Parts 4-5, pp. 24-32 Air and Weather Investigation 1, Parts 4-6, pp. 21-38 Investigation 3, Parts 1-2, pp. 8-16 Balance and Motion Investigation 2, Parts 1-3, pp. 8-25 Investigation 3, Parts 1-3, pp. 6-25 Science Stories, pp. 10-21 Human Body Investigation 3, Parts 1-3, pp. 8-21 Magnetism and Electricity Investigation 1, Part 3, pp. 23-29</p>
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<p>Draw conclusions and accurately communicate results, making connections to daily life</p>	<p>New Plants Investigation 2, Part 3, pp. 20-28</p> <p>Plants and Animals Investigation 1, Part 3, pp. 63-72</p> <p>Magnetism and Electricity Investigation 1, Part 3, pp. 23-29 Investigation 4, Part 2, pp. 14-18</p> <p>Measurement Investigation 4, Part 2, pp. 14-17</p> <p>Earth Materials Investigation 2, Part 2, pp. 14-21</p> <p>Matter and Energy Investigation 3, Parts 2-3, pp. 139-160</p> <p>Wood and Paper Investigation 1, Parts 3-5, pp. 20-32 Investigation 3, Part 4, pp. 22-25</p> <p>Fabric Investigation 2, Part 1, pp. 7-11</p> <p>New Plants Investigation 2, Parts 1-2, pp. 8-19</p> <p>Balance and Motion Investigation 1, Part 2, pp. 14-18</p> <p>Plants and Animals Investigation 1, Parts 1-2, pp. 47-62</p> <p>Water Investigation 4, Parts 1-2, pp. 8-18</p> <p>Magnetism and Electricity Investigation 4, Parts 2-3, pp. 14-22</p> <p>Physics of Sound Investigation 2, Parts 1-3, pp. 8-24</p> <p>Matter and Energy Investigation 2, Parts 1-2, pp. 93-114</p> <p>Sun, Moon and Stars Investigation 1, Parts 1-2, pp. 42-64</p>
<p>Pose or identify questions and make predictions</p>	<p>Animals Two by Two Investigation 1, Part 3, pp. 22-25</p> <p>Wood and Paper Investigation 1, Part 3, pp. 20-23</p> <p>New Plants Investigation 2, Parts 1-2, pp. 8-19</p> <p>Balance and Motion Investigation 1, Part 2, pp. 14-18 Investigation 3, Part 1, pp. 6-12</p> <p>Plants and Animals Investigation 1, Parts 1-2, pp. 47-62</p> <p>Water Investigation 2, Parts 1-3, pp. 8-24</p> <p>Magnetism and Electricity Investigation 3, Parts 1-2, pp. 10-21</p> <p>Human Body Investigation 4, Part 2, pp. 17-19</p> <p>Matter and Energy Investigation 4, Parts 2-3, pp. 181-206</p> <p>Sun, Moon and Stars</p>

<p>Conduct investigations to answer questions and check predictions</p>	<p>Investigation 1, Parts 1-2, pp. 42-64</p> <p>Animals Two by Two Investigation 1, Part 3, pp. 22-25</p> <p>Wood and Paper Investigation 1, Part 3, pp. 20-23</p> <p>Air and Weather Investigation 1, Parts 5-6, pp. 27-38</p> <p>New Plants Investigation 2, Parts 1-2, pp. 8-19 Investigation 3, Parts 1-3, pp. 8-25</p> <p>Plants and Animals Investigation 1, Parts 1-2, pp. 47-62</p> <p>Human Body Investigation 4, Part 2, pp. 17-19</p> <p>Magnetism and Electricity Investigation 3, Parts 1-2, pp. 10-21</p> <p>Water Investigation 2, Parts 1-3, pp. 8-24</p> <p>Sun, Moon and Stars Investigation 1, Parts 1-2, pp. 42-64</p> <p>Matter and Energy Investigation 3, Part 2, pp. 139-150</p>
<p>SC4.2.3 Students identify and use appropriate scientific equipment</p>	<p>Fabric Investigation 1, Part 4, pp. 20-23</p> <p>Animals Two by Two Investigation 4, Part 1, pp. 8-11</p> <p>Air and Weather Investigation 2, Parts 2, 4, pp. 14-19, 24-27</p> <p>Insects Investigation 1, Parts 1-3, pp. 8-25 Investigation 2, Parts 1-3, pp. 8-24</p> <p>Insects and Plants Investigation 1, Parts 1-3, pp. 52-75 Investigation 5, Parts 1-3, pp. 206-225</p> <p>Measurement Investigations 1-4, All Parts</p> <p>Water Investigation 4, Part 1, pp. 8-13</p> <p>Earth Materials Investigation 1, Part 1, pp. 8-15</p> <p>Sun, Moon and Stars Investigation 1, Part 1, pp. 42-55</p> <p>Matter and Energy Investigation 3, Parts 2-3, pp. 139-160 Investigation 4, Part 1, pp. 174-180</p>
<p>SC4.2.4 Students properly use safety equipment and recognize hazards and safety symbols while practicing standard safety procedures.</p>	<p>Safety is stressed in all FOSS modules. A classroom safety section is included in the Overview section of each Teacher Guide. In addition, safety warnings are listed throughout the guides where appropriate. See for example:</p> <p>Fabric Investigation 1, p. 32</p>

	<p>Wood and Paper Investigation 2, P. 13</p> <p>Air and Weather Investigation 1, pp. 24-25</p> <p>Magnetism and Electricity Investigation 1, p. 9</p> <p>Structures of Life Investigation 1, P. 20</p> <p>Sun, Moon and Stars Investigation 1, Part 1, pp. 50-51</p>
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GRADE SPAN K- 4

CONTENT STANDARD 3: HISTORY AND NATURE OF SCIENCE IN PERSONAL AND SOCIAL DECISIONS

Students recognize the nature of science, its history, and its connections to personal, social, economic, and political decisions. Historically, scientific events have had significant impacts on our cultural heritage.

<i>BENCHMARK GRADE 4</i>	<i>FOSS Investigations</i>
<p>SC4.3.1 Students recognize the nature and history of science.</p> <p>Discuss how scientific ideas change over time</p> <p>Describe contributions of scientists</p>	<p>Measurement Science Stories, pp.1-15</p> <p>Human Body Science Stories, pp. 21-24</p> <p>Water Science Stories, pp. 24-26</p> <p>Magnetism and Electricity Science Stories, pp. 16-17</p> <p>Sun, Moon and Stars Science Resources, pp. 40-43</p> <p>Ideas and Inventions Science Stories, pp. 1-3, 17-22</p> <p>Magnetism and Electricity Science Stories, pp. 12-20, 21-23, 34-37</p> <p>Structures of Life Science Stories, pp. 7-9</p> <p>Measurement Science Stories, p. 21</p> <p>Sun, Moon and Stars Science Resources, pp. 40, 44-45</p>
<p>SC4.3.2 Students recognize how scientific information is used to make decisions.</p> <p>Identify and describe local science issues such as environmental hazards or resources management</p> <p>Suggest feasible solutions and personal action plans to address an identified issue</p>	<p>Wood and Paper Investigation 4, Parts 1-2, pp. 8-18 Science Stories, pp. 19-23</p> <p>New Plants Investigation 1, p. 29</p> <p>Insects and Plants Investigation 2, Part 3, p. 113</p> <p>Water Investigation 3, Language Extension, p. 27 Science Stories, p. 21</p> <p>Measurement Science Stories, pp. 16-17</p> <p>FOSS modules provide an opportunity to address this benchmark. See below: Wood and Paper</p>

	<p>Investigation 4, Parts 1-2, pp. 8-18 Science Stories, pp. 19-23</p> <p>New Plants Investigation 1, p. 29</p> <p>Insects and Plants Investigation 2, Part 3, p. 113</p> <p>Water Investigation 3, Language Extension, p. 27 Science Stories, p. 21</p> <p>Measurement Science Stories, pp. 16-17</p>
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GRADE SPAN 5 - 8

CONTENT STANDARD 1: CONCEPTS AND PROCESSES

In the context of unifying concepts and processes, students develop an understanding of scientific content through inquiry. Science is a dynamic process; concepts and content are best learned through inquiry and investigation. Concepts in LIFE SYSTEMS, EARTH and SPACE SYSTEMS, and PHYSICAL SYSTEMS are taught within the context of the following Unifying Concepts and Processes of Science:

- Systems, classification, order and organization
- Evidence, models, and explanations
- Cycles and change over time
- Measurement
- Form and function

<i>BENCHMARK GRADE 8</i>	<i>FOSS Investigations</i>
<u>LIFE SYSTEMS</u>	
<p>SC8.1.1 <u>Levels of Organization in Living Systems</u>: Students model the cell as the basic unit of a living system. They realize that all the functions that sustain life act within a single cell and cells differentiate into specialized cells, tissues, organs, and organ systems.</p>	<p>Food and Nutrition Science Stories, pp. 6-8, 41-50</p> <p>Living Systems Investigation 1, Parts 1-3, pp. 51-70 Science Resources, pp. 2-13</p> <p>Diversity of Life Investigation 3, Parts 1-3, pp. 102-122 Investigation 4, Parts 1-2, pp. 133-141 Resources, pp. 24-45 CD, Cells and The Ribbon of Life</p> <p>Human Brain and Senses Investigation 2, Parts 2-3, pp. 73-83 Resources, pp. 63-74</p>
<p>SC8.1.2 <u>Reproduction and Heredity</u>: Students describe reproduction as a characteristic of all living systems, which is essential to the continuation of species, and identify and interpret traits, patterns of inheritance, and the interaction between genetics and environment.</p>	<p>Diversity of Life Investigation 7, Part 1, pp. 218-223 Resources, pp. 26, 40-44, 53-54, 58-59</p> <p>Populations and Ecosystems Investigation 9, Parts 1-4, pp. 262-291 Resources, pp. 46-55 CD, Larkeys, Punnett Square</p>
<p>SC8.1.3 <u>Evolution as a Theory</u>: Students explain evolution as a theory and apply the theory to the diversity of species, which results from natural selection and the acquisition of unique characteristics through biological adaptation.</p>	<p>Populations and Ecosystems Investigation 10, Parts 1-3, pp. 302-317 Resources, pp. 58-63 Video: Voyage to the Galapagos</p>
<p>SC8.1.4 <u>Diversity of Organisms</u>: Students investigate the interconnectedness of organisms, identifying similarity and diversity of organisms through a classification system of hierarchical relationships and structural</p>	<p>Environments Investigation 1, Parts 1-2, pp. 8-19 Science Stories, pp. 18-22, 42</p> <p>Diversity of Life Investigation 3, Parts 1-3, pp. 102-122</p>

<p>homologies.</p> <p>SC8.1.5 <u>Behavior and Adaptation</u>: Students recognize behavior as a response of an organism to an internal or environmental stimulus and connect the characteristics and behaviors of an organism to biological adaptation.</p> <p>SC8.1.6 <u>Interrelationships of Populations and Ecosystems</u>: Students illustrate populations of organisms and their interconnectedness within an ecosystem, identifying relationships among producers, consumers, and decomposers.</p>	<p>Investigation 5, Parts 1-3, pp. 151-170 Investigation 7, Parts 1-2, pp. 218-229 Investigation 10, Part 1, pp. 302-309 Resources, pp. 4-7, 10-17, 24-26, 31-70 Video: The Unknown World CD, Database</p> <p>Environments Investigation 2, Parts 2-4, pp. 16-30 Investigation 3, parts 1-3, pp. 8-22 Investigation 6, Parts 1-2, pp. 8-17 Science Stories, pp. 9-17, 49-52</p> <p>Diversity of Life Investigation 6, Part 2, pp. 193-197 Investigation 7, Parts 1-2, pp. 218-229 Investigation 8, Part 1, pp. 239-243 Investigation 9, Parts 1-2, pp. 273-285 Resources, pp. 46-64</p> <p>Human Brain and Senses Investigation 2, Part 1, pp. 67-72 Investigation 7, Parts 1-2, pp. 210-225 Resources, pp. 40-42</p> <p>Populations and Ecosystems Investigation 8, Parts 1-2, pp. 228-243 Resources, pp. 42-45</p> <p>Environments Investigation 4, Parts 1-3, pp. 8-22 Science Stories, pp. 27-28, 38-41, 43-45, 49-55 FOSS Web, Activity: Virtual Aquarium</p> <p>Populations and Ecosystems Investigation 2, Parts 1-2, pp. 70-79 Investigation 3, Parts 1-3, pp. 90-107 Investigation 5, Parts 2-4, pp. 151-169 Investigation 6, Parts 2-3, pp. 187-197 Resources, pp. 8-29 Video: Among the Wild Chimpanzees CD, Mono Lake, Food Web</p>
<p style="text-align: center;"><u>EARTH AND SPACE SYSTEMS</u></p> <p>SC8.1.7 <u>The Earth in the Solar System</u>: Students describe Earth as the third planet in the Solar System and understand the effects of the sun as a major source of energy, gravitational forces, and motions of objects in the Solar System.</p>	<p>Solar Energy Science Stories, pp. 40-44</p> <p>Models and Designs Science Stories, pp. 5-9</p> <p>Water Planet Investigation 1, Part 1, pp. 50-58 Science Resources, pp. 1-13</p> <p>Planetary Science Investigation 3, Parts 1-2, pp. 89-93 Investigation 9, Parts 1-4, pp. 283-301 Investigation 10, Parts 2-3, pp. 318-324 Resources, pp. 83-89 CD, Day-Night Simulation CD, Phases of the Moon</p>

<p>SC8.1.8 <u>The Structure of the Earth System</u>: Students examine the structure of the Earth, identifying layers of the Earth, considering plate movement and its effect, and recognizing landforms resulting from constructive and destructive forces.</p> <p>SC8.1.9 <u>The Earth's History</u>: Students systematize the Earth's history in terms of geologic evidence, comparing past and present Earth processes and identifying catastrophic events and fossil evidence.</p>	<p>Weather and Water Investigation 3, Parts 1-3, pp. 93-110 Resources, pp. 17-19 CD, Cycles: Seasons</p> <p>Landforms Investigation 2, Parts 1-2, pp. 8-22 Investigation 3, Parts 1-3, pp. 8-24 Science Stories, pp. 13-29 FOSS Web, Movie: Volcanic Eruption FOSS Web, Activity: Jigsaw Puzzle</p> <p>Earth History Investigation 4, Parts 3-4, pp. 138-149 Resources, pp. 100-105 CD, Geology Lab, Earth Processes Video: Weathering and Erosion</p> <p>Landforms Investigation 2, parts 1-2, pp. 8-22 Science Stories, pp. 9-10, 16-19, 22-29 FOSS Web, Movie: Volcanic Eruption</p> <p>Models and Designs Science Stories, pp. 11-16</p> <p>Earth History Investigation 6, Parts 1-4, pp. 205-224 Investigation 7, Parts 1-2, pp. 234-243 Resources, pp. 73-88, 93-97, 100-105 CD, Time Room, Time Machine</p>
<p><u>PHYSICAL SYSTEMS</u></p>	
<p>SC8.1.10 <u>The Structure and Properties of Matter</u>: Students identify characteristic properties of matter such as density, solubility, and boiling point and understand that elements are the basic components of matter.</p>	<p>Mixtures and Solutions Investigation 1, Parts 1-3, pp. 8-24 Investigation 2, Parts 1-4, pp. 8-28 Science Stories, pp. 1-6, 11-12, 25-28, 32-42</p> <p>Food and Nutrition Investigation 1, Parts 1-2, pp. 8-20 Investigation 3, Parts 1-3, pp. 8-25</p> <p>Variables Science Stories, pp. 10-11</p> <p>Earth History Investigation 8, Parts 1-2, pp. 254-265</p> <p>Weather and Water Investigation 5, Part 1, pp. 152-162 Resources, pp. 27-31</p> <p>Planetary Science Investigation 8, Parts 3-4, pp. 260-270</p> <p>Chemical Interactions Investigation 1, Parts 1-2, pp. 41-58 Investigation 3, Part 1, pp. 92-98 Investigation 7, Parts 1-2, pp. 204-214</p>
<p>SC8.1.11 <u>Physical and Chemical Changes in Matter</u>: Students evaluate chemical and physical changes, recognizing that chemical</p>	<p>Mixtures and Solutions Investigation 1, Parts 1-4, pp. 8-29 Investigation 4, Parts 1-3, pp. 8-24</p>

<p>change forms compounds with different properties and that physical change alters the appearance but not the composition of a substance.</p>	<p>Science Stories, pp. 18-19, 23-24, 26-28 FOSS Web, Movie: Physical vs Chemical Change Living Systems Investigation 3, Part 1, pp. 118-125 Food and Nutrition Investigation 1, Parts 1-2, pp. 8-20 Investigation 2, Parts 1-3, pp. 8-25 Investigation 3, Parts 1-3, pp. 8-25 Earth History Investigation 3, Part 1, pp. 88-95 Investigation 4, Parts 5-6, pp. 150-162 Chemical Interactions Investigation 4, Parts 1-3, pp. 122-141 Investigation 7, Parts 1-4, pp. 204-228 Investigation 8, Part 1, pp. 248-255 Investigation 9, Parts 1-4, pp. 280-312 Resources, pp. 29-31, 49-51, 63-67</p>
<p>SC8.1.12 <u>Forms and Uses of Energy</u>: Students investigate energy as a property of substances in a variety of forms with a range of uses.</p>	<p>Solar Energy Investigation 2, Parts 1-2, pp. 8-24 Investigation 4, Parts 1-3, pp. 8-28 Science Stories, pp. 1-5, 29-39 FOSS Web, Activity: Solar Road Race Variables FOSS Web, Movie: Sound Experiments Electronics Investigation 1, Parts 1-5, pp. 55-79 Investigation 4, Parts 1-2, pp. 143-151 Resources, pp. 1-2, 12-14 Video, Television: Window to the World CD, Tech Manual: Static Electricity Weather and Water Investigation 4, Parts 1-2, pp. 121-139 Investigation 5, Parts 2-3, pp. 163-174 CD, Matter and Energy: Heat Energy</p>
<p>SC8.1.13 <u>The Conservation of Matter and Energy</u>: Students identify supporting evidence to explain conservation of matter and energy, indicating that matter or energy cannot be created or destroyed but is transferred from one object to another.</p>	<p>Mixtures and Solutions Investigation 1, Parts 1-3, pp. 8-24 Investigation 2, Parts 1-2, pp. 8-20 Investigation 4, Parts 1-3, pp. 8-24 Science Stories, pp. 18-19, 23, 26-28 Weather and Water Investigation 4, Part 2, pp. 131-139 CD, Heat and Energy Video: Conduction through Metals Electronics Investigation 1, Parts 1-3, pp. 55-70 Investigation 4, Parts 1-2, pp. 143-171 Resources, pp. 1-2, 12-13</p>
<p>SC8.1.14 <u>Effects of Motions and Forces</u>: Students describe motion of an object by position, direction, and speed, and identify the effects of force and inertia on an object.</p>	<p>Levers and Pulleys Investigation 1, Parts 2-3, pp. 18-28 Investigation 3, Parts 1-2, pp. 8-20 Investigation 4, Parts 1-2, pp. 8-20 Science Stories, pp. 1-27</p>

	<p>FOSS Web, Activity: Building a Rube Goldberg Machine</p> <p>Variables</p> <p>Investigation 1, Parts 1-3, pp. 8-27</p> <p>Investigation 3, Parts 1-3, pp. 8-23</p> <p>Investigation 4, Parts 1-3, pp. 8-23</p> <p>FOSS Web, Activity: Blasto-The Human Cannonball</p> <p>Models and Designs</p> <p>Investigation 3, Parts 1-3, pp. 8-23</p> <p>Investigation 4, Parts 1-2, pp. 6-15</p> <p>Planetary Science</p> <p>Investigation 3, Parts 1-2, pp. 89-98</p> <p>Investigation 9, Part 2, pp. 288-292</p> <p>Resources, pp. 69-70</p> <p>Force and Motion</p> <p>Investigations 1-8, All Parts</p> <p>Resources, pp. 3-74</p> <p>CD, Resources</p>
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GRADE SPAN 5 - 8

CONTENT STANDARD 2: SCIENCE AND INQUIRY

Students demonstrate knowledge, skills, and habits of mind necessary to perform scientific inquiry. Inquiry is the foundation for the development of content, teaching students the use of processes of science that enable them to construct and develop their own knowledge. Inquiry requires appropriate field, classroom, and laboratory experiences with suitable facilities and equipment.

<i>BENCHMARK GRADE 8</i>	<i>FOSS Investigations</i>
<p>SC8.2.1 Students research scientific information and present findings through appropriate means.</p>	<p>Mixtures and Solutions Investigation 4, Part 4, pp. 25-28</p> <p>Landforms Investigation 5, Part 4, pp. 27-31</p> <p>Water Planet Science Resources, pp. 96-97</p> <p>Living Systems Investigation 3, Part 3, pp. 136-141</p> <p>Environments Investigation 6, Part 3, pp. 18-22</p> <p>Populations and Ecosystems Investigation 7, pp. 210-215</p> <p>Planetary Science Investigation 10, Parts 2-3, pp. 318-324</p> <p>Earth History Investigation 8, Part 4, pp. 271-274</p>
<p>SC8.2.2 Students use inquiry to conduct scientific investigations.</p> <p style="padding-left: 40px;">Ask questions that lead to conducting an investigation</p>	<p>Students conduct inquiry-based investigations in all FOSS modules. See for example:</p> <p>Environments Investigation 2, Parts 2-4, pp. 16-30</p> <p>Variables Investigation 3, Part 3, pp. 20-23 Investigation 4, Part 3, pp. 18-23</p> <p>Landforms Investigation 3, Parts 1-3, pp. 8-24</p> <p>Water Planet Investigation 2, Parts 1-3, pp. 80-100</p> <p>Living Systems Investigation 3, Part 3, pp. 136-141</p> <p>Planetary Science Investigation 5, Parts 1-2, pp. 158-167</p> <p>Diversity of Life Investigation 9, Part 2, pp. 278-285</p> <p>Planetary Science Investigation 5, Parts 2-3, pp. 158-167</p> <p>Force and Motion Investigation 8, Part 2, pp. 294-301</p>
<p>Collect, organize, and analyze and appropriately represent data</p>	<p>Levers and Pulleys Investigation 1, Parts 2-3, pp. 18-28</p> <p>Variables</p>

	<p>Investigation 1, Parts 1-3, pp. 8-27 Investigation 3, Parts 2-3, pp. 20-27 Solar Energy Investigation 2, Parts 1-2, pp. 8-24 Water Planet Investigation 3, Part 1, pp. 125-135 Living Systems Investigation 2, Part 1, pp. 85-98 Weather and Water Investigation 4, Part 1, pp. 121-130 Planetary Science Investigation 8, Parts 3-4, pp. 260-270 Electronics Investigation 6, Parts 1-3, pp. 187-200</p>
<p>Draw conclusions based on evidence and make connections to applied scientific concepts</p>	<p>Mixtures and Solutions Investigation 1, Parts 1-4, pp. 8-29 Variables Investigation 3, Parts 2-4, pp. 14-27 Investigation 4, Parts 2-3, pp. 12-23 Water Planet Investigation 3, Part 1, pp. 125-135 Living Systems Investigation 2, Part 1, pp. 85-98 Food and Nutrition Investigation 2, Parts 2-3, pp. 18-25 Weather and Water Investigation 5, Parts 2-3, pp. 163-174 Force and Motion Investigation 2, Part 3, pp. 89-99 Chemical Interactions Investigation 1, Parts 1-2, pp. 41-58</p>
<p>Clearly and accurately communicate the result of the investigation</p>	<p>Levers and Pulleys Investigation 1, Parts 2-3, pp. 18-28 Environments Investigation 2, Parts 2-4, pp. 16-30 Water Planet Investigation 2, Parts 1-3, pp. 80-100 Living Systems Investigation 3, Parts 2-3, pp. 126-141 Landforms Investigation 3, Parts 1-3, pp. 8-24 Diversity of Life Investigation 9, Part 2, pp. 278-285 Planetary Science Investigation 5, Parts 2-3, pp. 158-167 Human Brain and Senses Investigation 7, Parts 1-2, pp. 210-225</p>
<p>SC8.2.3 Students clearly and accurately communicate the result of their own work, as well as information obtained from other sources.</p>	<p>Levers and Pulleys Investigation 1, Parts 2-3, pp. 18-28 Environments Investigation 2, Parts 2-4, pp. 16-30 Investigation 6, Part 3, pp. 18-22 Landforms</p>

<p>SC8.2.2.4 Students recognize the relationship between science and technology in meeting human needs.</p>	<p>Investigation 3, Parts 1-3, pp. 8-24 Investigation 5, Part 4, pp. 27-31 Living Systems Investigation 3, Part 3, pp. 130-141 Mixtures and Solutions Investigation 4, Part 4, pp. 25-28 Diversity of Life Investigation 9, Part 2, pp. 278-285 Planetary Science Investigation 5, Parts 2-3, pp. 158-167 Human Brain and Senses Investigation 7, Parts 1-2, pp. 210-225</p> <p>Solar Energy Investigation 4, Parts 1-3, pp. 8-28 Science Stories, pp. 29-39 Variables Investigation 3, Parts 1-4, pp. 8-27 Science Stories, pp. 15-28 Levers and Pulleys Investigation 2, Parts 1-4, pp. 8-25 Science Stories, pp. 1-32 Force and Motion Investigation 8, Parts 1-2, pp. 284-301 Resources, pp. 70-74 Human Brain and Senses Investigation 5, Parts 2, 4, pp. 161-164, 169-175 Resources, p. 49 Electronics Investigation 4, Parts 1-2, pp. 143-151 Resources, pp. 343-38</p>
<p>SC8.2.5 Students properly use appropriate scientific and safety equipment, recognize hazards and safety symbols, and observe standard safety procedures.</p>	<p>Safety is stressed in all FOSS modules. A classroom safety section is included in the Overview section of each Teacher Guide. In addition, safety warnings are listed throughout the guides where appropriate. See for example:</p> <p>Levers and Pulleys Investigation 3, p. 12 Investigation 1, Parts 1-3, pp. 8-28 Mixtures and Solutions Investigation 1, p. 12 Investigation 1, Parts 1-4, pp. 8-29 Water Planet Investigation 1, p. 62 Planetary Science, p. 75 Earth History, p. 128 Force and Motion Investigation 2, Part 3, pp. 89-99 Diversity of Life Investigation 2, Parts 1-3, pp. 72-91 Weather and Water Investigation 5, Part 1, pp. 152-162</p>

GRADE SPAN 5 - 8

CONTENT STANDARD: 3 HISTORY AND NATURE OF SCIENCE IN PERSONAL AND SOCIAL DECISIONS

Students recognize the nature of science, its history, and its connections to personal and social decisions. Historically, scientific events have had significant impacts on our cultural heritage.

<i>BENCHMARK GRADE 8</i>	<i>FOSS Investigations</i>
<p>SC8.3.1 Students explore the nature and history of science.</p> <p>Students explore how scientific knowledge changes and grows over time, and impacts personal and social decisions.</p> <p>Students explore the historical use of scientific information to make personal and social decisions</p>	<p>Mixtures and Solutions Science Stories, pp. 1-6, 26-28, 32-36</p> <p>Food and Nutrition Science Stories, pp. 24-25, 34-36</p> <p>Variables Science Stories, pp. 15-20, 32-33</p> <p>Force and Motion Resources, pp. 50-52 Video: Galileo-On the Shoulders of Giants</p> <p>Electronics Resources pp. 34-36</p> <p>Food and Nutrition Science Stories, pp. 24-25, 34-36</p> <p>Models and Designs Science Stories, pp. 25-36</p> <p>Variables Science Stories, pp. 15-20</p> <p>Water Planet Science Resources, pp. 18-19</p> <p>Solar Energy Science Stories, pp. 29-39</p> <p>Planetary Science Resources, pp. 74-77</p> <p>Electronics Resources, pp. 18-21</p>
<p>SC*.3.2 Students explore how scientific information is used to make decisions.</p> <p>The role of science in solving personal, local, and national problems.</p>	<p>Food and Nutrition Science Stories, pp. 24-25, 34-36</p> <p>Landforms Science Stories, pp. 13-14</p> <p>Solar Energy Science Stories, pp. 29-39</p> <p>Water Planet Investigation 4, Part 4, pp. 21-216 Science Resources, pp. 65-66</p> <p>Models and Designs Science Stories, pp. 25-36</p> <p>Weather and Water</p>

<p>Interdisciplinary connections of the sciences and connections to other subject areas and careers in science or technical fields</p> <p>Origins and conservation of natural resources, including Wyoming examples</p>	<p>Resources, pp. 63-66 Electronics Resources, pp. 18-21 Earth History Resources, pp. 64-67</p> <p>Interdisciplinary extensions are located at the end of each investigation in the grade 5-6 modules. See for example: Mixtures and Solutions Investigation 2, p. 29 Levers and Pulleys Investigation 3, p. 25 In the grade 6-8 middle school modules there is an Extending the Experience section after many investigations. See for example: Planetary Science, p. 325 Earth History, p. 75 Also: Mixtures and Solutions Science Stories, pp. 29-31 Levers and Pulleys Science Stories, pp. 28-32 Earth History Resources, pp. 98-99</p> <p>Local Objective See also: Solar Energy FOSS Web, Activity: Resource Identification Electronics Resources, pp. 12-13</p>
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WYOMING

WYOMING SCIENCE ACADEMIC CONTENT STANDARDS FOR STUDENTS WITH THE MOST SIGNIFICANT COGNITIVE DISABILITIES.

CORRELATED WITH

FOSS (Full Option Science System)

GRADES K-8

This correlation shows representative examples of investigations and activities from the FOSS program that address the Science Content Academic Standards. The FOSS correlations listed meet or can be adapted to meet the levels of complexity outlined for students with the most significant cognitive disabilities. A citation does not reflect all of the investigations or activities that might address a particular standard or benchmark.

May 2009

4.A.S.1.3 Students demonstrate which features of living organisms serve specific functions in survival within different habitats.

EARTH AND SPACE SYSTEMS

4.A.S.1.4 Students describe and compare observable characteristics of water, air, rocks, and soil.

4.A.S.1.5 Students describe gradual changes

New Plants

Investigation 1, Parts 1-3, pp. 8-30

Insects

Investigations 1-5, All Parts
Science Stories, pp. 16-33

Insects and Plants

Investigation 3, Part 3, pp. 145-151
Science Resources, pp. 20-24

Structures of Life

Investigation 2, Part 3, pp. 18-22
Science Stories, pp. 20-21
FOSS Web, Activity: Life Cycles

Animals Two by Two

Investigation 2, Part 2, pp. 17-21
Investigation 3, Part 1, pp. 10-16
Science Stories, pp. 6, 10, 12, 16

New Plants

Investigation 1, Parts 2-3, pp. 13-30
Investigation 2, Parts 1-3, pp. 8-28
Science Stories, pp. 22-39

Insects

Investigation 3, Parts 1-3, pp. 8-26
Investigation 6, Parts 1-3, pp. 8-22

Plants and Animals

Investigation 1, Parts 1-2, pp. 47-62
Science Resources, pp. 28-45
Video: How Plants Grow in Different Places

Insects and Plants

Investigation 3, Parts 1-3, pp. 129-151
Investigation 5, Parts 1-3, pp. 206-225
Science Resources, pp. 30-33

Structures of Life

Investigation 3, Parts 1-4, pp. 8-30
Science Stories, pp. 17-19, 22-36

Pebbles, Sand and Silt

Investigation 1, Parts 1-3, pp. 8-21
Investigation 2, Parts 1-4, pp. 8-29
Investigation 4, Parts 1-3, pp. 8-25
Science Stories, p. 3-13, 20-23
FOSS Web, Activity: Find Earth Materials

Air and Weather

Investigation 1, Parts 1-6, pp. 8-38
Science Stories, pp. 3-6

Earth Materials

Investigation 1, Parts 1-3, pp. 8-29
Investigation 2, Parts 1-2, pp. 8-21
Science Stories, pp. 30-35
FOSS Web, Activity: Rock Database

Water

Investigation 1, Parts 1-2, pp. 8-18
Science Stories, pp. 1-3

Pebbles, Sand and Silt

to the Earth's surface.

PHYSICAL SYSTEMS

4.A.S.1.6 Students demonstrate that heating or cooling can change water between a solid or liquid by measuring and recording different observable physical properties.

4.A.S.1.7 Students demonstrate that pushing or pulling can change the position of objects.

Science Stories, pp. 10-15, 22-23, 26-31

Earth Materials

Science Stories, pp. 5-7, 34-36

Water

Science Stories, pp. 14-16

Solids and Liquids

Investigation 2, Science Extension, p. 31

Science Stories, pp. 14-17

Water

Investigation 2, Part 3, pp. 19-24

Investigation 3, Parts 1-4, pp. 8-26

Science Stories, pp. 13-16

FOSS Web, Activity: Evaporation

Measurement

Science Stories, pp. 32-33

Matter and Energy

Investigation 4, Part 2, pp. 181-192

Science Resources, pp. 54-56

Fabric

Investigation 1, Parts 4-6, pp. 20-33

Wood and Paper

Investigation 1, Parts 4-5, pp. 24-32

Air and Weather

Investigation 1, Parts 4-6, pp. 21-38

Investigation 3, Parts 1-2, pp. 8-16

Balance and Motion

Investigation 2, Parts 1-3, pp. 8-25

Investigation 3, Parts 1-3, pp. 6-25

Science Stories, pp. 10-21

Human Body

Investigation 3, Parts 1-3, pp. 8-21

Magnetism and Electricity

Investigation 1, Part 3, pp. 23-29

GRADE SPAN K- 4

CONTENT STANDARD 2: SCIENCE AS INQUIRY

Students demonstrate knowledge, skills, and habits of mind necessary to safely perform scientific inquiry. Inquiry is the foundation for the development of content, teaching students the use of processes of science that enable them to construct their own knowledge. Inquiry requires appropriate field, classroom, and laboratory experiences with suitable facilities and equipment.

ACADEMIC CONTENT STANDARD 2: SCIENCE AS INQUIRY

Students use inquiry to better understand their world.

ACADEMIC BENCHMARK GRADE 4	FOSS Investigations
<p>4.A.S.2.1 Students use science reference materials to answer science questions and present findings.</p>	<p>FOSS Science Stories would provide a resource for this benchmark. Pebbles, Sand and Silt Investigation 4, Part 3, pp. 19-25 Magnetism and Electricity Investigation 5, Part 3, pp. 21-25 Structures of Life Investigation 4, Part 4, pp. 25-29 Water Investigation 4, Part 4, pp. 24-28 Matter and Energy Investigation 3, Part 2, pp. 139-150 Sun, Moon and Stars Science Resources, p. 54</p>
<p>2. Students use the inquiry process to conduct simple scientific investigations.</p>	<p>Animals Two by Two Investigation 1, Part 3, pp. 22-25 Wood and Paper</p>
<p>4.A.S. 2.2.a Students ask questions about objects or events in the environment.</p>	<p>Investigation 1, Part 3, pp. 20-23 New Plants Investigation 2, Parts 1-2, pp. 8-19 Balance and Motion Investigation 1, Part 2, pp. 14-18 Investigation 3, Part 1, pp. 6-12 Plants and Animals Investigation 1, Parts 1-2, pp. 47-62 Water Investigation 2, Parts 1-3, pp. 8-24 Magnetism and Electricity Investigation 3, Parts 1-2, pp. 10-21 Human Body Investigation 4, Part 2, pp. 17-19 Matter and Energy Investigation 2, Parts 1-2, pp. 93-114 Sun, Moon and Stars Investigation 1, Parts 1-2, pp. 42-64</p>
<p>2. Students use the inquiry process to conduct simple scientific investigations.</p>	<p>Students conduct inquiry-based investigations in all FOSS modules. See for example: Wood and Paper</p>

<p>4.A.S.2.2.b Students conduct simple investigations using simple equipment and tools to collect data.</p>	<p>Investigation 1, Part 3, pp. 20-23 Investigation 3, Part 4, pp. 22-25 Fabric Investigation 2, Part 1, pp. 7-11 Air and Weather Investigation 2, Part 1, p. 8-13 Investigation 4, Part 1, pp. 8-11 Pebbles, Sand and Silt Investigation 2, Parts 1-4, pp. 8-29 Magnetism and Electricity Investigation 1, Part 3, pp. 23-29 Investigation 4, Part 2, pp. 14-18 Measurement Investigation 4, Part 2, pp. 14-17 Matter and Energy Investigation 3, Parts 2-3, pp. 139-160 Sun, Moon and Stars Investigation 1, Parts 1-2, pp. 42-64</p>
<p>2. Students use the inquiry process to conduct simple scientific investigations.</p>	<p>Fabric Investigation 2, Part 4, pp. 22-25 Air and Weather Investigation 2, Part 1, pp. 8-13 Investigation 4, Part 1, pp. 8-11</p>
<p>4.A.S. 2.2.c. Students use data to complete a simple graph, chart, diagram, and/or model.</p>	<p>New Plants Investigation 2, Part 3, pp. 20-28 Magnetism and Electricity Investigation 1, Part 3, pp. 23-29 Investigation 4, Part 2, pp. 14-18 Measurement Investigation 4, Part 2, pp. 14-17 Earth Materials Investigation 2, Part 2, pp. 14-21 Matter and Energy Investigation 3, Parts 2-3, pp. 139-160 Sun, Moon and Stars Investigation 2, Part 2, pp. 89-100</p>
<p>2. Students use the inquiry process to conduct simple scientific investigations.</p>	<p>Wood and Paper Investigation 1, Parts 3-5, pp. 20-32 Investigation 3, Part 4, pp. 22-25</p>
<p>4.A.S.2.2.d Students communicate results of an investigation.</p>	<p>Fabric Investigation 2, Part 1, pp. 7-11 New Plants Investigation 2, Parts 1-2, pp. 8-19 Balance and Motion Investigation 1, Part 2, pp. 14-18 Plants and Animals Investigation 1, Part 3, pp. 63-72 Insects and Plants Investigation 2, Part 3, pp. 105-115 Water Investigation 4, Parts 1-2, pp. 8-18 Magnetism and Electricity Investigation 4, Parts 2-3, pp. 14-22 Physics of Sound</p>

<p>4.A.S. 2.3 Students identify safety symbols and the associated concept.</p>	<p>Investigation 2, Parts 1-3, pp. 8-24 Matter and Energy Investigation 2, Parts 1-2, pp. 83-114 Sun, Moon and Stars Investigation 2, Part 2, pp. 89-100</p> <p>FOSS provides the opportunity to address this benchmark. Safety is stressed in all FOSS modules. A classroom safety section is included in the Overview section of each Teacher Guide. In addition, safety warnings are listed throughout the guides where appropriate. See for example:</p> <p>Fabric Investigation 1, p. 32 Wood and Paper Investigation 2, P. 13 Air and Weather Investigation 1, pp. 24-25 Plants and Animals Investigation 1, Part 1, p. 50 Magnetism and Electricity Investigation 1, p. 9 Structures of Life Investigation 1, P. 20 Sun, Moon and Stars Investigation 1, Part 1, pp. 50-51</p>
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GRADE SPAN K- 4

CONTENT STANDARD 3: HISTORY AND NATURE OF SCIENCE IN PERSONAL AND SOCIAL DECISIONS

Students recognize the nature of science, its history, and its connections to personal, social, economic, and political decisions. Historically, scientific events have had significant impacts on our cultural heritage.

ACADEMIC CONTENT STANDARD 3: HISTORY AND NATURE OF SCIENCE IN PERSONAL AND SOCIAL DECISIONS

Students use scientific knowledge to make personal decisions.

<i>ACADEMIC BENCHMARK GRADE 4</i>	<i>FOSS Investigations</i>
<p>1. Students recognize the nature and history of science.</p> <p>4.A.S. 3.1 Students demonstrate the sequence of events which link a technological advance to their environment.</p>	<p>FOSS provides the opportunity to address this benchmark.</p> <p>Measurement Science Stories, pp.21-23</p> <p>Human Body Science Stories, pp. 5-7</p> <p>Water Science Stories, pp. 17-23</p> <p>Magnetism and Electricity Science Stories, pp. 12-20, 28-37</p>
<p>2. Students recognize how scientific information is used to make decisions.</p> <p>4.A.S. 3.2 Students identify and perform a task associated with a healthy life style.</p>	<p>Human Body Science Stories, pp. 25-27</p>

GRADE SPAN 5 - 8

CONTENT STANDARD 1: CONCEPTS AND PROCESSES

In the context of unifying concepts and processes, students develop an understanding of scientific content through inquiry. Science is a dynamic process; concepts and content are best learned through inquiry and investigation.

ACADEMIC CONTENT STANDARD 1: CONCEPTS AND PROCESSES

Students learn about scientific content through inquiry.

<i>ACADEMIC BENCHMARK GRADE 8</i>	<i>FOSS Investigations</i>
<u>LIFE SYSTEMS</u>	
8.A.S.1.1 Students relate different organ systems with their specialized function.	Food and Nutrition Science Stories, pp. 6-8, 41-50 Living Systems Investigation 1, Parts 1-3, pp. 51-70 Science Resources, pp. 2-13 Diversity of Life Investigation 3, Parts 1-3, pp. 102-122 Investigation 4, Parts 1-2, pp. 133-141 Resources, pp. 24-45 CD, Cells and The Ribbon of Life Human Brain and Senses Investigation 2, Parts 2-3, pp. 73-83 Resources, pp. 63-74
8.A.S.1.2 Students describe the traits offspring inherit from their parents.	Diversity of Life Investigation 7, Part 1, pp. 218-223 Resources, pp. 26, 40-44, 53-54, 58-59 Populations and Ecosystems Investigation 9, Parts 1-4, pp. 262-291 Resources, pp. 46-55 CD, Larkeys, Punnett Square
8.A.S.1.3 Students describe interconnectedness of diverse organisms within an ecosystem.	Environments Science Stories, pp. 38-41, 43-45, 53-55 Populations and Ecosystems Investigation 2, Parts 1-2, pp. 70-79 Investigation 3, Parts 1-3, pp. 90-107 Investigation 5, Parts 2-4, pp. 151-169 Investigation 6, Parts 2-3, pp. 187-197 Resources, pp. 8-29 Video: Among the Wild Chimpanzees CD, Mono Lake, Food Web
<u>EARTH AND SPACE SCIENCE</u>	
8.A.S.1.4 Students describe Earth's features in relation to other objects in the Solar System.	Solar Energy Science Stories, pp. 40-44 Models and Designs Science Stories, pp. 5-9

8.A.S.1.5 Students demonstrate processes which are evidence of formation and development of the Earth.

EARTH AND SPACE SCIENCE

8.A.S.1.6 Students identify physical characteristics of a substance.

8.A.S.1.7 Students demonstrate that pushing and pulling can change the position, direction, and motion of objects.

Water Planet

Investigation 1, Part 1, pp. 50-58
Science Resources, pp. 1-13

Planetary Science

Investigation 3, Parts 1-2, pp. 89-93
Investigation 9, Parts 1-4, pp. 283-301
Investigation 10, Parts 2-3, pp. 318-324
Resources, pp. 83-89
CD, Day-Night Simulation
CD, Phases of the Moon

Weather and Water

Investigation 3, Parts 1-3, pp. 93-110
Resources, pp. 17-19
CD, Cycles: Seasons

Landforms

Investigation 2, parts 1-2, pp. 8-22
Science Stories, pp. 9-10, 16-19, 22-29
FOSS Web, Movie: Volcanic Eruption

Models and Designs

Science Stories, pp. 11-16

Earth History

Investigation 6, Parts 1-4, pp. 205-224
Investigation 7, Parts 1-2, pp. 234-243
Resources, pp. 73-88, 93-97, 100-105
CD, Time Room, Time Machine

Mixtures and Solutions

Investigation 1, Parts 1-3, pp. 8-24
Investigation 2, Parts 1-4, pp. 8-28
Science Stories, pp. 1-6, 11-12, 25-28, 32-42

Food and Nutrition

Investigation 1, Parts 1-2, pp. 8-20
Investigation 3, Parts 1-3, pp. 8-25

Variables

Science Stories, pp. 10-11

Earth History

Investigation 8, Parts 1-2, pp. 254-265

Weather and Water

Investigation 5, Part 1, pp. 152-162
Resources, pp. 27-31

Planetary Science

Investigation 8, Parts 3-4, pp. 260-270

Chemical Interactions

Investigation 1, Parts 1-2, pp. 41-58
Investigation 3, Part 1, pp. 92-98
Investigation 7, Parts 1-2, pp. 204-214

Levers and Pulleys

Investigation 1, Parts 2-3, pp. 18-28
Investigation 3, Parts 1-2, pp. 8-20
Investigation 4, Parts 1-2, pp. 8-20
Science Stories, pp. 1-27
FOSS Web, Activity: Building a Rube Goldberg Machine

	<p>Variables Investigation 1, Parts 1-3, pp. 8-27 Investigation 3, Parts 1-3, pp. 8-23 Investigation 4, Parts 1-3, pp. 8-23 FOSS Web, Activity: Blasto-The Human Cannonball</p> <p>Models and Designs Investigation 3, Parts 1-3, pp. 8-23 Investigation 4, Parts 1-2, pp. 6-15</p> <p>Planetary Science Investigation 3, Parts 1-2, pp. 89-98 Investigation 9, Part 2, pp. 288-292 Resources, pp. 69-70</p> <p>Force and Motion Investigations 1-8, All Parts Resources, pp. 3-74 CD, Resources</p>
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GRADE SPAN 5 - 8

CONTENT STANDARD 2: SCIENCE AND INQUIRY

Students demonstrate knowledge, skills, and habits of mind necessary to perform scientific inquiry. Inquiry is the foundation for the development of content, teaching students the use of processes of science that enable them to construct and develop their own knowledge. Inquiry requires appropriate field, classroom, and laboratory experiences with suitable facilities and equipment.

ACADEMIC CONTENT STANDARD 2: SCIENCE AND INQUIRY

Students learn inquiry to better understand the world in which they live.

<i>ACADEMIC BENCHMARK GRADE 8</i>	<i>FOSS Investigations</i>
<p>8.A.S.2.1. Students use science reference materials to answer science questions and present findings.</p>	<p>FOSS Science Stories would provide a resource for this benchmark. Mixtures and Solutions Investigation 4, Part 4, pp. 25-28 Landforms Investigation 5, Part 4, pp. 27-31 Environments Investigation 6, Part 3, pp. 18-22 Water Planet Science Resources, pp. 96-97 Living Systems Science Resources, pp. 52-53 Populations and Ecosystems Investigation 7, pp. 210-215 Planetary Science Investigation 10, Parts 2-3, pp. 318-324 Earth History Investigation 8, Part 4, pp. 271-274</p>
<p>2. Students use inquiry to conduct scientific investigations.</p> <p>8.A.S.2.2.a Students ask questions about objects, organisms, or events in the environment.</p>	<p>Students conduct inquiry-based investigations in all FOSS modules. See for example:</p> <p>Environments Investigation 2, Parts 2-4, pp. 16-30 Variables Investigation 3, Part 3, pp. 20-23 Investigation 4, Part 3, pp. 18-23 Landforms Investigation 3, Parts 1-3, pp. 8-24 Water Planet Investigation 2, Parts 1-3, pp. 80-100 Living Systems Investigation 3, Parts 2-3, pp. 126-141 Planetary Science Investigation 5, Parts 1-2, pp. 158-167 Diversity of Life Investigation 9, Part 2, pp. 278-285 Planetary Science Investigation 5, Parts 2-3, pp. 158-167</p>

<p>2. Students use inquiry to conduct scientific investigations.</p> <p>8.A.S.2.2.b Students conduct a simple investigation using simple technology and tools to collect and organize data.</p> <p>2. Students use inquiry to conduct scientific investigations.</p> <p>8.A.S.2.2.c. Students communicate results of an investigation and match connections to daily life.</p> <p>8.A.S.2.3 Students identify safety symbols and the associated concept.</p>	<p>Force and Motion Investigation 8, Part 2, pp. 294-301</p> <p>Levers and Pulleys Investigation 1, Parts 2-3, pp. 18-28</p> <p>Variables Investigation 1, Parts 1-3, pp. 8-27 Investigation 3, Parts 2-3, pp. 20-27</p> <p>Solar Energy Investigation 2, Parts 1-2, pp. 8-24</p> <p>Water Planet Investigation 3, Part 1, pp. 125-135</p> <p>Living Systems Investigation 2, Part 1, pp. 85-98</p> <p>Weather and Water Investigation 4, Part 1, pp. 121-130</p> <p>Chemical Interactions Investigation 1, Parts 1-2, pp. 41-58</p> <p>Electronics Investigation 6, Parts 1-3, pp. 187-200</p> <p>Levers and Pulleys Investigation 1, Parts 2-3, pp. 18-28</p> <p>Environments Investigation 2, Parts 2-4, pp. 16-30</p> <p>Landforms Investigation 3, Parts 1-3, pp. 8-24</p> <p>Water Planet Investigation 2, Parts 1-3, pp. 80-100</p> <p>Living Systems Investigation 3, Part 3, pp. 136-141</p> <p>Diversity of Life Investigation 9, Part 2, pp. 278-285</p> <p>Planetary Science Investigation 5, Parts 2-3, pp. 158-167</p> <p>Human Brain and Senses Investigation 7, Parts 1-2, pp. 210-225</p> <p>FOSS provides the opportunity to address this benchmark. Safety is stressed in all FOSS modules. A classroom safety section is included in the Overview section of each Teacher Guide. In addition, safety warnings are listed throughout the guides where appropriate. See for example:</p> <p>Levers and Pulleys Investigation 3, p. 12 Investigation 1, Parts 1-3, pp. 8-28</p> <p>Water Planet Investigation 1, p. 62</p> <p>Mixtures and Solutions Investigation 1, p. 12 Investigation 1, Parts 1-4, pp. 8-29</p> <p>Planetary Science, p. 75</p> <p>Earth History, p. 128</p>
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	<p>Force and Motion Investigation 2, Part 3, pp. 89-99</p> <p>Diversity of Life Investigation 2, Parts 1-3, pp. 72-91</p> <p>Weather and Water Investigation 5, Part 1, pp. 152-162</p>
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GRADE SPAN 5 - 8

CONTENT STANDARD 3: HISTORY AND NATURE OF SCIENCE IN PERSONAL AND SOCIAL DECISIONS

Students recognize the nature of science, its history, and its connections to personal and social decisions. Historically, scientific events have had significant impacts on our cultural heritage.

ACADEMIC CONTENT STANDARD 3: HISTORY AND NATURE OF SCIENCE IN PERSONAL AND SOCIAL DECISIONS

Students use scientific knowledge to make personal decisions.

ACADEMIC BENCHMARK GRADE 8	<i>FOSS Investigations</i>
<p>1. Students investigate the nature of science and how it impacts personal decisions.</p> <p>8.A.S.3.1 Students identify scientific information related to a task associated with a healthy life style choice.</p> <p>2. Students explore how scientific information is used to make decisions.</p> <p>8.A.S.3.2.a Students identify and perform a task associated with a local problem regarding natural resources.</p> <p>2. Students explore how scientific information is used to make decisions.</p> <p>8.A.S.3.2.b Students group science topics with careers in science.</p>	<p>Food and Nutrition Investigation 4, Part 1, pp. 8-15 Science Stories, pp. 1-5, 27-33, 37-4</p> <p>Living Systems Science Resources, pp. 36-41</p> <p>Landforms Science Stories, pp. 13-14, 43-44</p> <p>Environments Science Stories, pp. 36-37, 43-45</p> <p>Weather and Water Resources, pp. 63-66</p> <p>Mixtures and Solutions Science Stories, pp. 29-31</p> <p>Solar Energy Science Stories, pp. 26, 34</p> <p>Earth History Resources, pp. 98-99</p> <p>Chemical Interactions Resources, pp. 78-79, 84-85</p>