



**FOSS FULL OPTION SCIENCE SYSTEM
(FOSS®)**

and

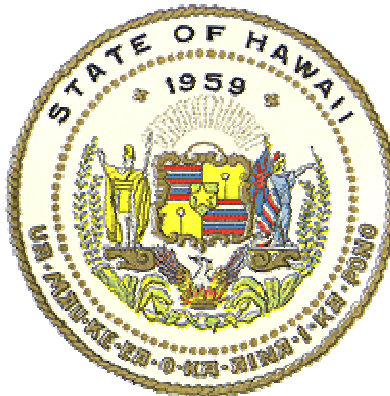


**DELTA SCIENCE MODULES
(DSM™)
Grades K-8**

Correlation with

HAWAII

Content and Performance Standards For Science



State of Hawaii

Content & Performance Standards For Science

**Correlated to the Full Option Science System
(FOSS™)
and to the
Delta Science Modules (DSM™)**

Grades K-8

The following is a correlation of the Hawaii Content and Performance Standards for Science to the Full Option Science System Program (FOSS) and the Delta Science Modules (DSM™). This correlation lists representative examples of investigations and activities that address the science content standards and benchmarks. A citation does not necessarily reflect all of the activities from FOSS that might address a particular standard.

GRADE K

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.1.1 Use the senses to make observations.	Animals Two by Two Investigation 2, Parts 1-4 Pages 9-24 Fabric Investigation 1, Parts 1-6 Pages 6-33 Trees Investigation 3, Parts 1-9 Pages 10-38 Wood and Paper Investigation 1, Parts 1-2 Pages 8-19	Finding the Moon Activity 8, Pages 71-76 From Seed to Plant Activity 1, Pages 15-19 Investigating Water Activity 1, Pages 13-19 Observing an Aquarium Activity 11, Pages 109-116 Properties Activity 5, Pages 41-46 Sunshine and Shadows Activity 12, Pages 89-94 How Do We Learn Activity 1, Pages 13-21
K.1.2 Ask questions about the world around them.	Animals Two by Two Investigation 1, Part 1 Pages 10-16 Fabric Investigation 1, Part 1 Pages 6-11 Trees Investigation 1, Part 2 Pages 15-19 Wood and Paper Investigation 1, Part 1 Pages 8-14	Finding the Moon Activity 12, Pages 99-103 How Do We Learn Activity 5, Pages 43-49 Observing an Aquarium Science Challenge Page 87 Properties Activity 5, Pages 41-46 <i>Investigating Water Delta</i> <i>Science Readers Page 12</i> <i>Sunshine and Shadows Delta</i> <i>Science Readers Page 13</i>
K.1.3 Collect data about living and non-living things.	Wood and Paper Investigation 1, Parts 4-5 Pages 24-32 Trees Investigation 3, Part 2 Pages 12-14 Fabric Investigation 2, Part 4 Pages 22-25 Animals Two by Two Investigation 1, Part 4 Pages 26-29	Finding the Moon Activities 3-4, Pages 39-46 From Seed to Plant Activities 7-8, Pages 59-72 How Do We Learn Activity 6, Pages 51-57 Investigating Water Activity 5, Pages 41-46 Observing and Aquarium Activity 10, Pages 97-106 Properties Activity 2, Pages 19-24 Sunshine and Shadows Activity 7, Pages 57-62

Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Science, Technology, and Society

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.2.1 Identify different types of technologies at home, in the classroom, and/or in the world.	Animals Two by Two Investigation 5, Part 1 Pages 10-15 Trees Investigation 3, Part 8 Pages 32-34 <u>Fabric FOSS Science Stories</u> <u>Pages 5, 12-15, 17-20</u> <u>Wood and Paper FOSS</u> <u>Science Stories</u> <u>Pages 3-8, 13-18</u>	Finding the Moon Activities 3, 4, Pages 28, 46 From Seed to Plant Activity 5, Pages 45-52 Investigating Water Activity 12, Pages 95-100 Observing and Aquarium Activity 2, Page 12 Properties Activity 9, Page 73 Sunshine and Shadows Activity 6, Pages 49-56

Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment.

Topic: Interdependence

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.3.1 Identify similarities and differences between plants and animals.	<u>Fabric FOSS Science Stories</u> <u>Pages 4-11</u>	Finding the Moon Activity 6, Pages 55-61 From Seed to Plant Activity 10, Pages 79-83 Science and Health Pages 66, 72, 103 Observing and Aquarium Activities 6-7, Pages 57-78 Activities 11-12, Pages 109-125 <u>Investigation Water Delta</u> <u>Science Readers Page 15</u>

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS – Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Topic: Interdependence

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.4.1 Identify differences between living and non-living things.	Animals Two by Two Investigation 1, Part 3 Pages 22-25 Trees Investigation 1, Parts 1-2 Pages 7-19	Finding the Moon Activity 6, Pages 55-61 From Seed to Plant Activity 2, Pages 21-31 Observing an Aquarium Activities 1-2, Pages 15-30

	<u>Fabric FOSS Science Stories</u> Pages 4,6,8-13 <u>Wood and Paper FOSS</u> <u>Science Stories</u> Pages 3-8, 13-18	
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Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON- Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Topic: Heredity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.5.1 Identify ways in which some offspring are very much like their parents, although not exactly.	Animals Two by Two www.FOSSweb.com Activity: Find the Parent	From Seed to Plant Activity 13, Pages 97-103 Observing an Aquarium Activity 10, Pages 97-107

Strand: Physical, Earth, and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Topic: Nature of Matter

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.6.1 Classify objects by their attributes (e.g., physical properties, materials of which they are made.)	Wood and Paper Investigation 1, Parts 1-2 Pages 8-19 Fabric Investigation 1, Parts 1-2 Pages 6-15	From Seed to Plant Activity 1, Pages 15-20 Investigating Water Activity 5, Pages 41-45 How Do We Learn Activity 3, Pages 31-36 Properties Activity 1, Pages 13-17 Sunshine and Shadows Activity 3, Pages 27-32 <u>Finding the Moon Delta</u> <u>Science Readers Page 15</u>

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION - Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Topic: Force and Motion

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.7.1 Identify the objects that will fall to the ground unless something is holding them up.	Trees Investigation 3, Part 1 Pages 10-11 Wood and Paper Investigation 1, Parts 4-5	Finding the Moon Activity 7, Pages 63-69 From Seed to Plant Activity 6, Pages 53-58 Investigating Water

	Pages 24-32	Activity 12, 95-100 Properties Activity 11, Pages 81-86
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Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Topic: Forces that Shape the Earth

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.8.1 Report and describe weather changes from day to day and over the seasons.	Trees Investigation 3, Part 1 Pages 10-11	<i>Sunshine and Shadows Delta Science Readers Pgs. 12-13</i>

Topic: The Universe

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
K.8.2 Identify different types of celestial objects seen in the day and night sky.	<i>Note: this standard is thoroughly addressed in the FOSS Grades 1-2 <u>Air and Weather</u> module.</i>	Finding the Moon Activity 1, Pages 13-19 <i>Sunshine and Shadows Delta Science Readers Page 10</i>

GRADE 1

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.1.1 Collect, record, and organize data using simple tools, equipment, and techniques safely.	Air and Weather Investigation 2, Parts 1-4 Pages 8-27 Balance and Motion Investigation 1, Part 2 Pages 14-18 Insects Investigation 2, Part 2 Pages 14-19 New Plants Investigation 1, Parts 1-3 Pages 8-30 Pebbles, Sand, and Silt Investigation 4, Part 1 Pages 8-14 Solids and Liquids Investigation 4, Parts 1-2 Pages 7-22 Plants and Animals Investigation 1, Part 3 Pages 63-72	Finding the Moon Activities 3-4, Pages 29-46 From Seed to Plant Activity 7, Pages 59-65 How Do We Learn Activity 10, Pages 81-86 Investigating Water Activity 10, Pages 81-87 Observing and Aquarium Properties Activity 11, Pages 109-115 Sunshine and Shadows Activity 4, Pages 33-40
1.1.2 Explain the results of an investigation to an audience using simple data organizers (e.g., charts, graphs, pictures.)	Air and Weather Investigation 1 Student Projects, Page 39 Solids and Liquids Investigation 4, Parts 1-3 Pages 7-27 New Plants Investigation 1, Parts 1-3 Pages 8-28 Balance and Motion Investigation 1 Student Projects, Page 32 Plants and Animals Investigation 1, Parts 2-3 Pages 58-72	Investigating Water Activity 12, Pages 95-99 Finding the Moon Activity 12, Pages 99-103 Properties Activity 10 Connections Page 80 From Seed to Plant Activity 7, Pages 59-65

Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Science, Technology, and Society

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.2.1 Explain why people create technological devices.	Air and Weather Investigation 2, Part 2 Pages 14-19 Balance and Motion www.fossweb.com ‘Roller Coasters’ Activity Solids and Liquids Investigation 3, Part 2 Pages 14-18 Insects www.fossweb.com ‘Insect Hunt’ Activity <u>New Plants FOSS Science</u> <u>Stories Pages 16-21</u> <u>Pebbles, Sand, and Silt FOSS</u> <u>Science Stories Pgs 16-19</u>	Finding the Moon Activity 12, Pages 99-103 From Seed to Plant Activity 1, Pages 15-20 Investigating Water Activity 12, Pages 95-100 Observing an Aquarium Activity 2, Pages 23-30 Properties Activity 6, Pages 47-51 Sunshine and Shadows Activity 6, Pages 49-56

Topic: Unifying Concepts and Themes

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.2.2 Describe a variety of changes that occur in nature.	Air and Weather Investigation 4, Parts 1-3 Pages 8-24 Balance and Motion Investigation 2, Part 1 Pages 8-13 New Plants Investigation 1, Parts 1-3 Pages 8-30 Insects Investigation 2, Parts 1-3 Pages 8-24 Solids and Liquids Investigation 4, Part 1 Pages 7-16 <u>Pebbles, Sand, and Silt FOSS</u> <u>Science Stories Pgs 10-13</u> Plants and Animals Investigation 2, Parts 1-3 Pages 87-108 Investigation 4, Parts 1-2 Pages 151-163 Insects and Plants Investigation 1, Parts 1-3 Pages 52-75 Investigation 2, Part 3 Pages 105-115	Finding the Moon Activities 3-4, Pages 29-46 From Seed to Plant Activity 4, Pages 39-44 Investigating Water Activities 10-11, Pages 81-93 Observing an Aquarium Activity 10, Pages 97-106 Sunshine and Shadows Activity 4, Pages 33-40

Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms; including their relationship to cycles of matter and energy in the environment.

Topic: Cycles of Matter and Energy

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.3.1 Identify the requirements of plants and animals to survive (e.g., food, air, light, water.)	<p>Insects Investigation 3, Parts 2-3 Pages 12-26</p> <p>New Plants Investigation 1, Parts 2-3 Pages 13-30</p> <p>Pebbles, Sand, and Silt Investigation 4, Science Ext. Page 27</p> <p>Plants and Animals Investigation 1, Part 1 Pages 47-57 Investigation 3, Parts 1-2 Pages 120-134 <i>Plants and Animals FOSS Science Resources</i> Pages 3-7, 21-23 Video: <i>How Plants Get Food</i></p> <p>Insects and Plants Investigation 1, Part 1 Pages 52-61 Investigation 3, Part 1 Pages 128-133 Investigation 4, Part 2 Pages 170-174</p>	<p>Finding the Moon Activity 12, Pages 99-103</p> <p>From Seed to Plant Activities 1-3, Pages 15-38 Activity 11, Pages 85-90</p> <p>Observing an Aquarium Activity 2, page 23-30 <i>Investigating Water Delta</i> <i>Science Readers Page 15</i></p>

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS – Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Topic: Classification

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.4.1 Describe how living things have structures that help them to survive.	<p>Insects Investigation 4, Parts 3-5 Pages 19-31</p> <p>New Plants Investigation 1, Part 3 Pages 23-30</p> <p>Plants and Animals Investigation 1, Part 1 Pages 47-57 Investigation 3, Parts 1-3 Pages 120-140 <i>Plants and Animals FOSS</i></p>	<p>From Seed to Plant Activities 9-10, Pages 73-84 <i>From Seed to Plant Delta</i> <i>Science Readers Pages 6-9</i></p> <p>Observing and Aquarium Activity 3, Pages 31-37</p>

	<u>Science Resources</u> Pages 4-7, 16-17, 28-45, 47-50 Video: <i>How Plants Get Food</i> Insects and Plants Investigation 1, Parts 1-3 Pages 52-75 Investigation 4, Parts 3-5 Pages 175-191 <u>Insects and Plants FOSS</u> <u>Science Resources</u> Pages 15-18, 30-33	
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Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON- Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Topic: Heredity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.5.1 Identify ways in which the same kinds of plants and the same kinds of animals differ.	Insects Investigation 3, Part 3 Pages 21-26 <u>Insects FOSS Science Stories</u> Pages 36-46 New Plants Investigation 1, Part 3 Pages 23-30 Plants and Animals Investigation 1, Part 3 Pages 63-72 Insects and Plants Investigation 3, Part 3 Pages 145-151 <u>Insects and Plants FOSS</u> <u>Science Resources</u> Pages 20-24, 42	From Seed to Plant Activity 5, Pages 45-52 Observing and Aquarium Activity 4, Pages 39-46

Topic: Unity and Diversity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.5.2 Describe the physical characteristics of living things that enable them to live in their environment.	Insects Investigation 5, Part 3 Pages 20-28 <u>Insects FOSS Science Stories</u> Pages 8-11 New Plants Investigation 3, Part 2 Pages 14-18 <u>New Plants FOSS Science</u> <u>Stories Pages 8-11, 22-43</u> Plants and Animals Investigation 1, Part 2 Pages 58-62 Investigation 3, Parts 1-3 Pages 120-140	From Seed to Plant Activity 6, Pages 53-58 Activity 11, Pages 85-90 Observing and Aquarium Activity 3, Pages 31-37 <u>Observing an Aquarium Delta</u> <u>Science Readers Pages 7-9</u>

	<u>Plants and Animals FOSS Science Resources</u> Pages 4-7, 16-19, 28-45, 47-50 Insects and Plants Investigation 3, Part 3 Pages 145-151 Investigation 5, Part 5 Pages 219-225 <u>Insects and Plants FOSS Science Resources</u> Pages 30-33, 48-53	
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Strand: Physical, Earth, and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Topic: Nature of Matter

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.6.1 Identify solids, liquids, and gases and their basic properties.	Air and Weather Investigation 1, Parts 1-6 Pages 8-38 Solids and Liquids Investigation 1, Parts 1-2 Pages 8-20 Investigation 2, Parts 1-3 Pages 10-27	Investigation Water Properties Activities 6-11, Pages 47-89 Properties Activities 7-9, Pages 53-74

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION - Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Topic: Forces and Motion

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.7.1 Describe how the motion of an object can be changed by force (push and pull.)	Balance and Motion Investigation 2, Parts 1-3 Pages 8-25 Air and Weather Investigation 1, Parts 4-6 Pages 21-38 Investigation 3, Parts 3-5 Pages 17-33 Solids and Liquids Investigation 3, Science Ext. Page 31 <u>Pebbles, Sand, and Silt FOSS Science Stories Pgs 14-15</u>	Investigating Water Properties Activity 5, Pages 41-46 Properties Activity 11, Pages 81-87

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Topic: The Universe

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
1.8.1 Describe that the sun warms the land, air, and water.	Air and Weather Investigation 2, Part 2 Pages 14-19	Finding the Moon Activity 6, Pages 55-60

GRADE 2

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
2.1.1 Develop predictions based on observations.	<p>Air and Weather Investigation 4, Part 2 Pages 12-18</p> <p>Insects Activity 2, Part 3 Pages 20-24</p> <p>Pebbles, Sand, and Silt Investigation 4, Parts 2-3 Pages 15-25</p> <p>New Plants Investigation 2, Part 2 Pages 15-19</p> <p>Balance and Motion Investigation 1, Parts 2-3 Pages 14-23</p> <p>Solids and Liquids Investigation 4, Part 3 Pages 23-27</p> <p>Plants and Animals Investigation 5, Parts 1-2 Pages 206-218</p> <p>Insects and Plants Investigation 1, Parts 1-2 Pages 47-62</p>	<p>Butterflies and Moths Activity 6, Pages 53-58</p> <p>Classroom Plants Activity 11, Pages 97-103</p> <p>Force and Motion Activity 6, Pages 57-63</p> <p>Plant & Animal Populations Activity 9, Pages 85-92</p> <p>Sink or Float? Activity 10, Pages 81-88</p> <p>Soil Science Activity 12, Pages 107-113</p> <p>States of Matter Activity 5, Pages 41-50</p> <p>Using Your Senses Activity 4, Pages 37-44</p> <p>Weather Watching Activity 6, Pages 51-58</p>
2.1.2 Conduct a simple investigation using a systematic process safely to test a prediction.	<p>New Plants Investigation 2, Part 2 Pages 15-19</p> <p>Air and Weather Investigation 1, Part 6 Pages 34-38</p> <p>Balance and Motion Investigation 1, Parts 2-3 Pages 14-23</p> <p>Solids and Liquids Investigation 4, Part 3 Pages 23-27</p> <p>Pebbles, Sand, and Silt Investigation 4, Part 3 Pages 19-25</p> <p>Plants and Animals Investigation 1, Part 2 Pages 58-62</p>	<p>Butterflies and Moths Activity 3, Pages 31-37</p> <p>Classroom Plants Activity 5, Pages 47-53</p> <p>Force and Motion Activity 4, Pages 41-47</p> <p>Plant & Animal Populations Activity 10, Pages 95-101</p> <p>Sink or Float? Activity 7, Pages 61-66</p> <p>Soil Science Activity 12, Pages 107-113</p> <p>States of Matter Activity 4, Pages 35-40</p> <p>Using Your Senses Activity 4, Pages 37-44</p>

Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Unifying Concepts and Themes

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
2.2.1 Describe changes that have occurred in society as a result of new technologies.	<u>Pebbles, Sand, and Silt FOSS Science Stories Pgs. 16-19</u> <u>Balance and Motion FOSS Science Stories Pgs 14-17</u> <u>New Plants FOSS Science Stories Pages 16-21</u> <u>Air and Weather FOSS Science Stories Pgs. 14-17</u>	Classroom Plants Activity 12, pages 105-112 Force and Motion Activity 6, Pages 57-64 Sink or Float? Activity 11, Pages 89-96 Soil Science Activity 11, Pages 99-105 States of Matter Activity 5, Pages 41-50 Using Your Senses Activity 4, Pages 37-44 Weather Watching Activity 12, Pages 109-115

Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment.

Topic: Interdependence

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
2.3.1 Describe how animals depend on plants and animals.	Insects Investigation 2, Part 1 Pages 8-20 <u>New Plants FOSS Science Stories Pages 22-43</u> Plants and Animals Investigation 3, Parts 1-3 Pages 120-140 <u>Plants and Animals FOSS Science Resources Pages 6-7, 29-30, 32-33, 36, 38-39, 41, 43-44, 47-50</u> Insects and Plants Investigation 3, Part 2 Pages 134-144 <u>Insects and Plants FOSS Science Resources Pages 6-7, 52</u>	Butterflies and Moths Activity 4, Pages 39-45 Classroom Plants Activity 1, Pages 15-21 Plant & Animal Populations Activity 6, Pages 59-67 <u>Soil Science Delta Science Readers Pages 10, 14</u>

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS - Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Topic: Classification

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
2.4.1 Explain how plants and animals go through life cycles.	Insects Investigation 1, Parts 1-3 Pages 8-25 <u><i>Insects FOSS Science Stories</i></u> <i>Pages 16-33</i> New Plants Investigation 1, Parts 1-3 Pages 8-30 Insects and Plants Investigation 1-5, all parts <u><i>Insects and Plants FOSS Science Resources</i></u> <i>Pages 37-55</i>	Butterflies and Moths Activity 1, Pages 15-22 Activity 6, Pages 53-60 Activity 9, Pages 79-88 Activity 11, Pages 97-103 Plant & Animal Populations Activity 5, Pages 51-58 <u><i>Classroom Plants Delta Science Readers</i></u> <i>Page 5</i>

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON - Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Topic: Unity and Diversity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
2.5.1 Identify distinct environments and the different kinds of organisms each environment supports.	<u><i>Insects FOSS Science Stories</i></u> <i>Pages 36-41</i> <u><i>New Plants FOSS Science Stories</i></u> <i>Pages 22-39</i> <u><i>Plants and Animals FOSS Science Resources</i></u> <i>28-45</i> <u><i>Insects and Plants FOSS Science Resources</i></u> <i>Pages 48-53</i>	<u><i>Plant and Animal Populations Delta Science Readers</i></u> <i>Pages 4-9</i>

Strand: Physical, Earth, and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Topic: Nature of Matter

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
2.6.1 Identify ways to change the physical properties of objects.	Air and Weather Investigation 1, Part 6 Pages 34-38 Balance and Motion	Classroom Plants Activity 4, Pages 39-46 Force and Motion Activity 4, Pages 41-47

	Investigation 2, Part 1 Pages 8-13 Solids and Liquids www.fossweb.com 'Change It' Activity <u>Pebbles, Sand, and Silt FOSS</u> <u>Science Stories Pgs. 10-14</u>	Plant & Animal Populations Activity 1, Pages 15-23 Sink or Float? Activity 5, Pages 43-52 Soil Science Activity 6, Pages 51-58 States of Matter Activity 10, Pages 81-88 Using Your Senses Activity 3, Pages 31-36 Weather Watching Activity 2, Pages 21-28
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Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION - Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Topic: Forces and Motion

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
2.7.1 Identify the properties of magnets.	Solids and Liquids Investigation 3 Science Extension Page 31 <u>Balance and Motion FOSS</u> <u>Science Stories Pgs. 18-21</u>	<i>Note: this standard is thoroughly addressed in the Grades 3-4 <u>Magnets Delta Science Module.</u></i>

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Topic: Earth Materials

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
2.8.1 Identify different Earth materials and classify them by their physical properties.	Air and Weather Investigation 1, Parts 1-2 Pages 8-16 Pebbles, Sand, and Silt Investigation 2, Parts 1-4 Pages 8-29	Classroom Plants Activity 3 Science Ext. Pg. 37 States of Matter Activity 4, Pages 35-40 Soil Science Activity 7, Pages 59-68 <u>Sink or Float? Delta Science Readers Pages 10-11</u> <u>Weather Watching Delta Science Readers Pages 4-5</u>
2.8.2 Identify the limited supply of natural resources and how they can be extended through conservation, reuse, and recycling.	New Plants Investigation 1 Page 29	Soil Science Activity 12, Pages 107-114

GRADE 3

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.1.1 Pose a question and develop a hypothesis based on observations.	<p>Earth Materials Investigation 1, Part 3 Pages 24-29</p> <p>Magnetism and Electricity Investigation 4, Parts 2 –3 Pages 14-22</p> <p>Measurement Investigation 4, Part 3 Pages 18-21</p> <p>Physics of Sound Investigation 4, Parts 1-2 Pages 6-20</p> <p>Matter and Energy Investigation 3, Part 2 Pages 139-150</p> <p>Structures of Life Activity 3, Part 4 Pages 24-30</p> <p>Water www.fossweb.com 'Evaporation' Activity</p>	<p>Butterflies and Moths Activity 6, Pages 53-58</p> <p>Classroom Plants Activity 11, Pages 97-103</p> <p>Force and Motion Activity 5, Pages 49-55</p> <p>Plant & Animal Populations Activity 9, Pages 85-93</p> <p>Sink or Float? Activity 5, Pages 43-51</p> <p>Soil Science Activity 12, Pages 107-113</p> <p>States of Matter Activity 5, Pages 41-50</p> <p>Using Your Senses Activity 4, Pages 37-44</p> <p>Weather Watching Activity 6, Pages 51-58</p> <p>Earth Movements Activity 4 Sci. Challenge Pg 46</p> <p>Electrical Circuits Activities 6-7, Pages 51-52</p> <p>Food Chains and Webs Activity 3, Pages 31-37</p> <p>Magnets Activity 12, Pages 77-81</p> <p>Plant & Animal Life Cycles Activity 12, Pages 105-112</p> <p>Sound Activity 11, Pages 91-98</p> <p>Water Cycle Activity 13, Pages 107-114</p> <p>Weather Instruments Activity 3, Pages 31-36</p>
3.1.2 Safely collect and analyze data to answer a question.	<p>Earth Materials Investigation 4, Part 1 Pages 8-13</p> <p>Human Body Investigation 4, Parts 1-3 Pages 8-24</p> <p>Ideas and Inventions Investigation 3, Part 2 Pages 14-17</p> <p>Magnetism and Electricity</p>	<p>Butterflies and Moths Activity 3, Pages 31-38</p> <p>Classroom Plants Activity 5, Pages 47-53</p> <p>Force and Motion Activity 2, Pages 23-29</p> <p>Plant & Animal Populations Activity 2, Pages 25-33</p> <p>Sink or Float? Activity 8, Pages 67-73</p>

	Investigation 4, Part 2 Pages 14-18 Measurement Investigation 4, Part 2 Pages 14-17 Physics of Sound Investigation 2, Parts 1-3 Pages 8-24 Structures of Life Activity 3, Part 4 Pages 24-30 Water Investigation 3, Parts 1-3 Pages 8-20 Sun, Moon and Stars Investigation 1, Parts 1-2 Pages 42-64	Soil Science Activity 9, Pages 81-89 States of Matter Activity 4, Pages 35-40 Using Your Senses Activity 11, Pages 89-95 Weather Watching Activity 6, Pages 51-58 Dinosaurs and Fossils Activity 6, Pages 47-53 Electrical Circuits Activity 7, Pages 57-61 Food Chains and Webs Activity 3, Pages 31-37 Magnets Activity 4, Pages 29-34 Plant & Animal Cycles Activity 7, Pages 65-73 Sound Activity 5, Pages 45-50 Weather Instruments Activity 12, Pages 97-101
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Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Science, Science, Technology, Society

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.2.1 Describe ways technologies in fields such as agriculture, information, manufacturing, or communications have influenced society.	<u>Earth Materials FOSS Science Stories Pages 24-29</u> <u>Human Body FOSS Science Stories Pages 5-7, 25-27</u> <u>Ideas and Inventions FOSS Science Stories Pgs. 17-22</u> <u>Magnetism and Electricity FOSS Science Stories Pages 8-19</u> <u>Physics of Sound FOSS Science Stories Pgs. 22-28</u> <u>Structures of Life FOSS Science Stories Pgs. 10-11</u> <u>Water FOSS Science Stories Pages 18-20, 22-23</u>	Butterflies and Moths Activity 5 Connections Pg. 52 <u>Classroom Plants Delta Science Readers Page 15</u> Plant & Animal Populations Activity 10 Connections Pg.95 Sink or Float? Activity 3 Connections Pg. 34 <u>Soil Science Delta Science Readers Pages 10-13</u> States of Matter Act. 12 Connections Pg. 101 <u>Using Your Senses Delta Science Readers Page 14</u> <u>Weather Watching Delta Science Readers Pgs.14-15</u> <u>Electrical Circuits Delta Science Readers Pgs 12-13</u> <u>Food Chains & Webs Delta Science Readers Pgs 12-13</u> <u>Magnets Delta Science Readers Page 14</u> Plant & Animal Life Cycles Activity 7 Connections Pg.73 Solar System Activity 2 Connections Pg. 26 <u>Sound Delta Science Readers Pages 8, 9, 14</u>

		<u>Water Cycle Delta Science Readers Pages 14-15</u> <u>Weather Instruments Delta Science Readers P. 9,12-13</u>
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Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment.

Topic: Interdependence

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.3.1 Describe how plants depend on animals.	<u>Structures of Life FOSS Science Stories Page 3</u> <i>This topic is also addressed in the FOSS Grades 1-2 <u>New Plants and Plants and Animals</u> modules.</i>	Soil Science Activity 9, Pages 81-90 <u>Classroom Plants Delta Science Readers Pg. 10, 15</u> Food Chains & Webs Activity 9, Pages 73-79 <u>Plant & Animal Life Cycles Delta Science Readers Pg 5</u> <u>Water Cycle Delta Science Readers Pages 14-15</u>

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS – Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Topic: Cells, Tissues, Organs, and Organ Systems

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.4.1 Compare distinct structures of living things that help them to survive.	Structures of Life Investigation 2, Part 1 Pages 8-13 Investigation 3, Part 1 Pages 8-15 Human Body Investigation 2, Part 4 Pages 23-25	Classroom Plants Activities 6-9, Pages 55-86 Butterflies and Moths Activity 2, Pages 23-30 Plant & Animal Populations Activity 4, Pages 43-50 <u>Using Your Senses Delta Science Readers Pgs 8, 11</u> Dinosaurs and Fossils Activity 8, Pages 61-66 Food Chains & Webs Activity 6, Pages 53-58 Plant & Animal Life Cycles Activity 8, Pages 75-82 Sound Activity 4, Pages 37-43

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON - Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Topic: Unity and Diversity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.5.1 Describe the relationship between structure and function in organisms.	Structures of Life Investigation 2, Part 1 Pages 8-13 Investigation 3, Part 1 Pages 8-15 <u>Structures of Life FOSS</u> <u>Science Stories Pgs. 26-27</u> Human Body Investigation 2, Part 4 Pages 23-25 <u>Human Body FOSS Science</u> <u>Stories Pgs. 1-3, 10, 12-16</u>	Classroom Plants Activities 6-9, Pages 55-86 Butterflies and Moths Activity 2, Pages 23-30 Plant & Animal Populations Activity 4, Pages 43-50 <u>Using Your Senses Delta</u> <u>Science Readers Pgs 8, 11</u> Dinosaurs and Fossils Activity 8, Pages 61-66 Food Chains & Webs Activity 6, Pages 53-58 Plant & Animal Life Cycles Activity 8, Pages 75-82 Sound Activity 4, Pages 37-43

Strand: Physical, Earth, and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Topic: Energy and its Transformation

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.6.1 Define energy and explain that the sun produces energy in the form of light and heat.	Matter and Energy Investigation 1, Part 1 Pages 50-62 <u>Matter and Energy FOSS</u> <u>Science Resources Page 1</u> <u>Structures of Life FOSS</u> <u>Science Stories Page 28</u> <u>Water FOSS Science Stories</u> <u>Pages 14-16</u> <u>Sun, Moon and Stars FOSS</u> <u>Science Resources</u> <u>Pages 1-3</u> <i>This topic is also addressed thoroughly in the FOSS Grades 5-6 <u>Solar Energy</u> module.</i>	<u>Plant & Animal Populations</u> <u>Delta Science Readers</u> <u>Pages 12-13</u> <u>Weather watching Delta</u> <u>Science Readers Pg 2-5, 10</u> <u>Food Chains & Webs Delta</u> <u>Science Readers Pages 6-9</u> <u>Solar System Delta Science</u> <u>Readers Page 3</u> <u>Water Cycle Delta Science</u> <u>Readers Pages 10-11</u> <u>Weather Instruments Delta</u> <u>Science Readers Page 2</u>

Topic: Waves

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.6.2 Explain how things make sound through vibrations.	Physics of Sound Investigation 1, Part 3 Pages 21-29 Investigation 2, Part 1 Pages 6-13	Using Your Senses Activity 5, Pages 45-52 Sound Activity 2, Pages 21-28
3.6.3 Explain how light traveling in a straight-line changes when it reaches an object.	Ideas and Inventions Investigation 4, Parts 1-3 Pages 8-21 Matter and Energy Investigation 2, Parts 1-2 Pages 93-114 <u>Matter and Energy FOSS Science Resources Page 28</u> <u>Ideas and Inventions FOSS Science Stories Pgs. 20-22</u>	Using Your Senses Activity 1, Pages 13-21 Water Cycle Activity 10, Pages 85-89 Weather Watching Activity 11, Pages 101-108

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION – Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Topic: Force and Motion

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.7.1 Compare how simple machines do work to make life easier.	<i>This topic is addressed in the FOSS Grades 5-6 <u>Levers and Pulleys</u> module.</i>	Force and Motion Activity 12, Pages 111-116

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Topic: Earth Materials

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.8.1 Describe different Earth materials (e.g., rocks, minerals, sand, soil) and explain their formation and composition.	Earth Materials Investigation 1, Parts 1-3 Pages 8-29 www.fossweb.com 'Rock Database' Activity <u>Earth Materials FOSS Science Stories Pgs. 12-14, 30-34</u>	Soil Science Activity 1, Pages 15-20 Earth Movements Activity 8, Pages 71-77 Dinosaurs and Fossils Activity 2, Pages 21-28

Topic: Forces that Shape the Earth

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
3.8.2 Describe how the water cycle is related to weather and climate.	Water Investigation 3, Part 4 Pages 21-26 <u>Water FOSS Science Stories Pages 12-16</u>	Weather Watching Activities 6-7, Pages 51-68 Water Cycle Activity 13, Pages 107-114 Weather Instruments Activities 11-12, Pgs 89-102

Topic: The Universe

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
<p>3.8.3 Safely observe and describe the basic movements of the sun and moon.</p>	<p><u>Ideas and Inventions FOSS Science Stories Pgs. 33-38</u> <i>This topic is addressed in the FOSS Grades 1-2 Air and Weather module and the Grades 5-6 Solar Energy module.</i></p> <p>Sun, Moon and Stars Investigation 1, Parts 1-2 Pages 42-64 Investigation 2, Parts 1-2 Pages 79-100 <u>Sun, Moon and Stars FOSS Science Resources</u> Pages 3-32</p>	<p>Solar System Activity 2, Pages 21-26</p>
<p>3.8.4 Describe that constellations stay the same, though they “appear” to move across the night sky.</p>	<p><u>Ideas and Inventions FOSS Science Stories</u> Pages 33-38</p> <p>Sun, Moon and Stars Investigation 3, Parts 1-2 Pages 114-130 <u>Sun, Moon and Stars FOSS Science Resources</u> Pages 36-39</p>	<p>Solar System Activity 12, Pages 101-110</p>

GRADE 4

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.1.1 Describe a testable hypothesis and an experimental procedure.	FOSS provides the opportunity to address this benchmark. See below: Earth Materials Investigation 1, Part 3 Pages 24-29 Human Body Investigation 4, Part 2 Pages 17-19 Magnetism and Electricity Investigation 4, Parts 2-3 Pages 14-22 Physics of Sound Investigation 4, Parts 1-2 Pages 6-20 Structures of Life Investigation 3, Part 4 Pages 24-30 Matter and Energy Investigation 3, Part 2 Pages 139-150 Water Investigation 4, Part 1 Pages 8-13	DSM provides the opportunity to address this benchmark. See below: Food Chains and Webs Activity 2, Pages 23-30 Electrical Circuits Activities 6-7, Pages 51-52 Magnets Activity 12, Pages 77-81 Plant & Animal Life Cycles Activity 12, Pages 105-112 Sound Activity 11, Pages 91-98 Water Cycle Activity 5, Pages 45-52

Topic: Scientific Knowledge

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.1.2 Differentiate between an observation and an inference.	FOSS provides the opportunity to address this benchmark. See below: Earth Materials Investigation 3, Part 2 Pages 14-19 Human Body Investigation 1, Part 3 Pages 21-25 Ideas and Inventions Investigation 3, Parts 1-2 Pages 8-17 Magnetism and Electricity Investigation 1, Part 4 Pages 30-34 Measurement	DSM provides the opportunity to address this benchmark. See below: Dinosaurs and Fossils Activity 8, Pages 61-65 Earth Movements Activity 4, Pages 39-46 Electrical Circuits Activity 5, Pages 45-50 Food Chains and Webs Activity 10, Pages 81-88 Magnets Activity 10, Pages 65-70 Plant & Animal Life Cycles Activity 12, Pages 105-114 Solar System

	Investigation 2, Parts 1-3 Pages 8-24 Structures of Life Investigation 5, Part 2 Pages 13-18 Water Investigation 3, Part 4 Pages 21-26	Activity 11, Pages 93-100 Sound Activity 10, Pages 83-90 Water Cycle Activity 3, Pages 31-37 Weather Instruments Activity 3, Pages 31-36
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Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Science, Technology, and Society

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.2.1 Describe how the use of technology has influenced the economy, demography, and environment of Hawaii.	<i>This is a local objective. FOSS Science Stories provide information to help teach this benchmark.</i> <i>See for example:</i> <u>Earth Materials FOSS Science Stories Pages 24-29</u> <u>Water FOSS Science Stories Pages 17-23</u> <u>Magnetism and Electricity FOSS Science Stories Pages 12-33</u>	<i>This is a local objective. Delta Science Readers provide information to help teach this benchmark.</i> <i>See for example:</i> <u>Electrical Circuits Delta Science Readers Pgs 12-15</u> <u>Food Chains & Webs Delta Science Readers Pgs 10-13</u> <u>Magnets Delta Science Readers Pages 8-13</u> <u>Solar System Delta Science Readers Page 15</u> <u>Sound Delta Science Readers Pages 8-9, 14-15</u> <u>Water Cycle Delta Science Readers Pages 14-15</u> <u>Weather Instruments Delta Science Readers Pgs 11-13</u>

Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment.

Topic: Cycles of Matter and Energy

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.3.1 Explain how simple food chains and food webs can be traced back to plants.	<u>Structures of Life FOSS Science Stories Page 43</u> <i>This topic is also addressed in the FOSS Grades 5-6 Environments module.</i>	Food Chains & Webs Activity 12, Pages 97-101 <u>Dinosaurs and Fossils Delta Science Readers Page 12</u>

Topic: Interdependence

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.3.2 Describe how an organism's behavior is determined by its environment.	Structures of Life Investigation 3, Parts 3-4 Pages 20-30 <u>Human Body FOSS Science Stories Pages 17-20</u> <u>Water FOSS Science Stories Pages 5-7</u>	Food Chains and Webs Activity 7, Pages 59-66 Plant & Animal Life Cycles Activity 5, Pages 49-55 <u>Dinosaurs and Fossils Delta Science Readers Pages 6-7</u> <u>Sound Delta Science Readers Page 15</u> <u>Weather Instruments Delta Science Readers Page 15</u>

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS – Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Topic: Cells, Tissues, Organs, and Organ Systems

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.4.1 Identify the basic differences between plant cells and animal cells.		

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON- Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Topic: Biological Evolution

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.5.1 Compare fossils and living things.	<u>Structures of Life FOSS Science Stories Pgs 45-48</u> <u>Human Body FOSS Science Stories Pages 22-24</u> Earth Materials www.fossweb.com 'Pictures'	Dinosaurs and Fossils Activities 5-7, Pages 41-60 Earth Movements Activity 3, Pages 29-37

Topic: Unity and Diversity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.5.2 Describe the roles of various organisms in the same environment.	<u>Structures of Life FOSS Science Stories Pgs 22-36</u> <u>Water FOSS Science Stories Pages 5-7</u> This topic is also addressed in the FOSS Grades 5-6 <u>Environments module</u> .	Food Chains and Webs Activity 11, Pages 89-96 <u>Dinosaurs & Fossils Delta Science Readers Pg 2-3,6-7</u>
4.5.3 Describe how different organisms need specific environmental conditions to survive.	<u>Structures of Life FOSS Science Stories Pgs 22-36</u> This topic is also addressed in the FOSS Grades 5-6 <u>Environments module</u> .	Food Chains and Webs Activity 2, Pages 23-30

Strand: Physical, Earth, and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Topic: Nature of Matter

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.6.1 Describe how some materials may be combined to form new substances.	Earth Materials Investigation 1, Part 3 Pages 24-29 Matter and Energy Investigation 4, Part 3 Pages 193-203 Ideas and Inventions Investigation 3, Parts 1-2 Pages 8-17 <u>Measurement FOSS Science Stories Pages 30-33</u> <u>Matter and Energy FOSS Science Resources Pages 60-62</u>	<u>Dinosaurs and Fossils Delta Science Readers Pages 4-5</u> <u>Earth Movements Delta Science Readers Page 15</u>

Topic: Energy and its Transformation

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.6.2 Explain what is needed for electricity to flow in a circuit to create light and sound.	Magnetism and Electricity Investigation 2, Parts 1-4 Pages 8-29 Investigation 3, Parts 1-3 Pages 10-26 Matter and Energy Investigation 1, Parts 1, 3 Pages 50-62, 71-82	Electrical Circuits Activities 3-4, Pages 27-44

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION – Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Topic: Forces of the Universe

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.7.1 Describe that the mass of the Earth exerts a gravitational force on all objects.	<u>Water FOSS Science Stories Page 4</u> This topic is addressed in the FOSS Grades 5-6 <u>Solar Energy</u> module.	<u>Weather Instruments Delta Science Readers Page 4</u>

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Topic: Forces that Shape the Earth

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.8.1 Describe how slow processes sometimes shape and reshape the surface of the Earth.	<u>Earth Materials FOSS Science Stories Pages 1-7, 34</u> <i>This topic is addressed in the FOSS Grades 5-6 Landforms module.</i>	Earth Movements Activities 6-8, Pages 55-78
4.8.2 Describe how fast processes (e.g., volcanoes, earthquakes) sometimes shape and reshape the surface of the Earth.	<u>Earth Materials FOSS Science Stories Pages 1-7, 34</u> <i>This topic is addressed in the FOSS Grades 5-6 Landforms module.</i>	Earth Movements Activity 12, Pages 105-110

Topic: Earth in the Solar System

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
4.8.3 Describe the relationship between the sun and the Earth's daily rotation and annual revolution.	<u>Ideas and Inventions FOSS Science Stories Pgs. 33-38</u> <i>This topic is also addressed in the FOSS Grades 5-6 Solar Energy module.</i> <u>Sun, Moon and Stars FOSS Science Resources</u> Page 3	Solar System Activity 12, Pages 101-110 <u>Solar System Delta Science Readers</u>

GRADE 5

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.1.1 Identify the variables in scientific investigations and recognize the importance of controlling variables in scientific experiments.	FOSS provides the opportunity to address this benchmark. See below: Environments Investigation 5, Parts 1-3 Pages 8-22 Food and Nutrition Investigation 2, Parts 1-2 Pages 8-21 Landforms Investigation 3, Part 3 Pages 20-24 Levers and Pulleys Investigation 1, Parts 1-3 Pages 8-28 Mixtures and Solutions Investigation 3, Part 1 Pages 8-14 Water Planet Investigation 2, Parts 2-3 Pages 86-100 Models and Designs Investigation 4, Part 2 Pages 11-15 Solar Energy Investigation 3, Part 2 Pages 17-23 Variables Investigation 1, Part 2 Pages 16-22	DSM provides the opportunity to address this benchmark. See below: Color and Light Act.6 Science Challenge Pg59 Electromagnetism Activity 6, Pages 43-48 Erosion Activity 5, Pages 43-49 Flight and Rocketry Activity 9, Pages 91-98 Oceans Activity 7, Pages 75-88 Pollution Activity 7, Pages 53-58 Simple Machines Activity 3, Pages 25-31
5.1.2 Formulate and defend conclusions based on evidence.	Environments Investigation 5, Part 3 Pages 19-22 Food and Nutrition Investigation 3, Part 2 Pages 16-20 Landforms Investigation 3, Part 3 Pages 20-24 Living Systems Investigation 2, Part 1 Pages 85-98 Levers and Pulleys	Color and Light Activity 7, Pages 61-68 Electromagnetism Activity 4, Pages 31-35 Erosion Activity 11, Pages 91-97 Flight and Rocketry Activity 5, Pages 55-64 Oceans Activity 9, Pages 99-111 Pollution Activity 11, Pages 77-82 Rocks and Minerals

	Investigation 1, Parts 1-3 Pages 8-28 Mixtures and Solutions Investigation 3, Part 3 Pages 21-24 Models and Designs Investigation 1, Part 1 Pages 8-17 Solar Energy Investigation 2, Parts 1-2 Pages 8-24 Variables Investigation 3, Part 2-3 Pages 14-23	Activity 6, Pages 47-54 Simple Machines Activity 1, Pages 13-18 Weather Forecasting Activity 11, Pages 81-86 You and Your Body Activity 9, Pages 67-71
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Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Science, Unifying Concepts and Themes

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.2.1 Use models and/or simulations to represent and investigate features of objects, events, and processes in the real world.	Environments www.fossweb.com ‘Virtual Aquarium’ Activity Food and Nutrition www.fossweb.com ‘What’s for Dinner’ Activity Landforms Investigation 1, Parts 1-3 Pages 8-24 Levers and Pulleys www.fossweb.com ‘Build a Rube Goldberg Machine’ Activity Mixtures and Solutions www.fossweb.com ‘Junkyard Analysis’ Activity Models and Designs Investigation 2, Part 1-2 Pages 8-21 Solar Energy Investigation 4, Parts 1-3 Pages 8-28 Solar Energy Investigation 1, Part 1 Pages 50-58 Investigation 3, Part 2 Pages 136-144 Variables www.fossweb.com ‘Blasto! The Subhuman Cannonball’ Activity	Color and Light Activity 11, Pages 93-100 Electromagnetism Activity 10, Pages 69-76 Erosion Activity 2, Pages 21-28 Flight and Rocketry Activity 7, Pages 73-80 Oceans Activities 5-8, Pages 55-98 Pollution Activity 5 Science Ext. Pg 45 Rocks and Minerals Activity 2, Pages 21-28 Simple Machines Activity 2, Pages 19-24 Weather Forecasting Activity 4, Pages 33-40 You and Your Body Activities 1-2, Pages 13-26

Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment.

Topic: Cycles of Matter and Energy

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.3.1 Describe the cycle of energy among producers, consumers, and decomposers.	<u>Environments FOSS Science Stories Pages 38-41</u> <u>Food and Nutrition FOSS Science Stories Pgs 41-43</u> <u>Living Systems FOSS Science Resources Pgs 31-36</u>	

Topic: Interdependence

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.3.2 Describe the interdependent relationships among producers, consumers, and decomposers in an ecosystem in terms of the cycles of matter.	<u>Environments FOSS Science Stories Pages 38-41</u> <u>Food and Nutrition FOSS Science Stories Pgs 41-43</u>	<u>Oceans Delta Science Readers Page 11</u> <u>Pollution Delta Science Readers Page 14</u>

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS – Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Topic: Cells, Tissues, Organs, and Organ Systems

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.4.1 Describe the structures of the human body and how they work together to sustain life.	Living Systems Investigation 1, Parts 1-3 Pages 51-70 <u>Food and Nutrition FOSS Science Stories Pages 6-9, 44-50</u> <u>Living Systems FOSS Science Resources Pgs 1-13</u>	<u>You and Your Body Delta Science Readers Pages 2-11</u>

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON- Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Topic: Heredity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.5.1 Recognize that some traits of living things are inherited and others are	<i>This topic is addressed in the FOSS Human Brain and Senses and Populations</i>	<i>This topic is addressed in the Grades 5-6 DNA – From Genes to Proteins Delta</i>

learned.	<i>and Ecosystems Middle School modules.</i>	<i>Science Modules.</i>
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Strand: Physical, Earth, and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Topic: Energy and its Transformation

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.6.1 Identify different forms of energy (e.g., thermal, electrical, nuclear, light, sound) and how they can change and transfer energy from one form to another.	<u><i>Solar Energy FOSS Science Stories Pgs 1-5, 16, 29-39</i></u> <u><i>Environments FOSS Science Stories Pages 38-41</i></u> <u><i>Food and Nutrition FOSS Science Stories Pages 1, 15, 41-43</i></u> <u><i>Landforms FOSS Science Stories Pages 22-23</i></u> <u><i>Models and Designs FOSS Science Stories Pgs 25, 27</i></u> <u><i>Living Systems FOSS Science Resources Pgs 31-36</i></u>	Flight and Rocketry Activity 3, Pages 33-44 <u><i>Color and Light Delta Science Readers Pages 2-4</i></u> <u><i>Electromagnetism Delta Science Readers Pgs 2-4</i></u> <u><i>Oceans Delta Science Readers Page 7</i></u> <u><i>Pollution Delta Science Readers Page 15</i></u>
5.6.2 Describe ways that heat can be transferred from one object to another.	Solar Energy Investigation 2, Parts 1-2 Pages 8-24 Investigation 3, Parts 1-2 Pages 8-23 Water Planet Investigation 3, Parts 1-2 Pages 125-144 <u><i>Water Planet FOSS Science Resources Pgs 42-51</i></u>	Flight and Rocketry Activity 3, Pages 33-44 Weather Forecasting Activity 8, Pages 63-68 <u><i>Oceans Delta Science Readers Page 10</i></u> <u><i>Pollution Delta Science Readers Page 9</i></u>

Topic: Waves

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.6.3 Compare what happens to light when it is reflected, refracted, and absorbed.	Solar Energy Investigation 3, Part 1 Pages 8-16 <i>This topic is also addressed in the FOSS Grades 3-4 Ideas and Inventions module and the FOSS Human Brain and Senses Middle School module.</i>	Color and Light Activities 1-2, Pages 13-28

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION - Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Topic: Forces of the Universe

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.7.1 Explain how electrically charged materials can push or pull other charged materials.	<u>Models and Designs FOSS Science Stories Pgs 41-43</u>	Electromagnetism Activity 4, Pages 37-42

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Topic: Earth in the Solar System

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
5.8.1 Describe the relationship (size and distance) of the Earth to other components in the solar system.	Water Planet Investigation 1, Part 1 Pages 50-58 <u>Water Planet FOSS Science Resources Pgs 1-13</u> <u>Solar Energy FOSS Science Stories Pages 40-43</u> <i>This topic is also addressed in the FOSS Planetary Science Middle School module.</i>	<i>This topic is addressed in the Grades 3-4 <u>Solar System Delta Science Modules.</u></i>
5.8.2 Describe examples of what astronomers have discovered using telescopes.	<u>Models and Designs FOSS Science Stories Pgs 9-10</u> <u>Solar Energy FOSS Science Stories Pages 40-43</u>	<i>This topic is addressed in the Grades 3-4 <u>Solar System Delta Science Modules.</u></i>
5.8.3 Explain that the planets orbit the sun and that the moon orbits the earth.	Water Planet Investigation 1, Part 1 Pages 50-58 <u>Water Planet FOSS Science Resources Pgs 1-13</u> <u>Models and Designs FOSS Science Stories Pgs 6-10</u> <u>Solar Energy FOSS Science Stories Pages 40-43</u> <i>This topic is also addressed in the FOSS Planetary Science and the <u>Weather and Water Middle School modules.</u></i>	<u>Oceans Delta Science Readers Page 9</u> <i>This topic is also addressed in the Grades 3-4 <u>Solar System Delta Science Modules.</u></i>
5.8.4 Demonstrate that day and night are caused by the rotation of the Earth on its axis.	<u>Solar Energy FOSS Science Stories Pages 1-3</u> <i>This topic is also addressed in the FOSS <u>Planetary Science and the Weather and Water Middle School modules.</u></i>	<i>This topic is addressed in the Grades 3-4 <u>Solar System Delta Science Modules.</u></i>

GRADE 6

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
6.1.1 Formulate a testable hypothesis that can be answered through a controlled experiment.	FOSS provides the opportunity to address this benchmark. See below: Environments Investigation 5, Parts 1-3 Pages 8-22 Water Planet Investigation 2, Parts 2-3 Pages 80-100 Food and Nutrition Investigation 2, Part 3 Pages 22-25 Landforms Investigation 3, Part 3 Pages 20-24 Levers and Pulleys Investigation 4, Part 3 Pages 21-25 Mixtures and Solutions Investigation 3, Part 3 Pages 21-24 Models and Designs Investigation 4, Part 2 Pages 11-15 Solar Energy Investigation 3, Part 2 Pages 17-23 Variables Investigation 4, Part 3 Pages 18-23 Diversity of Life Investigation 9, Part 2 Pages 278-285 Earth History Investigation 8, Part 2 Pages 259-265 Force and Motion Investigation 2, Part 3 Pages 89-98 Human Brain and Senses Investigation 7, Parts 1-2 Pages 210-225 Planetary Science Investigation 5, Parts 2-3 Pages 158-167	DSM provides the opportunity to address this benchmark. See below: Color and Light Activity 2, Pages 19-28 Electromagnetism Activity 3, Pages 25-30 Erosion Activity 10, Pages 83-89 Flight and Rocketry Activity 2, Pages 23-32 Oceans Activity 3, Pages 31-42 Pollution Activity 10, Pages 71-76 Astronomy Activity 1, Pages 13-22 Matter and Change Activity 12, Pages 99-104 Newton's Toy Box Activity 3, Pages 25-31

	<p>Populations & Ecosystems Investigation 6, Parts 1-2 Pages 179-190</p> <p>Weather and Water Investigation 8, Part 1 Pages 258-265</p>	
<p>6.1.2 Use appropriate tools, equipment, techniques safely to collect, display, analyze data.</p>	<p>Environments Investigation 5, Parts 1-3 Pages 8-22</p> <p>Food and Nutrition Investigation 3, Part 1-2 Pages 8-20</p> <p>Levers and Pulleys Investigation 1, Parts 1-3 Pages 8-28</p> <p>Mixtures and Solutions Investigation 2, Parts 1-2 Pages 8-20</p> <p>Solar Energy Investigation 3, Parts 1-2 Pages 8-23</p> <p>Water Planet Investigation 3, Part 1 Pages 125-135</p> <p>Living Systems Investigation 3, Parts 2-3 Pages 126-141</p> <p>Variables Investigation 1, Parts 1-3 Pages 8-27</p> <p>Diversity of Life Investigation 3, Parts 1-3 Pages 102-122</p> <p>Earth History Investigation 7, Parts 1-2 Pages 234-243</p> <p>Electronics Investigation 3, Parts 1-3 Pages 119-132</p> <p>Forces and Motion Investigation 6, Parts 1-4 Pages 218-245</p> <p>Human Brain and Senses Investigation 7, Parts 1-2 Pages 210-225</p> <p>Planetary Science Investigation 5, Parts 1-4 Pages 154-173</p> <p>Populations & Ecosystems Investigation 5, Part 1 Pages 142-150</p> <p>Weather and Water Investigation 4, Parts 1-2 Pages 121-139</p>	<p>Electromagnetism Activity 6, Pages 43-48</p> <p>Erosion Activity 7, Pages 59-66</p> <p>Flight and Rocketry Activity 8, Pages 81-90</p> <p>Oceans Activity 1, Pages 13-22</p> <p>Pollution Activity 12, Pages 83-88</p> <p>Rocks and Minerals Activity 4, Pages 35-40</p> <p>Simple Machines Activity 6, Pages 49-56</p> <p>Weather Forecasting Activity 3, Pages 25-32</p> <p>You and Your Body Activity 3, Page 27-32</p> <p>Astronomy Activity 11, Pages 101-108</p> <p>Matter and Change Activity 2, Pages 21-27</p> <p>Earth, Moon, and Sun Activity 4, Pages 37-44</p> <p>Earth Processes Activity 10, Pages 89-95</p> <p>Electrical Connections Activity 10, Pages 81-88</p> <p>Newton's Toy Box Activity 7, Pages 49-54</p> <p>Plants in Our World Activity 3, Pages 35-40</p>

Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Science, Science, Technology and Society

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
6.2.1 Explain how technology has an impact on society and science.	<u>Environments FOSS Science Stories Pages 43-48</u> <u>Landforms FOSS Science Stories Pages 35-36</u> <u>Food and Nutrition FOSS Sci. Stories Pgs 10-13, 19, 39</u> <u>Mixtures and Solutions FOSS Science Stories Pgs 43-45</u> <u>Models and Designs FOSS Science Stories Pgs 25-36</u> <u>Solar Energy FOSS Science Stories Pages 29-39</u> <u>Variables FOSS Science Stories Pages 15-28</u> <u>Diversity of Life Resources Pages 66, 68-69</u> <u>Earth History Resources Pages 64-67, 98-99</u> <u>Electronics Resources Pages 12-14, 18-21, 23-25, 34-36</u> <u>Forces and Motion Resources Pages 71-74</u> <u>Human Brain and Senses Resources Pgs 34-35, 49</u> <u>Planetary Science Resources Pages 74-79, 90-95</u> <u>Populations and Ecosystems Resources Pages 8-13, 28</u> <u>Weather and Water Resources Pages 43-44</u>	Astronomy Activity 9 Connections Pg. 91 Matter and Change Act. 10 Science Tech. Pg 92 DNA-From Genes to Proteins Act. 12 Science Tech. Pg 108 Earth, Moon, and Sun Activity 6 Science Tech. Pg 60 Earth Processes Act. 9 Science Tech. Pg 87 Electrical Connections Activity 7 Science Tech. Pg 65 Erosion Act. 11 Sci. Tech. Pg 73 Newton’s Toy Box Activity 2 Science Tech. Pg 23 Plants in Our World Act. 10 Science Tech. Pg 93 Rocks & Minerals Activity 11, Pages 85-92 <u>Electromagnetism Delta Science Readers Pgs 14-15</u> <u>Flight & Rocketry Delta Science Readers Pgs 6-12</u> <u>Oceans Delta Science Readers Page 11</u> <u>Pollution Delta Science Readers Pages 2-4, 7-14</u> <u>Simple Machines Delta Science Readers Pgs 10-11</u> <u>Weather Forecasting Delta Science Readers Pages 2, 5, 8, 12-14</u> <u>You and Your Body Delta Science Readers Page 12</u> <u>Electrical Connections Delta Science Readers Pages 21-22</u> <u>Astronomy Delta Science Readers Pages 16-20</u>
6.2.2 Explain how the needs of society have influenced the development and use of technologies.	<u>Environments FOSS Science Stories Pages 46-48</u> <u>Food and Nutrition FOSS Science Stories Pages 19, 34-36</u> <u>Landforms FOSS Science Stories Pages 19-21</u> <u>Mixtures and Solutions FOSS Science Stories Pgs 13-15</u> <u>Models and Designs FOSS Science Stories Pgs 52-55</u>	Matter and Change Act. 6 Science Tech. Pg 61 DNA-From Genes to Proteins Act. 13 Science Tech. Pg 115 Earth, Moon, and Sun Act. 6 Science Tech. Pg 60 Earth Processes Act. 12 Science Tech. Pg 110 Electrical Connections Act. 12 Science Tech. Pg 99 Erosion

	<u>Solar Energy FOSS Science Stories Pages 32-33</u> <u>Variables FOSS Science Stories Pages 8-9, 27-28</u> <u>Diversity of Life Resources Pages 68-69</u> <u>Earth History Resources Pages 64-66</u> <u>Electronics Resources Pages 18-21</u> <u>Forces and Motion Resources Pages 71-74</u> <u>Human Brain and Senses Resources Pgs 31-35, 49</u> <u>Planetary Science Resources Pages 74-77</u> <u>Populations and Ecosystems Resources Pages 54-55</u> <u>Weather and Water Resources Pages 20-21</u>	Act. 11 Science Tech. Pg 97 Newton's Toy Box Activity 8 Science Tech. Pg 59 Plants in Our World Activity 12, Pages 77-81 Rocks & Minerals Activity 11, Pages 85-92 <u>Color and Light Delta Science Readers Page 6, 9</u> <u>Electromagnetism Delta Science Readers Pgs 11-12</u> <u>Flight & Rocketry Delta Science Readers Pgs 6-12</u> <u>Oceans Delta Science Readers Page 15</u> <u>Pollution Delta Science Readers Pages 3, 8, 12, 15</u> <u>Simple Machines Delta Science Readers Pg 13, 15</u> <u>Weather Forecasting Delta Science Readers Pg 2-3, 5, 8, 10, 11-14</u> <u>You and Your Body Delta Science Readers Page 12</u>
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Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment.

Topic: Cycles of Matter and Energy

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
6.3.1 Describe how matter and energy are transferred within and among living systems and their physical environment.	Living Systems Investigation 3, Parts 1-2 Pages 118-135 <u>Living Systems FOSS Science Resources Pages 31-36, 47-48</u> <u>Environments FOSS Science Stories Pages 38-41</u> <u>Food and Nutrition FOSS Science Stories Pgs 41-43</u> Populations & Ecosystems Investigation 5, Parts 1-4 Pages 142-169 <u>Diversity of Life Resources Pages 36-37, 65-70</u>	Pollution Activity 10, Pages 71-76 You and Your Body Activity 9, Pages 67-71 DNA-From Genes to Proteins Act. 12, Pages 101-108 Plants in Our World Act. 5-6, 10, Pg 31-41, 63-68 <u>Erosion Delta Science Readers Page 7</u> <u>Oceans Delta Science Readers Pages 11-13</u> <u>Plants in Our World Delta Science Readers Pages 3-5</u> <u>DNA-From Genes to Proteins Delta Science Readers Pages 8-11</u>

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS – Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
There are no benchmarks for this standard for this Grade/Course.		

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON- Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
There are no benchmarks for this standard for this Grade/Course.		

Strand: Physical, Earth and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Topic: Energy and its Transformation

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
6.6.1 Compare how heat energy can be transferred through conduction, convection, and radiation.	Water Planet Investigation 3, Parts 1-2 Pages 125-144 Weather and Water Investigation 4, Parts 1-2 Pages 121-139 Investigation 5, Parts 2-3 Pages 163-174 <u>Water Planet FOSS Science Resources Pages 42-51</u> <u>Solar Energy FOSS Science Stories Pages 1-4, 22-37</u> <u>Earth History Resources Pages 101-102</u> <u>Electronics Resources Pg. 13</u> <u>Weather & Water Resources Pages 22-26, 31-33, 53</u> Weather and Water CD-Rom 'Heat and Energy' Activities	Earth Processes Activity 12, Pages 105-110 Electrical Connections Activity 7, Pages 59-66 <u>Erosion Delta Science Readers Pages 2-4</u>
6.6.2 Describe the different types of energy transformations.	Solar Energy Investigation 2, Parts 1-2 Pages 8-24 Living Systems Investigation 3, Parts 1-2	Simple Machines Activity 3, Pages 25-31 Astronomy Activity 10, Pages 85-91 Matter and Change

	<p>Pages 118-135 Electronics Investigation 1, Parts 1-3 Pages 55-60 <u>Living Systems FOSS Science Resources Pages 31-36, 47-48</u> <u>Solar Energy FOSS Science Stories Pages 1-4, 22-37</u> <u>Diversity of Life Resources Pages 36-37</u> <u>Electronics Resources Pages 1-2, 12-13</u> <u>Populations & Ecosystems Resources Page 20</u> <u>Weather & Water Resources Pages 22-26, 31-33, 53</u></p>	<p>Activity 6, Pages 53-61 Earth Processes Activity 8, Pages 71-79 Electrical Connections Activity 2, Pages 21-36 Newton's Toy Box Activity 10, Pages 67-72 Plants In Our World Activity 10, Pages 87-93 <u>Color and Light Delta Science Readers Pages 2</u> <u>Electromagnetism Delta Science Readers P 2, 12-13</u> <u>Erosion Delta Science Readers Pages 2-4</u> <u>Oceans Delta Science Readers Page 7</u> <u>Pollution Delta Science Readers Page 15</u> <u>Simple Machines Delta Science Readers Pg 3, 15</u> <u>Electrical Connections Delta Science Readers Pages 7-8, 13-16</u> <u>DNA-From Genes to Proteins Delta Science Readers Pages 10-11</u></p>
<p>6.6.3 Explain how energy can change forms and is conserved.</p>	<p>Living Systems Investigation 3, Parts 1-2 Pages 118-135 Electronics Investigation 1, Parts 1-3 Pages 55-60 <u>Electronics Resources Pages 1-2, 12-13</u> <u>Populations & Ecosystems Resources Page 20</u> <u>Weather & Water Resources Pages 25-26, 49, 63-64</u> <u>Living Systems FOSS Science Resources Pages 31-36, 47-48</u> Chemical Interactions Investigation 5, Part 3 Pages 165-171</p>	<p>Electromagnetism Activity 9, Pages 63-68 Electrical Connections Activity 2, Pages 21-26 Activity 6, Pages 51-58 Newton's Toy Box Activity 10, Pages 67-72 <u>Color and Light Delta Science Readers Pages 2, 4-7</u> <u>Oceans Delta Science Readers Page 7</u> <u>Pollution Delta Science Readers Page 15</u> <u>Simple Machines Delta Science Readers Page 15</u></p>
<p>6.6.4 Describe and give examples of different types of energy waves.</p>	<p><u>Solar Energy FOSS Science Stories Page 4</u> <u>Electronics Resources Page 23</u> <u>Planetary Science Resources Page 99</u> Human Brain and Senses CD-Rom 'How the Ear Works'</p>	<p>Earth Processes Activity 8, Pages 61-68 <u>Color and Light Delta Science Readers Pages 2-3, 8-9</u> <u>Electromagnetism Delta Science Readers Pg 9</u> <u>Oceans Delta Science Readers Page 7</u></p>

Topic: Nature of Matter

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
<p>6.6.5 Explain how matter can change physical or chemical forms, but the total amount of matter remains constant.</p>	<p>Mixtures and Solutions Investigation 1, Part 2 Pages 16-20</p> <p>Earth History Investigation 5, Parts 1-2 Pages 175-182</p> <p>Weather and Water Investigation 6, Part 4 Pages 206-213</p> <p><u>Food and Nutrition FOSS</u> <u>Science Stories Pgs 41-43</u></p> <p>Chemical Interactions Investigation 9, Parts 1-2 Pages 280-297</p> <p><u>Chemical Interactions FOSS</u> <u>Resources</u> <u>Pages 63-67, 69-71</u></p>	<p>Matter and Change Activity 7, Pages 63-68</p> <p><u>Matter and Change Delta</u> <u>Science Readers Pages 16-18</u></p>
<p>6.6.6 Describe and compare the physical and chemical properties of different substances.</p>	<p>Food and Nutrition Investigation 3, Part 2 Pages 16-20</p> <p>Earth History Investigation 3, Part 1 Pages 91-95</p> <p>Electronics Investigation 2, Parts 1-4 Pages 89-107</p> <p>Planetary Science Investigation 8, Parts 1-4 Pages 250-270</p> <p>Populations & Ecosystems Investigation 5, Part 1 Pages 142-150</p> <p>Weather and Water Investigation 5. Parts 1-3 Pages 152-174</p> <p><u>Mixtures and Solutions FOSS</u> <u>Science Stores P 1-7, 20-22, 37-42</u></p> <p>Chemical Interactions Investigation 1, Parts 1-2 Pages 41-58 Investigation 7, Part 1, 4-5 Pages 204-210, 222-234 Investigation 8, Part 1 Pages 248-255 Investigation 9, Parts 2-4 Pages 288-312 Investigation 10, Parts 1-2 Pages 323-336</p> <p><u>Chemical Interactions FOSS</u> <u>Resources</u> <u>Pages 64-67, 97-101</u></p>	<p>Oceans Activity 3, Pages 31-42</p> <p>Pollution Activity 8, Pages 59-64</p> <p>Rocks and Minerals Activities 11, Pages 85-92</p> <p>Matter and Change Activity 1, Pages 13-19 Activity 3, Pages 23-28 Activity 10, Pages 85-92</p> <p>Earth Processes Activities 4-5, Pages 39-54</p> <p>Electromagnetism Activity 1, Pages 13-17</p> <p>Plants in Our World Activity 11, Pages 95-102</p> <p><u>Color and Light Delta Science</u> <u>Readers Page 7</u> <u>Erosion Delta Science</u> <u>Readers Pages 5-6</u> <u>Rocks and Minerals Delta</u> <u>Science Readers Pages 3-6</u> <u>Matter and Change Delta</u> <u>Science Readers Pages 13-202</u></p>
<p>6.6.7 Describe the organization of the periodic table.</p>	<p><u>Mixtures and Solutions FOSS</u> <u>Science Stories Pgs 32-36</u></p> <p>Chemical Interactions</p>	<p>Matter and Change Activity 4, Pages 37-44</p> <p><u>Matter and Change Delta</u></p>

	Investigation 2, Parts 1-2 Pages 70-80 <u>Chemical Interactions FOSS Resources</u> Pages 4-6, 90-91	<u>Science Readers</u> Pages 4-5
6.6.8 Recognize changes that indicate that a chemical reaction has taken place.	Food and Nutrition Investigation 2, Parts 1-3 Pages 8-25 Mixtures and Solutions Investigation 4, Parts 1-3 Pages 8-24 Earth History Investigation 3, Part 1 Pages 91-95 Populations & Ecosystems Investigation 5, Part 1 Pages 142-150 <u>Mixtures and Solutions FOSS Science Stories P 23-24,28</u> Chemical Interactions Investigation 9, Parts 2-4 Pages 288-312 Investigation 10, Parts 1-2 Pages 323-329 <u>Chemical Interactions FOSS Resources</u> Pages 63-67	Erosion Activity 1, Pages 13-19 Flight and Rocketry Act. 12 Sci. Challenge P 130 Rocks and Minerals Activity 6, Pages 47-54 You and Your Body Activities 10-11, Pages 73-84 Matter and Change Activities 11-13, Pages 93-105 Earth Processes Activity 3, Pages 29-37 Plants in Our World Activity 5, Pages 49-55 <u>Matter and Change Delta Science Readers</u> Pages 16-18
6.6.9 Describe matter using the atomic model.	<u>Mixtures and Solutions FOSS Science Stories Pgs 25-28</u> <u>Earth History Resources P 88</u> <u>Electronics Resources Pgs 6-7</u> Chemical Interactions Investigation 9, Parts 1-2 Pages 280-297 <u>Chemical Interactions FOSS Resources</u> Pages 63-67	Matter and Change Activities 4-5, Pages 37-51 <u>Electromagnetism Delta Science Readers</u> Page 2 <u>Matter and Change Delta Science Readers</u> Pages 2-3, 22

Topic: Waves

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
6.6.10 Explain how vibrations in materials set up wavelike disturbances that spread away from the source.	<u>Human Brain and Senses Resources</u> Page 69	You and Your Body Activity 14, Pages 97-102 Earth Processes Activity 8, Pages 71-79 <u>Color and Light Delta Science Readers</u> Pages 2-3, 8-9 <u>Electromagnetism Delta Science Readers</u> Page 9 <u>Oceans Delta Science Readers</u> Page 7

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION – Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Topic: Force and Motion

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
6.7.1 Describe examples of how forces affect an object's motion.	<p>Models and Designs Investigation 3, Parts 1-3 Pages 8-23</p> <p>Variables Investigation 4, Parts 1-3 Pages 8-28</p> <p>Force and Motion Investigation 6, Parts 1-4 Pages 225-245</p> <p><u>Landforms FOSS Science Stories Pages 15-17</u></p> <p><u>Levers and Pulleys FOSS Science Stories Pgs 1-17</u></p> <p><u>Models and Designs FOSS Sci. Stories P 37-43, 48-55</u></p> <p><u>Solar Energy FOSS Science Stories Pages 43-44</u></p> <p><u>Planetary Science Resources Page 70</u></p>	<p>Electromagnetism Activity 5, Pages 37-42</p> <p>Erosion Activities 4-5, Pages 37-50</p> <p>Flight and Rocketry Activity 2, Pages 23-32 Activity 8-12, Pages 81-130</p> <p>Oceans Activity 6, Pages 65-73</p> <p>Simple Machines Activity 6, Pages 49-56</p> <p>Earth Processes Activity 7, Pages 63-69</p> <p>Earth, Moon, and Sun Activity 12, Pages 111-119</p> <p>Electrical Connections Activity 4, Pages 35-42</p> <p>Newton's Toy Box Activities 1-13, Pages 13-90</p> <p><u>Flight and Rocketry Delta Science Readers Pages 2-13</u></p> <p><u>Newton's Toy Box Delta Science Readers Pages 4-15</u></p>
6.7.2 Explain that electric currents can produce magnetic effects and that magnets can cause electric currents.	<p><u>Models and Designs FOSS Science Stories Pgs 41-43</u></p> <p><u>Electronics Resources Pages 12-13</u></p>	<p>Electromagnetism Activity 6, Pages 43-48</p> <p>Electrical Connections Activity 11, Pages 89-94</p> <p><u>Electromagnetism Delta Science Readers Pages 8-13</u></p> <p><u>Electrical Connections Delta Science Readers Pages 13-15</u></p>

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
There are no benchmarks for this standard for this Grade/Course.		

GRADE 7

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.1.1 Design and safely conduct a scientific investigation to answer a question or test a hypothesis.	<p>Diversity of Life Investigation 9, Part 2 Pages 278-285</p> <p>Earth History Investigation 5, Part 2 Pages 179-182</p> <p>Electronics Investigation 9, Part 2 Pages 290-297</p> <p>Force and Motion Investigation 3, Part 1 Pages 111-118</p> <p>Human Brain and Senses Investigation 7, Parts 1-2 Pages 210-225</p> <p>Planetary Science Investigation 5, Parts 2-3 Pages 158-167</p> <p>Populations & Ecosystems Investigation 6, Parts 1-2 Pages 179-190</p> <p>Weather and Water Investigation 2, Part 1 Pages 69-75</p>	<p>Matter and Change Activity 12, Pages 99-104</p> <p>Newton's Toy Box Activity 8 Pages 55-59</p> <p>Plants in Our World Activity 3, Pages 35-40</p> <p>Electrical Connections Activity 10, Pages 81-88</p>
7.1.2 Explain the importance of replicable trials.	<p>FOSS provides the opportunity to address this benchmark. See below:</p> <p>Diversity of Life Investigation 9, Part 2 Pages 278-285</p> <p>Electronics Investigation 8, Part 2 Pages 256-260</p> <p>Force and Motion Investigation 7, Part 1 Pages 256-262</p> <p>Human Brain and Senses Investigation 6, Part 1 Pages 186-192</p> <p>Planetary Science Investigation 5, Parts 2-3 Pages 158-167</p> <p>Populations & Ecosystems Investigation 6, Parts 1-3 Pages 179-197</p>	<p>DSM provides the opportunity to address this benchmark. See below:</p> <p>Matter and Change Act. 1 Sci. Challenge Pg 19 Activity 11, Pages 93-97</p> <p>Newton's Toy Box Activity 7, Pages 49-54</p> <p>Plants in Our World Activity 3, Pages 35-40 Act. 4 Sci. Challenge Pg 47</p> <p>Earth Processes Activity 10, Pages 89-95</p>

	Weather and Water investigation 2, Part 1 Pages 69-75	
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Topic: Scientific Knowledge

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.1.3 Explain the need to revise conclusions and explanations based on new scientific evidence.	FOSS provides the opportunity to address this benchmark. See below: Diversity of Life Investigation 9, Part 2 Pages 278-285 Force and Motion Investigation 1, Parts 1-2 Pages 47-62 Human Brain and Senses Investigation 6, Part 1 Pages 186-192 Planetary Science Investigation 5, Parts 2-4 Pages 158-173 Chemical Interactions Activity 8, Part 1 Pages 248-255 Populations & Ecosystems Investigation 6, Part 1 Pages 179-186 Weather and Water Investigation 7, Parts 1-2 Pages 232-244 <u>Earth History Resources</u> Pages 73-75 <u>Electronics Resources</u> Page 4	DSM provides the opportunity to address this benchmark. See below: Astronomy Activity 8, Pages 77-83 Matter and Change Activity 4 Science Ext. Pg 14 DNA – From Genes to Proteins Act. 1 Science Challenge P 17 Earth, Moon, and Sun Act. 3 Science Challenge P 35 Earth Processes Activity 1 Science Ext. Pg 21 Plants in Our World Activity 12 Sci/Health Pg 107

Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Science, Science, Technology and Society

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.2.1 Explain the use of reliable print and electronic sources to provide scientific information and evidence.	Earth History Investigation 2, Part 1 Pages 60-63 Human Brain and Senses Investigation 9, Part 2 Pages 270-275 Force and Motion Investigation 6, Part 4 Pages 242-245 Planetary Science Investigation 10, Part 2 Pages 318-322 Populations & Ecosystems Investigation 7 Pages 210-215 Weather and Water	Astronomy Act. 12 Sci. Challenge Pg 118 Matter and Change Act. 6 Sci/Sco Studies Pg 61 DNA – From Genes to Proteins Activity 8 Science Ext. Pg 75 Earth, Moon, and Sun Activity 3 Connections P 35 Earth Processes Activity 1 Connections Pg 21 Electrical Connections Activity 1, Science/Tech Pg 19 Newton’s Toy Box Act. 5 Sci/Soc Studies Pg 43 Plants in Our World

	Investigation 1, Part 2 #3 Page 55 Diversity of Life CD-Rom 'Cells and the Ribbon of Life'	Activity 7 Connections Pg 71
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Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment.

Topic: Cycles of Matter and Energy

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.3.1 Explain how energy moves through food webs, including the roles of photosynthesis and cellular respiration.	Populations and Ecosystems Investigation 5, Parts 1-4 Pages 142-169 <u><i>Diversity of Life Resources</i></u> Pages 28, 36-37	Plants in Our World Activities 8-11, Pages 73-102 <u><i>Plants in Our World Delta Science Readers</i></u> Pages 2-4 <u><i>DNA-From Genes to Proteins Delta Science Readers</i></u> Pages 10-11

Topic: Interdependence

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.3.2 Explain the interaction and dependence of organisms on one another.	Populations & Ecosystems Investigation 4, Part 2 Pages 122-129 <u><i>Diversity of Life Resources</i></u> Pages 42, 46-50, 55, 60-70 <u><i>Earth History Resources</i></u> Pages 64-67 <u><i>Planetary Science Resources</i></u> Pages 67-68	Plants in Our World Activity 11, Pages 95-102 <u><i>Plants in Our World Delta Science Readers</i></u> Pages 2-4 <u><i>DNA-From Genes to Proteins Delta Science Readers</i></u> Pages 10-11
7.3.3 Explain how biotic and abiotic factors affect the carrying capacity and sustainability of an ecosystem.	Populations & Ecosystems Investigation 6, Parts 1-3 Pages 179-197 <u><i>Diversity of Life Resources</i></u> Pages 46-50, 61-64 <u><i>Earth History Resources</i></u> Pages 64-67 <u><i>Planetary Science Resources</i></u> Pages 67-68 <u><i>Weather and Water Resources</i></u> Pages 45-47	

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS – Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Topic: Cells, Tissues, Organs, and Organ Systems

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.4.1 Describe the cell theory.	Diversity of Life Investigation 4, Parts 1-2 Pages 133-136 Populations & Ecosystems Investigation 9, Part 2 Pages 267-273 <u><i>Diversity of Life Resources</i></u> <i>Pages 27-30</i>	DNA-From Genes to Proteins Activities 3-5, Pages 25-49 Plants in Our World Activity 1, Pages 13-26 <u><i>Plants in Our World Delta Science Readers Page 2</i></u> <u><i>DNA-From Genes to Proteins Delta Science Readers Pages 2-14</i></u>
7.4.2 Describe the basic structure and function of various types of cells.	Diversity of Life Investigation 3, Parts 1-3 Pages 102-122 Populations & Ecosystems Investigation 9, Part 2 Pages 267-273 <u><i>Diversity of Life Resources</i></u> <i>Pages 8-9, 27-30</i> <u><i>Human Brain and Senses Resources</i></u> <i>Pages 60-62</i> Diversity of Life CD-Rom 'Cells and the Ribbon of Life'	DNA-From Genes to Proteins Activity 11, Pages 95-100 Plants in Our World Activity 1, Pages 13-26 <u><i>Plants in Our World Delta Science Readers Page 2</i></u> <u><i>DNA-From Genes to Proteins Delta Science Readers Pages 2-9</i></u>
7.4.3 Describe the levels of organizations in organisms.	Diversity of Life Investigation 4, Parts 1-2 Pages 133-136 Populations & Ecosystems Investigation 9, Part 2 Pages 267-273 <u><i>Human Brain and Senses Resources</i></u> <i>Pages 55-78</i> Diversity of Life CD-Rom 'Cells and the Ribbon of Life'	DNA-From Genes to Proteins Activities 3-5, Pages 25-49 Plants in Our World Activity 1-2, Pages 13-33 <u><i>Plants in Our World Delta Science Readers Pages 2, 13-19</i></u> <u><i>DNA-From Genes to Proteins Delta Science Readers Pages 2-3, 6</i></u>

Topic: Classification

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.4.4 Classify organisms according to their degree of relatedness.	Diversity of Life Investigation 10, Part 1 Pages 302-309 <u><i>Diversity of Life Resources</i></u> <i>Pages 55-56, 65-69</i> Diversity of Life CD-Rom 'Snails' Populations & Ecosystems CD-Rom 'Organism Database'	

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON- Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Topic: Heredity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.5.1 Differentiate between sexual and asexual reproduction.	<u>Diversity of Life Resources</u> Pages 26, 41-44, 53-54 <u>Populations and Ecosystems Resources</u> Pages 53-54	<u>Plants in Our World Delta Science Readers</u> Pages 6-7, 10, 12, 17, 19-20 <u>DNA-From Genes to Proteins Delta Science Readers</u> Pages 14, 18
7.5.2 Describe how an inherited trait can be determined by one or more genes which are found on chromosomes.	Populations & Ecosystems Investigation 9, Parts 1-4 Pages 262-291 <u>Populations & Ecosystems Resources</u> Pages 46-55	DNA-From Genes to Proteins Activities 10, Pages 87-94 <u>DNA-From Genes to Proteins Delta Science Readers</u> Pages 15-20
7.5.3 Explain that small differences between parents and offspring could produce descendants that look very different from their ancestors.	Populations & Ecosystems Investigation 9, Parts 2-4 Pages 262-291 <u>Populations & Ecosystems Resources</u> Pages 46-55	DNA-From Genes to Proteins Act. 2 Science Challenge P 24 <u>DNA-From Genes to Proteins Delta Science Readers</u> Pages 16-17, 19

Topic: Unity and Diversity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.5.4 Analyze how organisms' body structures contribute to their ability to survive and reproduce.	Populations & Ecosystems Investigation 8, Parts 1-2 Pages 228-243 Diversity of Life Investigation 8, Parts 1, 3 Pages 239-243, 253-260 <u>Human Brain and Senses Resources</u> Pages 40-42	DNA-From Genes to Proteins Activities 3-5, Pages 25-14 Plants in Our World Activity 2, 4, Pages 27-33, 41-47 <u>Plants in Our World Delta Science Readers</u> Pages 6-9, 11-12, 14-16, 18-19 <u>DNA-From Genes to Proteins Delta Science Readers</u> Page 19

Topic: Biological Evolution

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.5.5 Explain how fossils provide evidence that life and environmental conditions have changed over time.	Earth History Investigation 7, Parts 1-2 Pages 234-244	Earth Processes Activity 1, 4, Pages 13-21, 39-46 <u>Earth Processes Delta Science Readers</u> Pages 4, 22

Topic: Unity and Diversity

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
7.5.6 Explain why variation(s) in a species' gene pool contributes to its survival in a constantly changing environment.	Populations & Ecosystems Investigation 10, Parts 1-3 Pages 302-318 <i>Populations & Ecosystems Resources Pages 56-61</i>	

Strand: Physical, Earth and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
There are no benchmarks for this standard for this Grade/Course.		

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION - Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
There are no benchmarks for this standard for this Grade/Course.		

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
There are no benchmarks for this standard for this Grade/Course.		

GRADE 8

Strand: The Scientific Process

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION – Discover, invent, and investigate using the skills necessary to engage in the scientific process.

Topic: Scientific Inquiry

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.1.1 Determine the link(s) between evidence and the conclusion(s) of an investigation.	<p>Diversity of Life Investigation 6, Part 1 Pages 186-192</p> <p>Earth History Investigation 1, Parts 1-2 Pages 39-49</p> <p>Electronics Investigation 9, Part 2 Pages 290-297</p> <p>Force and Motion Investigation 2, Part 3 Pages 89-99</p> <p>Human Brain and Senses Investigation 7, Parts 1-2 Pages 210-225</p> <p>Planetary Science Investigation 5, Parts 1-7 Pages 154-184</p> <p>Populations & Ecosystems Investigation 6, Parts 1-2 Pages 179-190</p> <p>Weather and Water Investigation 2, Part 1 Pages 69-75</p>	<p>Astronomy Activity 2, Pages 23-30</p> <p>Matter and Change Activity 6, Pages 53-61</p> <p>Earth, Moon, and Sun Activity 9, Pages 81-92</p> <p>Earth Processes Activity 1, Pages 13-21</p> <p>Electrical Connections Activity 11, Pages 89-94</p> <p>Newton's Toy Box Activity 11, Pages 73-77</p> <p>Plants in Our World Activity 10, Pages 87-93</p>
8.1.2 Communicate the significant components of the experimental design and results of a scientific investigation.	<p>Diversity of Life Investigation 9, Parts 2-3 Pages 272-290</p> <p>Electronics Investigation 6, Part 4 Pages 201-209</p> <p>Force and Motion Investigation 5, Part 4 Pages 194-201</p> <p>Human Brain and Senses Investigation 7, Part 2 Pages 219-225</p> <p>Planetary Science Investigation 5, Parts 2-3 Pages 158-167</p> <p>Populations & Ecosystems Investigation 3, Parts 1-3 Pages 90-108</p> <p>Weather and Water Investigation 2, Part 1 Pages 69-75</p>	<p>Matter and Change Activity 12, Pages 99-104</p> <p>Newton's Toy Box Activity 3, Pages 25-31</p> <p>Earth Processes Activity 7, Pages 63-69</p> <p>Electrical Connections Activity 13, Pages 101-106</p> <p>Newton's Toy Box Activity 8, Pages 55-59</p> <p>Plants in Our World Activity 10, Pages 87-93</p>

Standard 2: The Scientific Process: NATURE OF SCIENCE – Understand that science, technology, and society are interrelated.

Topic: Science, Science, Technology and Society

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.2.1 Describe significant relationships among society, science, and technology and how one impacts the other.	<u><i>Diversity of Life Resources</i></u> Pages 65-70 <u><i>Earth History Resources</i></u> Pages 64-66 <u><i>Electronics Resources</i></u> Pages 18-21, 34-36 <u><i>Force and Motion Resources</i></u> Pages 70-74 <u><i>Human Brain and Senses Resources</i></u> Pgs 31-35, 49 <u><i>Planetary Science Resources</i></u> Pages 52-53, 90-96 <u><i>Populations & Ecosystems Resources</i></u> P 8-13, 28-29 <u><i>Weather & Water Resources</i></u> Pages 45-47, 63-66	Astronomy Activity 5, Pages 53-60 Matter and Change Act.13 Sci., Tech, & Soc. P 109 DNA-From Genes to Proteins Activity 13, Pages 109-116 Earth, Moon, and Sun Activity 13, Pages 121-129 Earth Processes Activity 9, Pages 81-87 Electrical Connections Act. 9 Sci., Tech, & Soc. P 80 Newton’s Toy Box Act. 8 Sci., Tech, & Soc. P 59 Plants in Our World Activity 12, Pages 103-107

Topic: Unifying Themes and Concepts

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.2.2 Describe how scale and mathematical models can be used to support and explain scientific data.	Diversity of Life Investigation 10, Part 2 Pages 310-316 Earth History Investigation 6, Parts 3-4 Pages 215-224 Electronics Investigation 8, Part 4 Pages 265-271 Force and Motion Investigation 7, Part 3 Pages 267-272 Human Brain and Senses Investigation 5, Part 4 Pages 169-176 Planetary Science Investigation 6, Parts 2-3 Pages 197-205 Populations & Ecosystems Investigation 6, Part 1 Pages 179-186 Weather and Water Investigation 3, Part 3 Pages 103-112	Astronomy Activity 11, Pages 101-109 Matter and Change Activity 5, Pages 45-51 DNA-From Genes to Proteins Activity 10, Pages 87-94 Earth, Moon, and Sun Activity 3, Pages 29-35 Earth Processes Activity 9, Pages 81-87 Electrical Connections Activity 6, Pages 51-58 Newton’s Toy Box Activity 5 Science Ext. Pg 43 Plants in Our World Activity 10 Science/Math P 93

Strand: Life and Environmental Sciences

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT – Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment.

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
There are no benchmarks for this standard for this Grade/Course.		

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS – Understand the structures and functions of living organisms and how organisms can be compared scientifically.

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
There are no benchmarks for this standard for this Grade/Course.		

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTON- Understand genetics and biological evolution and their impact on the unity and diversity of organisms.

Topic: Biological Evolution

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.5.1 Describe how changes in the physical environment affect the survival of organisms.	Populations & Ecosystems Investigation 6, Part 2 Pages 187-190 <i>Diversity of Life Resources</i> Pages 29-31 <i>Earth History Resources</i> Pages 57, 64-67 <i>Planetary Science Resources</i> Pages 67-68	Plants in Our World Activity 3, Pages 35-40

Strand: Physical, Earth and Space Sciences

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY- Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe.

Topic: Waves

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.6.1 Explain the relationship between the color of light and wavelength within the electromagnetic spectrum.	<i>Electronics Resources</i> Pages 23-24 <i>Planetary Science Resources</i> Page 99	

8.6.2 Explain how seismic waves provide scientists with information about the structure of Earth's interior.	<u><i>Earth History Resources P 98</i></u>	Earth Processes Activity 8, Pages 71-79 <u><i>Earth Processes Delta Science Reader Page 9</i></u>
8.6.3 Identify the characteristics and properties of mechanical and electromagnetic waves.	<u><i>Electronics Resources Pages 23-24</i></u> <u><i>Planetary Science Resources Page 99</i></u>	

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION - Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic.

Topic: Forces of the Universe

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.7.1 Explain that every object has mass and therefore exerts a gravitational force on other objects.	Force and Motion Investigation 7, Parts 1-3 Pages 256-272 <u><i>Planetary Science Resources Pages 69-70, 84-89</i></u> <u><i>Weather & Water Resources Pages 48-52</i></u>	Newton's Toy Box Activity 2, Pages 19-23 Earth, Moon and Sun Investigation 12, Pages 111-119 <u><i>Newton's Toy Box Delta Science Reader Page 4</i></u> <u><i>Earth, Moon and Sun Delta Science Reader Pages 5, 16-17</i></u>

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE - Understand the Earth and its processes, the solar system, and the universe and its contents.

Topic: Earth Materials

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.8.1 Compare the characteristics of the three main types of rocks.	Earth History Investigation 4, Parts 5-6 Pages 150-162 Investigation 8, Parts 1-3 Pages 254-270	Earth Processes Activities 4-6, Pages 39-62 <u><i>Earth Processes Delta Science Reader Pages 16-18</i></u>
8.8.2 Illustrate the rock cycle and explain how igneous, metamorphic, and sedimentary rocks are formed.	<u><i>Earth History Resources Pages 93-97</i></u>	Earth Processes Activities 4-6, Pages 39-62 <u><i>Earth Processes Delta Science Reader Pages 16-18</i></u>

Topic: Earth in the Solar System

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.8.3 Describe how the Earth's motions and tilt on its axis affect the seasons and weather patterns.	Weather and Water Investigation 3, Parts 1-3 Pages 93-112	Astronomy Activity 5, Pages 51-60 Earth, Moon, and Sun Activities 8-9, Pages 71-92 <u><i>Earth, Moon and Sun Delta Science Reader Page 11</i></u>

Topic: Forces that Shape the Earth

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.8.4 Explain how the sun is the major source of energy influencing climate and weather on Earth.	Weather and Water Investigation 3, Parts 1-3 Pages 93-110 Investigation 9, Part 3 Pages 311-314 <u>Weather & Water Resources</u> Pages 12-19, 53-55	Astronomy Activity 5, Pages 51-60 Earth, Moon, and Sun Activities 8-9, Pages 71-92 <u>Earth, Moon and Sun Delta</u> <u>Science Reader</u> Pages 6, 11
8.8.5 Explain the concepts of continental drift and plate tectonics.	<u>Earth History Resources</u> Pages 100-103	Earth Processes Activity 1, Pages 13-21 Activity 14, Pages 121-129 <u>Earth Processes Delta</u> <u>Science Reader</u> Pages 2-8
8.8.6 Explain the relationship between density and convection currents in the ocean and atmosphere.	Weather and Water Investigation 5, Parts 1-3 Pages 152-174 <u>Weather & Water Resources</u> Pages 31-33, 53-55	Earth Processes Activities 11-13, Pages 97-120
8.8.7 Describe the physical characteristics of oceans.		Earth, Moon, and Sun Activity 12, Pages 111-119 <u>Earth, Moon and Sun Delta</u> <u>Science Reader</u> Pages 16-17

Topic: The Universe

Benchmark	FOSS Investigation & Page Number(s)	DSM Activity & Page Number(s)
8.8.8 Describe the composition of objects in the galaxy.	Planetary Science Investigation 10, Parts 1-3 Pages 312-324	Astronomy Activities 10-11, Pages 93-108 <u>Astronomy Delta Science</u> <u>Reader</u> Pages 11-15
8.8.9 Explain the predictable motions of the Earth and moon.	Planetary Science Investigation 3, Parts 1-3 Pages 89-103 Investigation 4, Part 1 Pages 120-125 Weather and Water Investigation 3, Part 2 Pages 97-102	Astronomy Activity 2, Pages 23-30 Earth, Moon, and Sun Activities 10-11, Pages 93-109 <u>Earth, Moon and Sun Delta</u> <u>Science Reader</u> Pages 8-19
8.8.10 Compare the characteristics and movement patterns of the planets in our solar system.	Planetary Science Investigation 10, Parts 1-3 Pages 312-324	Astronomy Activity 6, Pages 61-68 Earth, Moon, and Sun Activity 4, Pages 37-44 <u>Astronomy Delta Science</u> <u>Reader</u> Pages 2-7 <u>Earth, Moon and Sun Delta</u> <u>Science Reader</u> Pages 2-3, 21-23
8.8.11 Describe the major components of the universe.	Planetary Science Investigation 10, Parts 1-3 Pages 312-324 <u>Planetary Science Resources</u> Pages 83-89, 97-103	Astronomy Activity 11, Pages 101-108 <u>Astronomy Delta Science</u> <u>Reader</u> Pages 2-15 <u>Earth, Moon and Stars Delta</u> <u>Science Reader</u> Pages 2-4
8.8.12 Describe the role of	<u>Planetary Science Resources</u>	Newton's Toy Box

<p>gravitational force in the motions of planetary systems.</p>	<p><i>Pages 70, 84-89</i> <u><i>Force & Motion Resources</i></u> <i>Pages 67-69</i></p>	<p>Activity 5, Pages 39-43 <u><i>Newton's Toy Box Delta</i></u> <i>Science Reader Page 23</i> <u><i>Astronomy Delta Science</i></u> <i>Reader Page 3</i> <u><i>Earth, Moon and Sun Delta</i></u> <i>Science Reader Page 5</i></p>
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