



FOSS Full Option Science System
(FOSS™)
Grades K-8

Correlation to

**Illinois
Learning Standards
For Science**



Correlation of the Illinois Learning Standards for Science To Full Option Science System

The following is a correlation of the Early Elementary, Late Elementary and Middle/Junior High portions of the Illinois Learning Standards for Science to Full Option Science System (FOSS). This correlation cites *representative* examples of investigations and activities from the FOSS program that address the standards and their benchmarks. A citation does not reflect *all* of the investigations or activities from FOSS that might address a particular benchmark.

The examples of FOSS investigations cited below for the Middle/Junior High Benchmarks are from modules developed for grades 5-6 and from the FOSS Middle School Science Program. Note: If Grade 6 is included in the Late Elementary benchmark, some FOSS Middle School modules might be appropriate at that level as well. However, in this correlation, FOSS Middle School modules are cited only in the Middle/Junior High Benchmark column.

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STATE GOAL 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.

As a result of their schooling students will be able to:

Learning Standard A. Know and apply the concepts, principles and processes of scientific inquiry.

Benchmarks – Early Elementary	FOSS Activities/ Investigations	Benchmarks – Late Elementary	FOSS Activities/ Investigations	Benchmarks – Middle/Junior High	FOSS Activities/ Investigations
<p>11.A.1a Describe an observed event</p>	<p><u>Animals Two by Two</u> Investigation 1, Part 2, Pages 17-21 <u>Fabric</u>, Investigation 1, Part 4, Pages 20-22 <u>Trees</u>, Investigation 3, Part 7, Pages 29-31 <u>Wood & Paper</u>, Inv. 1, Part 3, Pages 20-23 <u>Air and Weather</u>, Investigation 2, Parts 1-4, Pages 8-27 <u>Air and Weather FOSS Science Stories</u>, P18-23 <u>Balance and Motion</u>, Investigation 1, Part 3, Pages 19-23 <u>Balance and Motion FOSS Science Stories</u>, pages 10-13, 24-31 <u>Insects</u>, Investigation 1, Parts 2-3, Pages 16-25 <u>Insects FOSS Science Stories</u>, Pages 22-33 <u>New Plants</u>, Inv. 1, Part 3, Pages 23-30 <u>New Plants FOSS Science Stories</u>, P12-21 <u>Pebbles, Sand, and Silt</u>, Investigation 4, Part 1,</p>	<p>11.A.2a Formulate questions on a specific science topic and choose the steps needed to answer the questions.</p>	<p><u>Earth Materials</u>, Investigation 3, Part 2, Pages 14-19 <u>Magnetism & Electricity</u>, Investigation 3, Part 2, Pages 16-21 <u>Matter and Energy</u> Investigation 3, Part 2, Pages 139-150 <u>Structures of Life</u>, Inv. 3, Part 4, Pages 24-30 <u>Sun, Moon and Stars</u> Investigation 1, Pars 1-2, Pages 42-64 <u>Living Systems</u> Investigation 2, Part 1, Pages 85-98 <u>Environments</u>, Investigation 6, Part 3, Pages 18-22 <u>Food and Nutrition</u>, Investigation 4, Part 2, Pages 16-20 <u>Landforms</u>, Investigation 3, Part 3, Pages 20-24 <u>Levers and Pulleys</u>, Investigation 4, Part 3, Pages 21-25 <u>Mixtures and Solutions</u>, Investigation 4, Part 4,</p>	<p>11.A.3a Formulate hypotheses that can be tested by collecting data.</p>	<p><u>Environments</u>, Inv. 5, Part 3, Pages 19-22 <u>Food & Nutrition</u>, Inv. 2, Parts 2-3, Pages 18-25 <u>Mixtures and Solutions</u>, Investigation 1, Part 4, Pages 25-29 <u>Models and Designs</u>, Investigation 4, Science Extension #1, Page 23 <u>Solar Energy</u>, Inv. 4, Parts 2-3, Pages 20-28 <u>Living Systems</u> Investigation 3, Part 3, Pages 136-141 <u>Variables</u>, Investigation 3, Part 3, Pages 20-23 <u>Variables FOSS Science Stories</u>, Pages 1-3 <u>Chemical Interactions</u>, Investigation 5, Part 1, Pages 153-158 <u>Diversity of Life</u>, Inv. 6, Parts 1-3, Pages 173-203 <u>Earth History</u>, Inv. 8, Part 2, Pages 259-265 <u>Electronics</u>, Inv. 3, Parts 2-3, Pages 124-132 <u>Force and Motion</u>, Inv. 5, Part 2, Pages 177-186</p>

	<p>Pages 8-14 <u>Solids & Liquids</u>, Inv. 4, Part 1, Pages 7-16 <u>Solids & Liquids FOSS Science Stories</u>, P14-23 <u>Insects and Plants</u> Investigation 5, Parts 1-3, Pages 206-225 <u>Plants and Animals</u> Investigation 1, Parts 1-2, Pages 47-62</p>		<p>Pages 25-28 <u>Models and Designs</u>, Investigation 4, Part 3, Pages 16-20 <u>Solar Energy</u>, Investigation 4, Part 4, Pages 29-33 <u>Variables</u>, Inv. 4, Part 4, Pages 24-28</p>		<p><u>Planetary Science</u>, Investigation 5, Parts 1-3, Pages 154-167 <u>Populations & Ecosystems</u> Investigation 6, Part 1, Pages 179-186 <u>Weather & Water</u>, Inv. 2, Part 1, Pages 69-75</p>
<p>11.A.1b Develop questions on scientific topics.</p>	<p><u>Animals Two by Two</u> Investigation 1, Part 1, Pages 10-16 <u>Fabric</u> Investigation 1, Part 1, Pages 6-11 <u>Trees</u> Investigation 1, Part 1, Pages 7-14 <u>Wood and Paper</u> Investigation 1, Part 1, Pages 8-14 <u>Wood and Paper FOSS Science Stories</u>, Page 9 <u>Air and Weather</u>, Investigation 1 Science Extension #1, Page 39 <u>Balance and Motion</u>, Investigation 1 Science Extension #7, Page 32 <u>Insects</u>, Investigation 1, Part 1, Pages 8-15 <u>New Plants</u>, Investigation 1 Science Extension #3, Page 32 <u>Pebbles, Sand, and Silt</u>, Investigation 1, Part 4, Pages 22-25 <u>Solids and Liquids</u>, Investigation 1, Part 1, Pages 8-16</p>	<p>11.A.2b Collect data for investigations using scientific process skills including observing, estimating and measuring.</p>	<p><u>Earth Materials</u>, Investigation 1, Part 1, Pages 8-16 <u>Human Body</u>, Investigation 4, Part 2, Pages 17-20 <u>Magnetism & Electricity</u>, Investigation 1, Part 3, Pages 23-29 <u>Measurement</u>, Inv. 2, Part 3, Pages 18-21 <u>Physics of Sound</u>, Investigation 2 Parts 1-3, Pages 8-24 <u>Sun, Moon and Stars</u> Investigation 2, Part 2, Pages 89-100 <u>Matter and Energy</u> Investigation 3, Part 2, Pages 139-150 <u>Structures of Life</u>, Inv. 3, Part 4, Pages 24-30 <u>Water</u>, Investigation 3, Part 2, Pages 12-16 <u>Water Planet</u> Investigation 3, Part 1, Pages 125-135 <u>Living Systems</u> Investigation 2, Part 1, Pages 85-98 <u>Environments</u>,</p>	<p>11.A.3b Conduct scientific experiments that control all but one variable.</p>	<p><u>Environments</u>, Inv. 6, Parts 1-2, Pages 8-17 <u>Food & Nutrition</u>, Inv. 2, Part 2-3, Pages 18-25 <u>Levers & Pulleys</u>, Inv. 1, Parts 2-3, Pages 18-28 <u>Mixtures and Solutions</u>, Investigation 2, Part 3, Pages 21-25 <u>Solar Energy</u>, Investigation 3, Parts 1-2, Pages 8-23 Variables, Investigation 1, Part 2, Pages 16-22 Variables FOSS Science Stories, Pages 1-3 <u>Water Planet</u> Investigation 2, Parts 2-3, Pages 86-100 <u>Chemical Interactions</u>, Investigation 1, Part 2, Pages 46-58 <u>Diversity of Life</u>, Inv. 9, Part 2, Pages 278-285 <u>Earth History</u>, Inv. 8, Part 2, Pages 259-265 <u>Electronics</u>, Inv. 2, Part 1, Pages 89-93 <u>Force & Motion</u>, Inv. 7, Part 3, Pages 267-272 <u>Human Brain and Senses</u>,</p>

	<p>Solids and Liquids FOSS Science Stories, Pages 22- 23 Insects and Plants Investigation 1, Part 1, pp. 52-61 Plants and Animals Investigation 1, Part 2, Pages 58-62</p>		<p>Investigation 4, Part 2, Pages 13-19 Food and Nutrition, Investigation 1, Parts 1-2, Pages 1-22 Levers and Pulleys, Investigation 4, Part 1, Pages 8-13 Mixtures and Solutions, Investigation 3, Part 2, Pages 15-20 Solar Energy, Investigation 1, Part 2, Pages 14-23 Variables, Investigation 1, Parts 1-3, Pages 8-27</p>		<p>Inv. 6, Part 1, Pgs 186-192 Planetary Science, Inv. 5, Parts 1-3, Pages 154-167 Populations & Ecosystems Inv. 6, Part 2, Pgs 187-190 Weather & Water, Inv. 4, Part 1, Pages 121-130</p>
<p>11.A.1c Collect data for investigations using measuring instruments and technologies.</p>	<p>Animals Two by Two, Investigation 3 Math Extension #1, Page 21 Trees, Investigation 3, Part 9, Pages 35-38 Air and Weather, Investigation 2, Parts 1-4, Pages 8-27 New Plants, Investigation 2, Part 3, Page 20-28 Solids and Liquids, Investigation 1 Math Extension #3, 4, Pgs 27 Plants and Animals Investigation 1, Part 3, pp. 63-72</p>	<p>11.A.2c Construct charts and visualizations to display data.</p>	<p>Earth Materials, Inv. 2, Part 2, Pages 14-21 Human Body, Inv. 4 Math Ext. #2, Page 31 Ideas and Inventions, Inv. 2, Part 1, Pgs 8-15 Magnetism & Electricity, Investigation 1, Part 3, Pgs 23-29 Measurement, Inv. 2, Part 3, Pages 18-21 Physics of Sound, Inv. 2 Math Ext. #1, Pgs 25-27 Sun, Moon and Stars Investigation 2, Part 2, pp. 89-100 Matter and Energy Investigation 3, Parts 2-3, Pages 139-160 Structures of Life, Inv. 2, Part 3, Pages 18-22 Water, Investigation 3, Part 2, Pages 12-16 Environments, Inv. 6, Part 2, Pages 14-17</p>	<p>11.A.3c Collect and record data accurately using consistent measuring and recording techniques and media.</p>	<p>Environments, Inv. 6, Part 2, Pages 14-17 Food & Nutrition, Inv. 2, Parts 1-3, Pages 8-25 Levers & Pulleys, Inv. 1, Part 2, Pages 18-23 Mixtures and Solutions, Investigation 3, Parts 1-3, Pgs 8-24 Solar Energy, Inv. 2, Part 2, Pages 16-24 Water Planet Investigation 3, Part 1, Pages 125-135 Variables, Investigation 4, Parts 1-2, Pages 8-17 Variables FOSS Science Stories, Pages 1-7 Chemical Interactions, Inv. 3, Part 1, Pgs 92--98 Diversity of Life, Inv. 6, Parts 1-3, Pages 173-203 Earth History, Inv. 4, Part 3, Pages 138-146 Electronics, Inv. 8, Parts 1-</p>

			<p>Food & Nutrition, Inv. 1, Part 2, Pages 16-20 <u>Landforms</u>, Inv. 4, Part 1, Pages 8-15 <u>Water Planet</u> Investigation 3, Part 1, Pages 125-135 <u>Living Systems</u> Investigation 2, Part 1, Pages 85-95 <u>Levers & Pulleys</u>, Inv. 3, Parts 1-2, Pages 8-20 <u>Mixtures and Solutions</u>, Investigation 2, Part 1, Pages 8-15 <u>Solar Energy</u>, Inv. 2, Part 2, Pages 16-24 <u>Variables</u>, Inv. 2, Parts 1-3, Pages 8-23</p>		<p>4, Pages 250-271 <u>Force & Motion</u>, Inv. 7, Part 3, Pages 267-272 <u>Human Brain and Senses</u>, Investigation 4, Parts 1-3, Pages 120-143 <u>Planetary Science</u>, Inv. 5, Parts 1-3, Pages 154-167 <u>Populations & Ecosystems</u> Inv. 8, Part 2, Pgs 234-243 <u>Weather & Water</u>, Inv. 1, Part 2, Pages 48-56</p>
<p>11.A.1d Record and store data using available technologies.</p>	<p><u>Animals Two by Two</u>, Investigation 3 math Extension #1, Page 21 <u>Fabric</u>, Investigation 2, Part 4, Pages 22-25 <u>Trees</u>, Investigation 2 Math Extension Page 29 <u>Air and Weather</u>, Investigation 2, Parts 1-4, Pages 8-27 <u>New Plants</u>, Investigation 2, Part 3, Page 20-28 <u>Plants and Animals</u> Investigation 1, Part 3, Pages 63-72</p>	<p>11.A.2d Use data to produce reasonable explanations.</p>	<p><u>Earth Materials</u>, Inv. 4, Part 1, Pages 8-13 <u>Human Body</u>, Inv. 4, Parts 1-3, Pages 8-24 <u>Magnetism & Electricity</u>, Investigation 4, Part 3, Pages 19-22 <u>Measurement</u>, Inv. 4, Part 1, Pages 8-13 <u>Physics of Sound</u>, Inv 2, Part 2, Pages 13-19 <u>Structures of Life</u>, Inv. 3, Part 4, Pages 24-30 <u>Sun, Moon and Stars</u> Investigation 1, Part 2, Pages 56-64 <u>Matter and Energy</u> Investigation 3, Part 2, Pages 139-150 <u>Water</u>, Investigation 3, Parts 1-3, Pages 8-20 <u>Water Planet</u> Investigation 3, Part 1,</p>	<p>11.A.3d Explain the existence of unexpected results in a data set.</p>	<p><u>Environments</u>, Inv. 2, Parts 2-3, Pages 15-25 <u>Food and Nutrition</u>, Inv. 2, Part 3, Pages 22-25 <u>Levers and Pulleys</u>, Inv. 1, Part 2, Page 21 <u>Mixtures and Solutions</u>, Inv. 2, Part 1, Page 13 <u>Solar Energy</u>, Investigation 2, Math Extension #1, Pages 22-23 <u>Water Planet</u> Investigation 2, Part 2, Pages 86-92 <u>Variables</u>, Inv. 1, Part 2, Pages 16-22 <u>Chemical Interactions</u>, Inv. 6, Pages 178-187 <u>Diversity of Life</u>, Inv. 6, Parts 1-3, Pages 173-203 <u>Electronics</u>, Inv. 5, Part 2, Pages 166-170 <u>Force & Motion</u>, Inv. 3,</p>

<p>11.A.1e Arrange data into logical patterns and describe the patterns.</p>	<p><u>Fabric</u>, Investigation 2, Part 4, Pages 22-25 <u>Trees</u>, Investigation 2 Math Extension Page 29 <u>Air and Weather</u>, Investigation 4, Parts 1-3, Pages 8-24 <u>New Plants</u>, Investigation 1, Part 3, Pages 23-30 <u>Pebbles, Sand and Silt</u>, Investigation 1, Parts 3-4, Pages 18-25 <u>Plants and Animals</u>, Investigation 1, Part 3, Pages 63-72</p>	<p>11.A.2e Report and display the results of individual and group investigations.</p>	<p>Pages 125-135 <u>Living Systems</u> Investigation 2, Part 1, Pages 85-95 <u>Environments</u>, Inv. 5, Parts 1-3, Pages 8-22 <u>Food & Nutrition</u>, Inv. 2, Parts 1-2, Pages 8-21 <u>Levers & Pulleys</u>, Inv. 1, Parts 2-3, Pages 18-28 <u>Mixtures and Solutions</u>, Investigation 3, Parts 1-3, Pages 8-24 <u>Models and Designs</u>, Investigation 1, Part 1, Pages 8-17 <u>Solar Energy</u>, Inv. 2, Parts 1-2, Pages 8-24 <u>Variables</u>, Inv. 4, Part 3, Pages 18-23</p>	<p>11.A.3e Use data manipulation tools and quantitative (e.g., mean, mode, simple equations) and representational methods (e.g., simulations, image processing) to analyze measurements.</p>	<p>Part 1, Pages 111-118 <u>Human Brain and Senses</u>, Investigation 4, Parts 1-3, Pages 120-143 <u>Planetary Science</u>, Inv. 8, Part 3, Pages 260-264 <u>Populations & Ecosystems</u> Investigation 5, Part 1, Pages 142-150 <u>Weather & Water</u>, Inv. 8, Part 3, Pages 271-275</p>
<p>11.A.1e Arrange data into logical patterns and describe the patterns.</p>	<p><u>Fabric</u>, Investigation 2, Part 4, Pages 22-25 <u>Trees</u>, Investigation 2 Math Extension Page 29 <u>Air and Weather</u>, Investigation 4, Parts 1-3, Pages 8-24 <u>New Plants</u>, Investigation 1, Part 3, Pages 23-30 <u>Pebbles, Sand and Silt</u>, Investigation 1, Parts 3-4, Pages 18-25 <u>Plants and Animals</u>, Investigation 1, Part 3, Pages 63-72</p>	<p>11.A.2e Report and display the results of individual and group investigations.</p>	<p>Pages 125-135 <u>Living Systems</u> Investigation 2, Part 1, Pages 85-95 <u>Environments</u>, Inv. 5, Parts 1-3, Pages 8-22 <u>Food & Nutrition</u>, Inv. 2, Parts 1-2, Pages 8-21 <u>Levers & Pulleys</u>, Inv. 1, Parts 2-3, Pages 18-28 <u>Mixtures and Solutions</u>, Investigation 3, Parts 1-3, Pages 8-24 <u>Models and Designs</u>, Investigation 1, Part 1, Pages 8-17 <u>Solar Energy</u>, Inv. 2, Parts 1-2, Pages 8-24 <u>Variables</u>, Inv. 4, Part 3, Pages 18-23</p>	<p>11.A.3e Use data manipulation tools and quantitative (e.g., mean, mode, simple equations) and representational methods (e.g., simulations, image processing) to analyze measurements.</p>	<p><u>Environments</u>, Inv. 6, Math Extensions #2-3, Page 24 <u>Food & Nutrition</u>, Inv. 1, Part 2, Pages 16-20, Math Extension #1, Pages 22-23 <u>Landforms</u>, Investigation 4, Parts 1-3, Pages 8-24 <u>Levers & Pulleys</u>, Inv. 4, Part 2, Pages 14-20 <u>Water Planet</u> Investigation 3, Part 1, Pages 125-135 <u>Mixtures & Solutions</u>, Inv. 2, Math Ext. #1, Pg 30 <u>Models & Designs</u>, Inv. 2, Math Extension, Page 26 <u>Solar Energy</u>, Inv. 2, Math Extension, Pages 26-27 <u>Variables</u>, Investigation 1, Parts 1-3, Pages 8-27 <u>Earth History</u>, Inv. 6 Extending the Experience</p>

			<p>Investigation 3, Part 3, Pages 136-141 <u>Water Planet</u> Investigation 3, Part 1, Pages 125-135 <u>Structures of Life</u>, Investigation 5, Part 4, Pages 25-29 <u>Water</u>, Investigation 4, Part 2, Pages 14-18 <u>Environments</u>, Inv. 5, Part 2, Pages 14-18 <u>Food & Nutrition</u>, Inv. 2, Part 3, Pages 22-25 <u>Landforms</u>, Inv. 3, Part 3, Pages 20-24 <u>Levers & Pulleys</u>, Inv. 2, Part 3, Pages 18-22 <u>Mixtures and Solutions</u>, Investigation 4, Part 4, Pages 25-28 <u>Models and Designs</u>, Inv. 4, Part 2, Pgs 11-15 <u>Solar Energy</u>, Inv. 4, Part 3, Pages 24-28 <u>Variables</u>, Inv. 4, Math Extension #1, Pgs 30-31</p>		<p>#1, Page 225 <u>Electronics</u>, Inv. 2, Extending the Experience #6, #8, Page 109 <u>Force & Motion</u>, Inv. 3, Parts 1-2, Pages 111-123 <u>Human Brain and Senses</u>, Investigation 7, Parts 1-2, Pages 210-225 <u>Planetary Science</u>, Inv. 2, Parts 1-2, Pages 64-77 <u>Populations & Ecosystems</u> Investigation 6, Parts 1-3, Pages 179-197 <u>Weather and Water</u>, Inv. 1, Extending the Experience #3, #7, Pages 55-56</p>
<p>11.A.1f Compare observations of individual and group results.</p>	<p><u>Animals Two by Two</u>, Investigation 2, Part 4, Pages 22-24 <u>Trees</u>, Investigation 2, Part 6, Pages 26-28 <u>Fabric</u>, Investigation 2, Part 2, Pages 22-25 <u>Wood and Paper</u>, Investigation 3, Parts 2-4, Pages 13-25 <u>Wood and Paper FOSS Science Stories</u>, P11-12 <u>Air and Weather</u>, Investigation 3, Part 4, Pages 22-27</p>			<p>11.A.3f Interpret and represent results of analysis to produce findings.</p>	<p><u>Environments</u>, Inv. 5, Part 3, Pages 19-22 <u>Food & Nutrition</u>, Inv. 2, Parts 2-3, Pages 18-25 <u>Landforms</u>, Investigation 3, Part 3, Pages 20-24 <u>Levers & Pulleys</u>, Inv. 1, Part 2, Pages 18-23 <u>Mixtures & Solutions</u>, Inv. 2, Part 3, Pages 20-24 <u>Models & Designs</u>, Inv. 4, Part 2, Pages 11-15 <u>Living Systems</u> Investigation 2, Part 1, Pages 85-98</p>

	<p><u>Balance and Motion</u>, Investigation 1, Part 3, Pages 19-23 <u>New Plants</u>, Investigation 1, Part 3, Pages 23-30 <u>Pebbles, Sand, and Silt</u>, Investigation 4, Part 1, Pages 8-14 <u>Solids and Liquids</u>, Investigation 4, Part 3, Pages 23-27 <u>Plants and Animals</u>, Investigation 1, Part 2, Pages 58-62 <u>Insects and Plants</u>, Investigation 2, Part 3, Pages 105-115</p>				<p><u>Solar Energy</u>, Investigation 4, Part 3, Pages 24-28 <u>Variables</u>, Investigation 1, Parts 1-3, Pages 8-27 <u>Chemical Interactions</u>, Investigation 8, Part 3, Pages 263-268 <u>Diversity of Life</u>, Inv. 6, Parts 1-3 Pages 173-203 <u>Earth History</u>, Inv. 3, Part 1, Pages 88-95 <u>Electronics</u>, Inv. 2, Parts 1-4, Pages 81-110 <u>Force & Motion</u>, Inv. 5, Part 4, Pages 194-201 <u>Human Brain and Senses</u>, Investigation 4, Parts 1-3, Pages 120-143 <u>Planetary Science</u>, Inv. 2, Parts 1-2, Pages 64-77 <u>Populations & Ecosystems</u>, Investigation 6, Parts 1-3, Pages 179-197 <u>Weather & Water</u>, Inv. 4, Part 1, Pages 121-130</p>
				<p>11.A.3g Report and display the process and results of a scientific investigation.</p>	<p><u>Environments</u>, Inv. 6, Part 3, Pages 18-22 <u>Food & Nutrition</u>, Inv. 4, Part 2, Pages 16-20 <u>Landforms</u>, Investigation 5, Part 4, Pages 27-31 <u>Levers & Pulleys</u>, Inv. 4, Part 3, Pages 21-25 <u>Living Systems</u>, Investigation 3, Part 3, Pages 136-141 <u>Water Planet</u>, Investigation 3, Part 1, Pages 125-135 <u>Mixtures & Solutions</u>, Inv. 4, Part 4, Pages 25-28 <u>Models & Designs</u>, Inv. 4,</p>

					Part 3, Pages 16-20 Solar Energy, Inv. 4, Part 4, Pages 29-33 Variables, Investigation 4, Part 4, Pages 24-28 <u>Chemical Interactions</u> , Inv. 4, Part 1, Pgs 122-129 <u>Diversity of Life</u> , Inv. 9, Parts 1-3, Pages 273-289 <u>Earth History</u> , Inv. 8, Part 4, Pages 270-274 <u>Electronics</u> , Inv. 6, Extending the Experience #2, Page 209 Force & Motion, Inv. 8, Part 2, Pages 294-301 <u>Human Brain and Senses</u> , Inv. 9, Part 2, Pgs 270-275 <u>Planetary Science</u> , Inv. 10, Part 2, Pages 303-325 <u>Populations & Ecosystems</u> Investigation 7, P 210-217 <u>Weather & Water</u> , Inv. 8, Part 2, Pages 265-270
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Learning Standard B. Know and apply the concepts, principles and processes of technological design.

Benchmarks – Early Elementary	F OSS Activities/ Investigations	Benchmarks – Late Elementary	F OSS Activities/ Investigations	Benchmarks – Middle/Junior High	F OSS Activities/ Investigations
11.B.1a Given a simple design problem, formulate possible solutions.	<u>Animals Two by Two</u> , Investigation 3, Science Extension #4, Page 23 <u>Wood and Paper</u> , Investigation 5, Parts 1-3, Pages 8-24 <u>Air and Weather</u> , Investigation 3 Art Extension, Page 35 <u>Balance and Motion</u> , Investigation 3, Part 3,	11.B.2a Identify a design problem and propose possible solutions.	<u>Earth Materials</u> , Inv. 3, Part 2, Pages 14-19 <u>Human Body</u> , Inv. 4, Part 1, Pages 8-16 <u>Magnetism & Electricity</u> , Investigation 3, Part 3, Pages 22-26 <u>Measurement</u> , Inv. 3, Part 3, Pages 18-21 <u>Physics of Sound</u> , Investigation 1, Part 2,	11.B.3a Identify an actual design problem and establish criteria for determining the success of a solution.	<u>Levers and Pulleys</u> , Investigation 4, Science Extension #3, Page 28 <u>Models and Designs</u> , Investigation 4, Parts 1-2, Pages 6-15 <u>Solar Energy</u> , Investigation 4, Part 3, Pages 24-28 <u>Chemical Interactions</u> , Investigation 4, Part 1, Pages 122-129

	<p>Pages 19-25 <u>Solids and Liquids</u>, Investigation 1, Part 3, Pages 21-24</p>		<p>Pages 16-20 <u>Structures of Life</u>, Inv. 3, Part 4, Pages 24-30 <u>Water</u>, Investigation 4, Part 2, Pages 14-18 <u>Levers and Pulleys</u>, Investigation 4, Science Extension #3, Page 28 <u>Models and Designs</u>, Investigation 2, Parts 1-3, Pages 8-24 <u>Solar Energy</u>, Inv. 4, Part 3, Pages 24-28</p>		<p><u>Diversity of Life</u> Investigation 6, Part 3, Pages 198-203 <u>Electronics</u>, Investigation 9, Part 2, Pages 290-297 <u>Force and Motion</u>, Investigation 8, Part 2, Pages 294-301 <u>Planetary Science</u>, Inv. 7, Pages 207-238 <u>Weather and Water</u>, Investigation 2, Part 1, Pages 69-75</p>
<p>11.B.1b Design a device that will be useful in solving the problem.</p>	<p><u>Animals Two by Two</u>, Investigation 3, Science Extension #4, Page 23 <u>Air and Weather</u>, Investigation 3 Art Extension Page 35 <u>Balance and Motion</u>, Investigation 3, Part 3, Pages 19-25 <u>Solids and Liquids</u>, Investigation 1, Part 3, Pages 21-24</p>	<p>11.B.2b Develop a plan, design and procedure to address the problem identifying constraints (e.g., time, materials, technology).</p>	<p><u>Earth Materials</u>, Inv. 3, Part 2, Pgs 14-19 <u>Human Body</u>, Inv. 4, Part 1, Pages 8-16 <u>Ideas and Inventions</u>, Inv. 4, Part 4, Pgs 22-25 <u>Magnetism & Electricity</u>, Inv. 4, Part 3, Pgs 19-22 <u>Measurement</u>, Inv. 2, Part 3, Pages 18-21 <u>Physics of Sound</u>, Inv 4, Part 1, Pages 6-15 <u>Structures of Life</u>, Inv. 3, Part 4, Pages 24-30 <u>Water</u>, Investigation 4, Part 2, Pages 14-18 <u>Models and Designs</u>, Investigation 4, Parts 1-2, Pages 6-15 <u>Solar Energy</u>, Inv. 4, Part 3, Pages 24-28</p>	<p>11.B.3b Sketch, propose and compare design solutions to the problem considering available materials, tools, cost effectiveness and safety.</p>	<p><u>Models and Designs</u>, Investigation 4, Part 3, Pages 16-20 <u>Solar Energy</u>, Investigation 4, Part 3, Pages 24-28 <u>Variables</u>, Investigation 4, Part 4, Pages 24-28 <u>Diversity of Life</u>, Investigation 6, Part 3, Pages 198-203 <u>Electronics</u>, Investigation 9, Part 2, Pages 290-297 <u>Force and Motion</u>, Investigation 8, Part 2, Pages 294-301 <u>Planetary Science</u>, Investigation 7, P 207-238 <u>Weather and Water</u>, Investigation 2, Part 1, Pages 69-75</p>
<p>11.B.1c Build the device using the materials and tools provided.</p>	<p><u>Animals Two by Two</u>, Investigation 3, Science Extension #4, Page 23 <u>Wood and Paper</u>, Investigation 5, Part 3, Pages 18-21 <u>Air and Weather</u>, Investigation 3 Art</p>	<p>11.B.2c Build a prototype of the design using available tools and materials.</p>	<p><u>Earth Materials</u>, Inv. 3, Part 2, Pgs 14-19 <u>Ideas and Inventions</u>, Inv. 4, Part 3, Pgs 18-21 <u>Magnetism & Electricity</u>, Inv. 4, Part 3, Pgs 19-22 <u>Measurement</u>, Inv. 2, Part 3, Pages 18-21</p>	<p>11.B.3c Select the most appropriate design and build a prototype or simulation.</p>	<p><u>Levers and Pulleys</u>, Investigation 4, Science Extension #3, Page 28 <u>Models and Designs</u>, Investigation. 4, Parts 1-2, Pages 6-15 <u>Solar Energy</u>, Inv. 4, Part 3, Pages 24-28</p>

	<p>Extension Page 35 <u>Balance and Motion</u>, Investigation 3, Part 3, Pages 19-25 <u>Solids and Liquids</u>, Investigation 1, Part 3, Pages 21-24</p>		<p>Physics of Sound, Inv 4, Part 1, Pages 6-15 <u>Structures of Life</u>, Inv. 3, Part 4, Pages 24-30 <u>Water</u>, Investigation 4, Part 2, Pages 14-18 <u>Levers & Pulleys</u>, Inv. 4, Science Ext. #3, Pg 28 <u>Models & Designs</u>, Inv. 4, Parts 1-2, P 6-15 Solar Energy, Inv. 4, Part 3, Pages 24-28</p>	<p>Diversity of Life, Inv. 6, Part 3, Pages 198-203 <u>Electronics</u>, Inv. 9, Part 2, Pages 290-297 <u>Force & Motion</u>, Inv. 8, Part 2, Pages 294-301 <u>Planetary Science</u>, Inv. 2, Extending the Experience #1, #2, Page 78 <u>Weather and Water</u>, Investigation 2 Part 1 Pages 69-75</p>		<p>Diversity of Life, Inv. 6, Part 3, Pages 198-203 <u>Electronics</u>, Inv. 9, Part 2, Pages 290-297 <u>Force & Motion</u>, Inv. 8, Part 2, Pages 294-301 <u>Planetary Science</u>, Inv. 2, Extending the Experience #1, #2, Page 78 <u>Weather and Water</u>, Inv. 2, Part 1, Pages 69-75</p>
<p>11.B.1d Test the device and record results using given instruments, techniques and measurement methods.</p>	<p>Air and Weather, Investigation 3 Art Extension Page 35 <u>Balance and Motion</u>, Investigation 3, Part 3, Pages 19-25 <u>Solids and Liquids</u>, Investigation 1, Part 3, Pages 21-24</p>	<p>11.B.2d Test the prototype using suitable instruments, techniques and quantitative measurements to record data.</p>	<p>11.B.3d Test the prototype using available materials, instruments and technology and record the data.</p>		<p>11.B.3e Evaluate the test results based on established criteria, note sources of error and recommend improvements.</p>	
<p>11.B.1e Report the design of the device, the test process and the results in solving a given problem.</p>	<p>Air and Weather, Investigation 3 Art Extension Page 35 <u>Balance and Motion</u>, Investigation 3, Part 3, Pages 19-25 <u>Solids and Liquids</u>, Investigation 1, Part 3, Pages 21-24</p>	<p>11.B.2e Assess test results and the effectiveness of the design using given criteria and noting possible sources of error.</p>	<p>11.B.3e Evaluate the test results based on established criteria, note sources of error and recommend improvements.</p>		<p>11.B.3e Evaluate the test results based on established criteria, note sources of error and recommend improvements.</p>	

		<p>11.B.2f Report test design, test process and test results</p>	<p>Investigation 4, Parts 1-2, Pages 6-15 <u>Solar Energy</u>, Inv. 4, Part 3, Pages 24-28 <u>Earth Materials</u>, Inv. 3, Part 2, Pages 14-19 <u>Magnetism & Electricity</u>, Investigation 4, Parts 1-3, Pages 8-22 Investigation 5, Parts 1-2, Pages 8-20 <u>Physics of Sound</u>, Investigation 4, Part 1, Pages 6-15 <u>Water</u>, Investigation 4, Part 2, Pages 14-18 <u>Models and Designs</u>, Investigation 4, Parts 1-2, Pages 6-15 <u>Solar Energy</u>, Investigation 4, Part 3, Pages 24-28</p>	<p>11.B.3f Using available technology, report the relative success of the design based on the test results and criteria.</p>	<p>Extending the Experience #1, #2, Page 78 <u>Weather and Water</u>, Inv. 2, Part 1, Pages 69-75 <u>Models and Designs</u>, Investigation 4, Parts 1-2, Pages 6-15 <u>Solar Energy</u>, Investigation 4, Part 3, Pages 24-28 <u>Diversity of Life</u>, Inv. 6, Part 3, Pages 198-203 <u>Electronics</u>, Investigation 9, Part 2, Pages 290-297 CD-Rom "Workbench" <u>Force and Motion</u>, Investigation 8, Part 2, Pages 294-301 <u>Planetary Science</u>, Inv. 2, Extending the Experience #1, #2, Page 78 <u>Weather and Water</u>, Inv. 2 Part 1, Pages 69-75</p>
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STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

As a result of their schooling students will be able to:

A. Know and apply concepts that explain how living things function, adapt and change.

Benchmarks – Early Elementary	FOSS Activities/ Investigations	Benchmarks – Late Elementary	FOSS Activities/ Investigations	Benchmarks – Middle/Junior High	FOSS Activities/ Investigations
<p>12.A.1a Identify and describe the component parts of living things (e.g., birds have feathers; people have bones, blood, hair, skin) and their major functions.</p>	<p>Animals Two by Two, Inv. 1, Parts 1-4, P10-29 Animals Two by Two FOSS Science Stories, Pgs 5-6, 9-10, 13-14, 17 Trees, Investigation 1, Parts 5-6, Pages 25-30 Trees FOSS Science Stories, Page 3 Insects, Investigation 1, Part 2, Pages 8-15 Insects FOSS Science Stories, Pg 12-15, 34-38 New Plants, Inv. 1, Part 3, Pages 23-30 New Plants FOSS Science Stories, Pages 3-7, 12-15, 24, 28-43 Insects and Plants Investigation 1, Parts 1-3, Pages 52-75 Insects and Plants FOSS Science Resources, Pages 30-33 Plants and Animals Investigation 2, Parts 1-3, Pages 87-108 Plants and Animals FOSS Science</p>	<p>12.A.2a Describe simple life cycles of plants and animals and the similarities and differences in their offspring.</p>	<p>Structures of Life, Investigation 2, Part 3, Pages 18-22 Structures of Life FOSS Science Stories, Pages 20-21 Environments, Investigation 2, Science Extension #3, page 32 Environments FOSS Science Stories, Pages 18-20, 21, 22, 42</p>	<p>12.A.3a Explain how cells function as “building blocks” of organisms and describe the requirements for cells to live.</p>	<p>Food and Nutrition FOSS Science Stories, Pg 41-43 Living Systems Investigation 1, Part 1, Pages 51-59 Living Systems FOSS Science Resources, Pages. 2-3 Diversity of Life, Investigation 3, Parts 1-2, Pages 93-115 Investigation 4, Parts 1-2, Pages 125-141; Diversity of Life Resources Pages 8-9, 27-45, 51-59 Diversity of Life CD-ROM “Ribbon of Life” Populations & Ecosystems Investigation 9 Part 2 Pages 267-273 Populations & Ecosystems Resources, Pages 49-55</p>

<p>12.A.1b Categorize living organisms using a variety of observable features (e.g., size, color, shape, backbone).</p>	<p><u>Resources</u>, Pages 4-7, 16-19, 47-50 <u>Animals Two by Two</u>, Investigation 2, Parts 1-4, Pages 9-24 <u>Animals Two by Two FOSS Science Stories</u>, Pages 3-24 <u>Trees</u>, Investigation 1, Parts 1-4, Pages 7-24 <u>Insects</u>, Investigation 2, Parts 2-3, Pages 14-24 <u>Insects FOSS Science Stories</u>, Pages 12-13 <u>New Plants</u>, Inv. 2, Parts 1-2, Pages 8-19 <u>New Plants FOSS Science Stories</u>, Pages 15, 22-39, 40-43 <u>Insects and Plants Investigation</u>5, Parts 1-3, Pages 206-225 <u>Insects and Plants FOSS Science Resources</u>, Pages 30-33 <u>Plants and Animals Investigation 1</u>, Parts 1-2, Pages 47-62 <u>Plants and Animals FOSS Science Resources</u>, Pages 47-50</p>	<p>12.A.2b Categorize features as either inherited or learned (e.g., flower color or eye color is inherited; language is learned).</p>	<p><u>Human Body</u>, Investigation 4, Parts 1-3, Pages 8-24 <u>Physics of Sound FOSS Science Stories</u>, P 5-10 <u>Structures of Life FOSS Science Stories</u>, Pages 1-3, 6-9 <u>Environments FOSS Science Stories</u>, Pages 32, 47-48 <u>Food and Nutrition FOSS Science Stories</u>, Pages 16-19 <u>Models and Designs FOSS Science Stories</u>, Page 4</p>	<p>12.A.3b Compare characteristics of organisms produced from a single parent with those of organisms produced by two parents.</p>	<p><u>Diversity of Life Resources</u> Pages 40-45, 53-54, 60-62 <u>Populations and Ecosystems</u>, Investigation 8, Parts 1-2, Pages 219-243 <u>Investigation 9</u>, Parts 1-4, Pages 245-291; <u>Investigation 10</u>, Parts 1-3, Pages 293-318 <u>Populations & Ecosystems Resources</u>, Pages 49-55</p>
				<p>12.A.3c Compare and contrast how different forms and structures reflect different functions (e.g., similarities and differences</p>	<p><u>Environments</u>, Inv. 2, Parts 2-3, Pages 16-25 <u>Environments FOSS Science Stories</u>, Pages 18-22, 32-35, 42 <u>Living Systems Investigation 1</u>, Part 3, Pages 66-70 <u>Investigation 2</u>, Part 1, pp.</p>

				among animals that fly, walk or swim; structures of plant cells and animal cells).	85-98 <u>Living Systems FOSS Science Resources</u> , Pages 2-10 <u>Food and Nutrition FOSS Science Stories</u> , P 41-43 <u>Diversity of Life</u> , Investigation 3, Parts 1-3, Pages 93-124 Investigation 4, Parts 1-2, Pages 125-141 Investigation 8, Parts 1-3, Pages 239-259 <u>Diversity of Life Resources</u> Pages 4-9, 24-70 <u>Human Brain and Senses</u> , Inv. 2, Parts 1-3, P 67-83 <u>Human Brain and Senses Resources</u> , Pages 40-42 <u>Populations & Ecosystems</u> Investigation 8, Parts 1-2 <u>Populations & Ecosystems Resources</u> , Pages 58-61
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B. Know and apply concepts that describe how living things interact with each other and with their environment.

<i>Benchmarks – Early Elementary</i>	<i>FOSS Activities/ Investigations</i>	<i>Benchmarks – Late Elementary</i>	<i>FOSS Activities/ Investigations</i>	<i>Benchmarks – Middle/Junior High</i>	<i>FOSS Activities/ Investigations</i>
12.B.1a Describe and compare characteristics of living things in relationship to their environments.	<u>Animals Two by Two</u> , Investigation 1, Parts 2-3, Pages 17-25 <u>Insects</u> , Investigation 3, Parts 1-3, Pages 8-26 <u>Insects FOSS Science Stories</u> , Pgs 8-11, 36-41 <u>New Plants</u> , Investigation 2 Science Extension #2, 3, 4, P 30 <u>New Plants FOSS Science Stories</u> ,	12.B.2a Describe relationships among various organisms in their environments (e.g., predator/prey, parasite/host, food chains and food webs).	<u>Human Body</u> , Investigation 1, Part 3, Pages 21-25 <u>Structures of Life FOSS Science Stories</u> , Pages 20-34, 43 <u>Water FOSS Science Stories</u> , Pages 5-7 <u>Environments</u> , Investigation 4, Part 3, Pages 19-22 <u>Environments FOSS</u>	12.B.3a Identify and classify biotic and abiotic factors in an environment that affect population density, habitat and placement of organisms in an energy pyramid.	<u>Environments</u> , Investigation 1, Parts 1-2, Pages 10-21 <u>Environments FOSS Science Stories</u> , Pages 38-41, 43-45, 51-52 <u>Diversity of Life Resources</u> Pages 46-50, 55-64 <u>Populations & Ecosystems</u> Investigation 6, Parts 1-3, Pages 179-197 <u>Populations & Ecosystems</u>

	<p>Pages 22-39 <u>Insects and Plants Investigation 3, Parts 1-3, Pages 129-151</u> <u>Insects and Plants FOSS Science Resources, Pages 26-29, 48-55</u> <u>Plants and Animals Investigation 3, Parts 1-3, Pages 157-165</u> <u>Plants and Animals FOSS Science Resources, Pages 28-45</u></p>		<p><u>Science Stories, Pages 39-41</u> <u>Landforms FOSS Science Stories, Pages 13-14</u></p>		<p><u>Resources, Pages 17-29</u></p>
<p>12.B.1b Describe how living things depend on one another for survival.</p>	<p><u>Insects, Investigation 4, Part 3, Pages 19-22</u> <u>Insects FOSS Science Stories, Pages 3-7</u> <u>New Plants, Investigation 1, Part 3, Pages 23-30</u> <u>New Plants FOSS Science Stories, Pages 22-39</u> <u>Insects and Plants</u> <u>Insects and Plants FOSS Science Resources, Pages 6-7</u> <u>Plants and Animals Investigation 3, Parts 1-2, Pages 120-134</u> <u>Plants and Animals FOSS Science Resources, Pages 18-19, 21-22, 28-45, 47-50</u></p>	<p>12.B.2b Identify physical features of plants and animals that help them live in different environments (e.g., specialized teeth for eating certain foods, thorns for protection, insulation for cold temperature).</p>	<p><u>Human Body, Inv. 1, Parts 1-3, Pages 8-25</u> <u>Ideas and Inventions, Investigation 1, Part 2, Pages 14-17</u> <u>Structures of Life, Inv. 1 Science Ext. #1 Pg 35</u> <u>Human Body FOSS Science Stories, Page 4</u> <u>Physics of Sound FOSS Science Stories, Pages 7-10, 21</u> <u>Structures of Life FOSS Science Stories, Pages 39-42</u> <u>Environments, Inv. 2, Parts 2-3, Pages 16-25</u> <u>Environments FOSS Science Stories Pages 17, 18-20, 22</u></p>	<p>12.B.3b Compare and assess features of organisms for their adaptive, competitive and survival potential (e.g., appendages, reproductive rates, camouflage, defensive structures).</p>	<p><u>Environments Investigation 2, Parts 2-3, Pages 16-25</u> <u>Environments FOSS Science Stories Pgs 17, 18-20, 22, 42, 54</u> <u>Diversity of Life Investigation 8, Parts 1-3, Pages 231-260</u> <u>Diversity of Life Resources Pages 31-64</u> <u>Human Brain and Senses Resources, Investigation 4 Part 3, Pages 136-144</u> <u>Populations & Ecosystems Investigation 8, Parts 1-2, Pages 228-243</u> <u>Populations & Ecosystems Resources P 22-24, 42-45</u></p>

C. Know and apply concepts that describe properties of matter and energy and the interactions between them.

Benchmarks – Early Elementary	FOSS Activities/ Investigations	Benchmarks – Late Elementary	FOSS Activities/ Investigations	Benchmarks – Middle/Junior High	FOSS Activities/ Investigations
<p>12.C.1a Identify and compare sources of energy (e.g., batteries, the sun).</p>	<p><u>Air and Weather</u>, Investigation 2, Part 2, Pages 14-19</p>	<p>12.C.2a Describe and compare types of energy including light, heat, sound, electrical and mechanical.</p>	<p><u>Magnetism & Electricity</u>, Inv. 2, Part 1, Pgs 1-13 <u>Physics of Sound</u>, Inv 1, Part 3, Pages 21-29 <u>Water</u>, Investigation 4, Part 2, Pages 14-18 <u>Human Body FOSS Science Stories</u>, Pg 25 <u>Ideas and Inventions FOSS Science Stories</u>, Pages 23-31 <u>Magnetism & Electricity FOSS Science Stories</u>, Pages 28-33 <u>Physics of Sound FOSS Science Stories</u>, Pages 14, 22-28 <u>Structures of Life FOSS Science Stories</u>, Pg 43 <u>Water FOSS Science Stories</u>, Pages 22-23 <u>Environments FOSS Science Stories</u>, Pages 38-41 <u>Matter and Energy Investigation 1</u>, Parts 1-3, Pages 50-82 <u>Matter and Energy FOSS Science Resources</u>, Pages 1-11, 14-21 <u>Food & Nutrition</u>, Inv. 4, Part 1, Pages 8-15 <u>Food & Nutrition FOSS Science Stories P 41-43 Landforms FOSS Science Stories P 22-27</u></p>	<p>12.C.3a Explain interactions of energy with matter including changes of state and conservation of mass and energy.</p>	<p><u>Environments FOSS Science Stories</u> Pages 38-41 <u>Mixtures and Solutions</u>, Investigation 4, Parts 1-3, Pages 8-24 <u>Mixtures and Solutions FOSS Science Stories</u>, Page 24 <u>Solar Energy</u>, Investigation 2, Parts 1-2, Pages 8-24 <u>Solar Energy FOSS Science Stories</u>, Pg. 22-25 <u>Water Planet Investigation 2</u>, Parts 1-4, Pages 80-110 <u>Investigation 3</u>, Parts 1-2, Pages 125-144 <u>Investigation 4</u>, Part 1, Pages 184-197 <u>Water Planet FOSS Science Resources</u>, Pages 26-30, 33-37 <u>Chemical Interactions</u>, Investigation 4, Parts 1-3, Pages 122-142 <u>Chemical Interactions Resources</u>, Pages 24-27, 32-37, 38-48 <u>Electronics Resources</u>, Pages 6-8, 9-13, 30-31 <u>Planetary Science</u>, Investigation 5, Part 2, Pages 158-163 <u>Planetary Science Resources</u>, Pages 59-66</p>

			<p>Models and Designs. <u>Inv. 3, Parts 1-3, P 8-23</u> <u>Models and Designs</u> <u>FOSS Science Stories,</u> <u>Pages 4-5</u> <u>Solar Energy, Inv. 2,</u> <u>Parts 1-2, Pages 8-24</u> <u>Solar Energy FOSS</u> <u>Science Stories,</u> <u>Pages 16, 29-31, 34-35</u> <u>Variables, Inv. 3,</u> <u>Parts 1-3, Pages 8-23</u> <u>Variables FOSS</u> <u>Science Stories, Page 9</u></p>	<p>12.C.2b Describe and explain the properties of solids, liquids and gases.</p>	<p><u>Populations & Ecosystems</u> <u>Investigation 5, Parts 1-4,</u> <u>Pages 142-169</u> <u>Populations & Ecosystems</u> <u>Resources, Pages 14-21</u> <u>Weather & Water, Inv. 4,</u> <u>Parts 1-2, Pages 121-139</u> <u>Weather and Water</u> <u>Resources, Pgs 22-26, 49</u></p>
<p>12.C.1b Compare large-scale physical properties of matter (e.g., size, shape, color, texture, odor).</p>	<p><u>Fabric, Investigation 1,</u> <u>Parts 1-2, Pages 6-15</u> <u>Fabric FOSS Science</u> <u>Stories, Pages 3, 16-23</u> <u>Wood & Paper,</u> <u>Investigation 1,</u> <u>Parts 1-3, Pages 8-23</u> <u>Investigation 3,</u> <u>Parts 1-4, Pages 8-25</u> <u>Air & Weather, Inv. 1,</u> <u>Part 1, Pages 8-12</u> <u>Air and Weather FOSS</u> <u>Science Stories, Pg 3-6</u> <u>Balance & Motion,</u> <u>Inv. 2, Part 1, Pgs 8-13</u> <u>Balance & Motion FOSS</u> <u>Science Stories, P 18-21</u> <u>Insects FOSS Science</u> <u>Stories, Pages 42-45</u> <u>New Plants, Inv. 2,</u> <u>Parts 1-2, Pages 8-19</u> <u>Pebbles, Sand, and Silt,</u> <u>Investigation 1,</u> <u>Parts 1-4, Pages 8-25</u> <u>Pebbles, Sand, and Silt</u> <u>FOSS Science Stories,</u> <u>Pages 3-9</u> <u>Solids & Liquids, Inv. 2,</u></p>		<p><u>Earth Materials,</u> <u>Investigation 3,</u> <u>Parts 1-2, Pages 8-19</u> <u>Earth Materials FOSS</u> <u>Science Stories P 30-33</u> <u>Ideas and Inventions,</u> <u>Investigation 3,</u> <u>Parts 1-3, P 8-21</u> <u>Physics of Sound, Inv 3,</u> <u>Parts 1-2, Pages 8-19</u> <u>Water,</u> <u>Investigation 2,</u> <u>Parts 1-3, Pages 8-24</u> <u>Investigation 3,</u> <u>Parts 1-4, Pages 8-26</u> <u>Matter and Energy</u> <u>Investigation 3, Part 1,</u> <u>Pages 129-138</u> <u>Matter and Energy</u> <u>FOSS Science</u> <u>Resources, Pages 39-42</u> <u>Measurement FOSS</u> <u>Science Stories P 30-33</u> <u>Physics of Sound FOSS</u> <u>Science Stories,</u> <u>Pages 19-20</u> <u>Water FOSS Science</u></p>	<p>12.C.3b Model and describe the chemical and physical characteristics of matter (e.g., atoms, molecules, elements, compounds, mixtures):</p>	<p><u>Mixtures and Solutions,</u> <u>Investigation 4, Parts 1-3,</u> <u>Pages 1-24</u> <u>Mixtures and Solutions</u> <u>FOSS Science Stories,</u> <u>Pages 1-6, 21-22, 25-28</u> <u>Solar Energy FOSS</u> <u>Science Stories P 18-21</u> <u>Chemical Interactions,</u> <u>Investigation 2, Parts 1-2,</u> <u>Pages 70-80</u> <u>Chemical Interactions</u> <u>Resources,</u> <u>Pages 3-15, 63-77</u> <u>Earth History Resources</u> <u>Pages 87-90</u> <u>Electronics Resources,</u> <u>Pages 6-8</u> <u>Weather and Water,</u> <u>Investigation 4, Parts 1-2,</u> <u>Pages 121-139</u> <u>Weather and Water</u> <u>Resources, Pages 27-28</u></p>

	<p>Parts 1-3, Pages 10-27 Solids and Liquids FOSS Science Stories, Pages 3-5, 8-13, 14-17</p>		<p>Stories, Pgs 1-2, 8-9, 11, 13-15 Food and Nutrition, Investigation 1, Parts 1-2, Pages 8-20 Investigation 1 Science Extension #1, Page 24 <u>Landforms FOSS</u> <u>Science Stories P 22-27</u> <u>Mixtures and Solutions,</u> Inv. 1, Parts 1-4 Pg 8-29 <u>Mixtures and Solutions</u> <u>FOSS Science Stories,</u> Pages 1-6, 20-22 Solar Energy, Inv. 2, Parts 1-2, Pages 8-24 Solar Energy FOSS Science Stories P 18-25</p>		
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D. Know and apply concepts that describe force and motion and the principles that explain them.

Benchmarks – Early Elementary	FOSS Activities/ Investigations	Benchmarks – Late Elementary	FOSS Activities/ Investigations	Benchmarks – Middle/Junior High	FOSS Activities/ Investigations
<p>12.D.1a Identify examples of motion (e.g., moving in a straight line, vibrating, rotating).</p>	<p>Animals Two by Two, Investigation 3, Part 2, Pages 13-16 <u>Trees, Tools for Observing Weather,</u> Tool 5, Pages 18-21 <u>Wood and Paper,</u> Investigation 1, Parts 4-5, Pages 24-32 <u>Air and Weather,</u> Inv. 3, Parts 1-5, P 8-33 Air and Weather FOSS Science Stories, Pg 3-6 <u>Balance and Motion,</u> ALL, such as Inv. 3, Parts 1-3 Pages 6-25 <u>Balance and Motion</u></p>	<p>12.D.2a Explain constant, variable and periodic motions.</p>	<p>Physics of Sound, Investigation 1, Part 3, Pages 21-29 <u>Physics of Sound FOSS</u> <u>Science Stories,</u> Pages 17-21 <u>Landforms FOSS</u> <u>Science Stories,</u> Pages 22-27 <u>Models and Designs,</u> Investigation 3, Parts 1-3, Pages 8-25 <u>Models and Designs</u> <u>FOSS Science Stories,</u> Pages 37-55 Variables, Inv. 1, Parts 1-3, Pages 8-30</p>	<p>12.D.3a Explain and demonstrate how forces affect motion (e.g., action/reaction, equilibrium conditions, free-falling objects).</p>	<p><u>Landforms FOSS Science</u> <u>Stories, Pages 22-27</u> <u>Levers & Pulleys, Inv. 1,</u> <u>Parts 1-3, Pages 8-28</u> <u>Levers and Pulleys FOSS</u> <u>Science Stories Page 2</u> <u>Models & Designs,</u> Investigation 3, Parts 1-3, Pages 8-25 <u>Models and Designs</u> <u>FOSS Science Stories,</u> Pages 37-55 Solar Energy FOSS Science Stories Pgs 18-25 Variables FOSS Science Stories P 10-11, 15-20 <u>Chemical Interactions</u></p>

	<p><u>FOSS Science Stories</u>, Pages 3-9, 18-21, 22-33</p>		<p>Investigation 3, Parts 1-4, Pages 8-27 <u>Variables FOSS Science Stories</u>, Pages 8-9</p>	<p><u>Resources</u>, Pages 18-27 <u>Earth History Resources</u>, Pages 100-105 <u>Force & Motion</u>, Inv. 6, Parts 1-4, Pages 219-245 <u>Force & Motion Resources</u> Pages 17-19, 32-35, 50-52 <u>Planetary Science</u>, Inv. 5, Parts 1-3, Pages 154-167 <u>Planetary Science Resources</u>, Pages 70, 97 <u>Weather & Water</u>, Inv. 8, Parts 1-2, Pages 259-270 <u>Weather and Water Resources</u>, Pages 48-55</p>
<p>12.D.1b Identify observable forces in nature (e.g., pushes, pulls, gravity, magnetism).</p>	<p><u>Fabric</u>, Investigation 1 Science Ext. #3, Pg 36 <u>Trees</u>, Tools for Observing Weather, Tool 5, Pages 18-21 <u>Wood & Paper</u>, Inv. 1, Parts 4-5, Pages 24-32 <u>Air & Weather</u>, Inv. 1, Part 6, Pages 34-38 <u>Air and Weather FOSS Science Stories</u>, Pages 4-5, 14-17 <u>Balance & Motion</u>, Inv. 3 Parts 1-3, Pages 6-25 <u>Balance and Motion FOSS Science Stories</u>, Pages 3-21 <u>New Plants FOSS Science Stories</u>, P10-13</p>	<p>12.D.2b Demonstrate and explain ways that forces cause actions and reactions (e.g., magnets attracting and repelling; objects falling, rolling and bouncing).</p>	<p><u>Earth Materials FOSS Science Stories</u>, Pages 34-36 <u>Human Body FOSS Science Stories</u> P 14-16 <u>Magnetism & Electricity</u>, Inv. 1, Parts 1-4, P 8-34 <u>Magnetism & Electricity FOSS Science Stories</u>, Pages 5-11 <u>Physics of Sound</u>, Inv 1, Part 3, Pages 21-29 <u>Physics of Sound FOSS Science Stories</u>, Pg 21 <u>Water</u>, Investigation 1, Part 3, Pages 19-23 <u>Water FOSS Science Stories</u>, Page 4 <u>Landforms FOSS Science Stories</u> P 22-27 <u>Levers & Pulleys</u>, Inv. 1, Parts 1-3, Pages 8-28 <u>Models & Designs</u>, Inv. 3, Parts 1-3, P 8-25 <u>Models and Designs FOSS Science Stories</u>, Pages 37-55</p>	<p>12.D.3b Explain the factors that affect the gravitational forces on objects (e.g., changes in mass, distance).</p>
				<p><u>Models and Designs FOSS Science Stories</u>, Pages 40-41 <u>Solar Energy FOSS Science Stories</u> Pgs 18-21 <u>Variables FOSS Science Stories</u>, Pgs 10-11, 15-20 <u>Water Planet</u> <u>Investigation 1, Part 2</u>, Pages 59-66 <u>Water Planet FOSS Science Resources</u>, Pages 16-17 <u>Force and Motion</u>, Investigation 7, Parts 1-3, Pages 256-272 <u>Force and Motion Resources</u>, Pages 36-40, 62-66 <u>Planetary Science Resources</u>, Pages 69-89, 97-100 <u>Planetary Science Resources</u>, Pages 70, 97</p>

				Variables, Inv. 2, Science Ext. #2, Pg 27 Variables FOSS Science Stories, Pages 10-11, 15-20	
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E. Know and apply concepts that describe the features and processes of the Earth and its resources.

Benchmarks – Early Elementary	FOSS Activities/ Investigations	Benchmarks – Late Elementary	FOSS Activities/ Investigations	Benchmarks – Middle/Junior High	FOSS Activities/ Investigations
12.E.1a Identify components and describe diverse features of the Earth's land, water and atmospheric systems.	Trees, Tools for Observing Weather, Tools 1-6, Pages 6-24 <u>Trees FOSS Science Stories</u> , Pgs 4-12, 14-21 <u>Air and Weather</u> , Investigation 2, Parts 3-4, Pages 20-27 <u>Air and Weather FOSS Science Stories</u> Pg 7-13 <u>New Plants FOSS Science Stories</u> , Pages 22-39 <u>Pebbles, Sand, and Silt</u> , Investigation 4, Parts 1-3, Pages 8-25 <u>Pebbles, Sand, and Silt FOSS Science Stories</u> , Pages 10-13, 14-15	12.E.2a Identify and explain natural cycles of the Earth's land, water and atmospheric systems (e.g., rock cycle, water cycle, weather patterns).	Earth Materials <u>FOSS Science Stories</u> , Pages 34-35 <u>Ideas and Inventions FOSS Science Stories</u> , Pages 33-38 <u>Water</u> , Investigation 3, Part 4, Pages 21-26 <u>Water FOSS Science Stories</u> , Pages 14-15 <u>Landforms</u> , Investigation 2, Parts 1-2, Pages 8-22 <u>Landforms FOSS Science Stories</u> , Pages 22-32 <u>Water Planet</u> Investigation 3, Part 2, Pages 136-144 Investigation 4, Part 1, Pages 184-197 <u>Water Planet FOSS Science Resources</u> , Pages 46-51, 67-70 <u>Solar Energy FOSS Science Stories</u> , Pages 18-25	12.E.3a Analyze and explain large-scale dynamic forces, events and processes that affect the Earth's land, water and atmospheric systems (e.g., jet stream, hurricanes, plate tectonics).	<u>Landforms FOSS Science Stories</u> , Pages 22-29 <u>Solar Energy FOSS Science Stories</u> , Pg 18-25 <u>Water Planet</u> Investigation 4, Part 2, Pages 198-203 <u>Water Planet FOSS Science Resources</u> , Pages 71-79 <u>Earth History</u> , Inv. 4, Parts 3-4, Pages 138-149 <u>Earth History Resources</u> , Pages 100-105 <u>Planetary Science</u> , Inv. 5, Part 6, Pages 176-179 <u>Planetary Science Resources</u> , Pages 67-70 <u>Weather and Water</u> , Investigation 2, Parts 1-2, Pages 57-82 Investigation 8, Parts 1-4, Pages 258-279 <u>Weather and Water Resources</u> , Pages 48-55
12.E.1b Identify and describe patterns of	<u>Trees FOSS Science Stories</u> , Pages 14-21 <u>Air and Weather</u> ,	12.E.2b Describe and explain short-term and long	Earth Materials, Investigation 3 Science Extension #1, Page 24	12.E.3b Describe interactions between solid	<u>Landforms</u> , Investigation 2, Parts 1-2, Pages 1-22 <u>Landforms FOSS Science</u>

<p>weather and seasonal change.</p>	<p>Investigation 2, Parts 1-4, Pages 8-27 Investigation 4, Parts 1-3, Pages 8-24 <u>Air and Weather FOSS Science Stories</u>, Pages 18-23</p>	<p>-term interactions of the Earth's components (e.g., earthquakes, types of erosion).</p>	<p>Earth Materials FOSS Science Stories P 34-35 <u>Magnetism & Electricity FOSS Science Stories</u>, Pages 10-11 <u>Physics of Sound FOSS Science Stories</u>, Pages 25-28 <u>Water</u>, Investigation 1, Science Ext. #1 Pg 27 <u>Water FOSS Science Stories</u>, Pages 14-15 Landforms, Investigation 2, Parts 1-2, Pages 1-22 <u>Landforms FOSS Science Stories</u>, Pages 13-32 <u>Models and Designs FOSS Science Stories</u>, Pages 11-12 <u>Solar Energy FOSS Science Stories</u>, Pages 18-25 <u>Water Planet Investigation 4, Part 2, Pages 198-203</u> <u>Water Planet FOSS Science Resources</u>, Pages 71-79</p>	<p>earth, oceans, atmosphere and organisms that have resulted in ongoing changes of Earth (e.g., erosion, El Nino).</p>	<p>Stories, Pages 13-32 <u>Solar Energy FOSS Science Stories</u> Pgs 18-25 <u>Water Planet Investigation 4, Part 1, Pages 184-197</u> <u>Water Planet FOSS Science Resources</u>, Pages 67-70 <u>Diversity of Life</u>, Inv. 10, Parts 1-2, Pages 302-316 <u>Earth History</u>, Inv. 4, Parts 1-6, Pages 113-163 <u>Earth History Resources</u>, Pg 37, 60-63, 68-82, 93-97 <u>Planetary Science</u>, Inv. 5, Part 6, Pages 176-179 <u>Planetary Science Resources</u>, Pgs 67-70, 86 <u>Populations & Ecosystems Investigation 7, P 210-217</u> <u>Populations & Ecosystems Resources</u>, P 8-13, 30-41 <u>Weather & Water</u>, Inv. 2, Parts 1-2, Pages 57-82 <u>Investigation 8, Parts 1-4, Pages 258-279</u> <u>Weather and Water Resources</u>, P 45-47, 63-65 <u>Electronics Resources</u> Pages 18-21</p>
<p>12.E.1c Identify renewable and nonrenewable natural resources.</p>	<p>Conservation is top priority in FOSS. In FOSS modules most materials, like plastic cups, straws and paper plates, are re-used or recycled. See for example: <u>Wood and Paper</u>, Investigation 3, Parts 2-3, Pages 13-21 <u>Investigation 4, Part 1, Pages 8-13</u></p>	<p>12.E.2c Identify and classify recyclable materials.</p>	<p>Conservation is top priority in FOSS. In FOSS modules most materials, like plastic cups, straws and paper plates, are re-used or recycled. See for example: <u>Water</u>, Investigation 4, Math Extension #1, #2, Pages 30-31 <u>Water FOSS Science Stories</u>, Pages 17-21</p>	<p>12.E.3c Evaluate the biodegradability of renewable and nonrenewable natural resources.</p>	

	Wood and Paper FOSS Science Stories P 19-23 New Plants, Inv. 1, Part 3, Pages 23-30 New Plants FOSS Science Stories P 16-21				
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F. Know and apply concepts that explain the composition and structure of the universe and Earth's place in it.

Benchmarks – Early Elementary	FOSS Activities/ Investigations	Benchmarks – Late Elementary	FOSS Activities/ Investigations	Benchmarks – Middle/Junior High	FOSS Activities/ Investigations
12.F.1a Identify and describe characteristics of the sun, Earth and moon as familiar objects in the solar system.	Air and Weather, Investigation 2, Parts 1-4, Pages 1-31 Investigation 4, Parts 1-3, Pages 1-26	12.F.2a Identify and explain natural cycles and patterns in the solar system (e.g., order of the planets; moon phases; seasons as related to Earth's tilt, one's latitude, and where Earth is in its yearly orbit around the sun).	Ideas and Inventions FOSS Science Stories, Pages 33-38 Sun, Moon and Stars Investigation 2, Parts 1-2, Pages 79-100 Sun, Moon and Stars FOSS Science Resources, Pages 1-7 Models and Designs FOSS Science Stories Pages 5-10 Solar Energy, Investigation 1, Parts 1-2, Pages 8-21 Solar Energy FOSS Science Stories, Pages 1-5, 40-44 Water Planet Investigation 1, Part 1, Pages 50-58 Water Planet FOSS Science Resources, Pages 1-13	12.F.3a Simulate, analyze and explain the effects of gravitational force in the solar system (e.g., orbital shape and speed, tides, spherical shape of the planets and moons).	Solar Energy FOSS Science Stories, Pages 1-3, 40-44 Water Planet Investigation 1, Part 2, Pages 59-66 Water Planet FOSS Science Resources, Pages. 16-17 Force and Motion Resources, Pages 67-69 Planetary Science, Investigation 4, Parts 1-3, Pages 111-135 Investigation 7, Parts 1-5, Pages 207-238 Planetary Science Resources, Pages 32, 35, 52-53, 69-70, 78-103;
12.F.1b Identify daily, seasonal and annual patterns related to the Earth's	Trees, Investigation 3, Parts 1-9 Pages 10-38 Trees FOSS Science Stories, Pages 14-21 Air and Weather,	12.F.2b Explain the apparent motion of the sun and stars.	Ideas and Inventions FOSS Science Stories, Pages 26-27, 33-38 Sun, Moon and Stars Investigation 1, Parts 1-	12.F.3b Describe the organization and physical characteristics of the solar system	Models & Designs, Investigation 1 Language Ext. #1, Page 26 Models & Designs FOSS Science Stories,

<p>rotation and revolution.</p>	<p>Investigation 4, Parts 1-3, Pages 1-26 <u>Air and Weather FOSS Science Stories</u>, P18-23</p>		<p>2, Pages 42-64 Investigation 3, Part 1, Pages 114-125 <u>Sun, Moon and Stars FOSS Science Resources</u>, Pages 1-11, 37-39 <u>Models and Designs FOSS Science Stories</u>, Pages 5-10 <u>Solar Energy</u>, Investigation 1, Parts 1-2, Pages 8-21 <u>Solar Energy FOSS Science Stories</u>, Pages 1-3, 40-44</p>	<p>(e.g., sun, planets, satellites, asteroids, comets).</p>	<p>Pages 5-10 <u>Solar Energy FOSS Science Stories</u>, Pages 1-3, 40-44 <u>Water Planet Investigation 1, Part 1</u>, Pages 50-58 <u>Water Planet FOSS Science Resources</u>, Pages 1-13 <u>Planetary Science</u>, Investigation 3, Parts 1-2, Pages 79-98 Investigation 10, Parts 1-3, Pages 303-325 <u>Planetary Science Resources</u>, Pages 35, 43, 69-103</p>
		<p>12.F.2c Identify easily recognizable star patterns (e.g., the Big Dipper, constellations).</p>	<p><u>Sun, Moon and Stars Investigation 3, Part 1</u>, Pages 114-125 <u>Sun, Moon and Stars FOSS Science Resources</u>, Pages 36-39</p>	<p>12.F.3c Compare and contrast the sun as a star with other objects in the Milky Way Galaxy (e.g., nebulae, dust clouds, stars, black holes).</p>	<p><u>Solar Energy FOSS Science Stories</u>, Pages 1-3, 40-44 <u>Planetary Science Investigation 10, Parts 1-3</u>, Pages 312-325 <u>Planetary Science Resources</u> Pages 80-103</p>

STATE GOAL 13: Understand the relationships among science, technology and society in historical and contemporary contexts.

As a result of their schooling students will be able to:

A. Know and apply the accepted practices of science.

Benchmarks – Early Elementary	FOSS Activities/ Investigations	Benchmarks – Late Elementary	FOSS Activities/ Investigations	Benchmarks – Middle/Junior High	FOSS Activities/ Investigations
<p>13.A.1a Use basic safety practices (e.g., not tasting materials without permission, “stop/drop/roll”).</p>	<p>Classroom safety posters are included in all FOSS modules to promote safe practices during investigations. See also: <u>Animals Two by Two</u>, Investigation 1, Part 1, Pages 10-16 <u>Fabric</u>, Investigation 1, Part 6, Pages 29-33 <u>Trees</u>, Investigation 3, Part 2, Pages 12-14 <u>Air and Weather</u>, Investigation 1, Part 4, Page 21-26 <u>Balance and Motion</u>, Investigation 2, Parts 2-3, Pages 14-25 <u>New Plants</u>, Investigation 2, Part 3, Pages 20-28 <u>Plants and Animals</u> Investigation 1, Part 1, Page 49</p>	<p>13.A.2a Demonstrate ways to avoid injury when conducting science activities (e.g., wearing goggles, fire extinguisher use).</p>	<p>Classroom safety posters are included in all FOSS modules to promote safe practices during investigations. See also: <u>Earth Materials</u>, Investigation 1, Part 2, Pages 16-23 <u>Human Body</u>, Investigation 1, Parts 1-3, Pages 8-25 <u>Ideas and Inventions</u>, Investigation 4, Part 2, Pages 14-17 <u>Sun, Moon and Stars</u> Investigation 1, Part 1, Pages 50-51 <u>Water Planet</u> Investigation 1, Page 62 <u>Magnetism & Electricity</u>, Investigation 2, Parts 1-3, Pages 8-25 <u>Physics of Sound</u>, Inv 3, Part 1, Pages 8-14 <u>Structures of Life</u>, Inv. 5, Part 1, Pages 8-12 <u>Water</u>, Investigation 4, Part 3, Pages 19-23 <u>Environments</u>,</p>	<p>13.A.3a Identify and reduce potential hazards in science activities (e.g., ventilation, handling chemicals).</p>	<p>Classroom safety posters are included in all FOSS modules to promote safe practices during investigations. See also: <u>Environments</u>, Inv. 4, Part 2, Pages 13-18 <u>Mixtures and Solutions</u>, Inv. 4, Parts 1-3, Pgs 8-24 <u>Variables</u>, Investigation 4, Part 2, Pages 12-17 <u>Water Planet</u> Investigation 1, Page 62 <u>Chemical Interactions</u>, Inv. 1, Part 1, Pages 41-45 Inv. 7, Part 3, Pgs 215-224 <u>Chemical Interactions Resources</u>, Page 89 <u>Diversity of Life</u>, Investigation 10, Parts 1, 3 Pages 302-309, 317-321 <u>Earth History</u>, Inv. 5, Part 3, Pages 184-185 <u>Electronics</u>, Inv. 1, Part 1 Page 58 <u>Electronics Resources</u> Pages 12-14 <u>Force and Motion</u>, Inv. 6, Part 1, Pages 218-228 <u>Human Brain and Senses</u>,</p>

	<p>13.A.1b Explain why similar results are expected when procedures are done the same way.</p>	<p>13.A.2b Explain why similar investigations may not produce similar results.</p>	<p>Investigation 4, Part 2, Pages 13-18 <u>Mixtures and Solutions</u>, Investigation 4, Parts 1-3, Pages 8-24 <u>Variables</u>, Investigation 4, Part 2, Pages 12-17</p>	<p>Investigation 4, Part 2, Pages 13-18 <u>Mixtures and Solutions</u>, Investigation 4, Parts 1-3, Pages 8-24 <u>Variables</u>, Investigation 4, Part 2, Pages 12-17</p>	<p>Inv. 2, Part 1, Pages 67-72 <u>Populations & Ecosystems</u> Inv. 5, Part 1, Pgs 142-150 <u>Weather and Water</u>, Inv. 2, Part 1, Pages 69-75</p>
<p>13.A.1b Explain why similar results are expected when procedures are done the same way.</p>	<p><u>Air and Weather</u>, Investigation 1, Parts 1-5, Pages 8-33 <u>Balance and Motion</u>, Investigation 1, Part 2, Pages 14-18 <u>Balance and Motion</u> <u>FOSS Science Stories</u> Pages 8, 14, 18 <u>New Plants FOSS Science Stories</u>, P24-25 <u>Pebbles, Sand, and Silt</u>, Investigation 4, Parts 1-3, Pages 8-25 <u>Solids and Liquids</u>, Investigation 4, Parts 1-3, Pages 7-27 <u>Solids and Liquids</u> <u>FOSS Science Stories</u>, Pages 14-17 <u>Plants and Animals</u> Investigation 1, Parts 1-2, Pages 47-62</p>	<p>13.A.2b Explain why similar investigations may not produce similar results.</p>	<p><u>Earth Materials</u>, Investigation 3, Part 2, Pages 14-19 <u>Human Body</u>, Investigation 4, Part 2, Pages 17-19 <u>Magnetism & Electricity</u>, Investigation 1, Part 3, Pages 23-29 <u>Measurement</u>, Inv. 1, Part 1, Pages 8-15 <u>Water</u>, Investigation 2, Part 2, Pages 14-18 <u>Matter and Energy</u> Investigation 3, Part 2, Pages 139-150 <u>Water Planet</u> Investigation 3, Part 1, Pages 125-135 <u>Food and Nutrition</u>, Investigation 1, Part 2, Pages 16-23 <u>Models and Designs</u>, Investigation 1, Part 2, Pages 18-21 <u>Variables</u>, Investigation 2, Parts 1-3, Pages 8-23 <u>Variables FOSS Science Stories</u>, Page 3</p>	<p>13.A.3b Analyze historical and contemporary cases in which the work of science has been affected by both valid and biased scientific practices.</p>	<p><u>Environments FOSS Sci. Stories</u>, Pgs 36-37, 43-48 <u>Food & Nutrition FOSS Sci Stories</u>, P 21, 24-26, 34-36 <u>Landforms FOSS Science Stories</u> P 7-8, 11-14, 19-21 <u>Mixtures and Solutions</u> <u>FOSS Science Stories</u>, Pages 10, 15, 32-36 <u>Models & Designs FOSS Science Stories</u> Pgs 3-16 <u>Solar Energy FOSS Sci. Stories</u>, Pgs 32-33, 35-39 <u>Variables FOSS Science Stories</u>, Pg 4-6, 8-9, 12-14 <u>Chemical Interactions</u> <u>Resources</u>, P 69-72,84-85 <u>Diversity of Life</u>, Inv. 1, Parts 1-2, Pages 43-63 <u>Diversity of Life Resources</u> Pages 65-70 <u>Earth History</u>, Inv. 7, Part 2, Pages 240-243 <u>Earth History Resources</u> Pages 60-67, 73-75, 79 <u>Electronics</u>, Investigation 4 Part 2 Pages 149-151 <u>Electronics Resources</u>, Pages 18-21, 23-25, 34-36 <u>Force and Motion</u>, Inv. 7, Part 3, Pages 267-272 <u>Force and Motion Resources</u>, Pages 50-52 <u>Human Brain and Senses</u></p>

	<p>13.A.1c Explain how knowledge can be gained by careful observation.</p>	<p>13.A.2c Explain why keeping accurate and detailed records is important.</p>			<p>Resources, P 23-24, 47-48 <u>Planetary Science</u>, Inv. 5, Parts 1-7, Pages 143-183 <u>Planetary Science Resources</u>, Pages 59-73 <u>Populations & Ecosystems</u> Inv.10, Parts 1-3, P 302-17 <u>Populations & Ecosystems Resources</u>, Pgs 46-55, 61 <u>Weather & Water</u>, Inv. 9, Part 4, Pages 315-318 <u>Weather & Water Resources</u>, P20-1, 53-5, 63-5</p>
<p>13.A.1c Explain how knowledge can be gained by careful observation.</p>	<p><u>Animals Two by Two</u> Investigation 1, Parts 1-4, Pages 10-29 <u>Animals Two by Two FOSS Science Stories</u> Pages 3-24 <u>Fabric</u>, Investigation 1, Part 1, Pages 6-11 <u>Fabric FOSS Science Stories</u>, Pages 14-15 <u>Trees</u>, Investigation 3, Parts 1-9, Pages 10-38 <u>Wood and Paper</u>, Investigation 3, Part 4, Pages 22-25 <u>Wood and Paper FOSS Science Stories</u>, Pages 9-12 <u>Air and Weather</u>, Investigation 2, Parts 1-4, Pages 8-27 <u>Air and Weather FOSS Science Stories</u>, P14-17 <u>Balance and Motion FOSS Science Stories</u>, Pages 18-21 <u>Insects</u>, ALL, such as Investigation 1, Part 2, Pages 16-21</p>	<p>13.A.2c Explain why keeping accurate and detailed records is important.</p>	<p><u>Earth Materials</u>, Investigation 1, Part 1, Pages 8-15 <u>Human Body</u>, Inv. 1, Part 1, Pages 8-15 <u>Human Body FOSS Science Stories</u> P 21-24 <u>Magnetism & Electricity</u>, Investigation 1, Part 3, Pages 24-29 <u>Magnetism & Electricity FOSS Science Stories</u>, Pages 17-19 <u>Measurement</u>, Inv. 2, Part 3, Pages 18-21 <u>Matter and Energy</u> Investigation 3, Part 2, Pages 139-150 <u>Living Systems</u> Investigation 2, Part 1, Pages 85-98 <u>Structures of Life</u>, Inv. 3, Part 4, Pages 24-30 <u>Structures of Life FOSS Science Stories</u>, Pg 6-9 <u>Water</u>, Investigation 2, Part 3, Pages 19-24 <u>Water FOSS Science Stories</u>, Pages 24-26</p>	<p>13.A.3c Explain what is similar and different about observational and experimental investigations.</p>	<p><u>Environments</u>, Inv. 5, Parts 1-3, Pages 8-22 <u>Landforms</u>, Investigation 2, Part 1, Pages 8-15 <u>Investigation 3</u>, Parts 1-2, Pages 8-19 <u>Levers and Pulleys</u>, Inv. 4, Part 2, Pages 14-20 <u>Mixtures and Solutions</u>, Inv. 3, Parts 1-3, Pgs 8-24 <u>Models & Designs</u>, Inv. 3, Parts 1-3, Pages 8-23 <u>Solar Energy</u>, Investigation 3, Parts 1-2, Pages 8-23 <u>Investigation 4</u>, Parts 1-3, Pages 8-28 <u>Living Systems</u> Investigation 2, Parts 1-2, Pages 85-106 <u>Variables</u>, Investigation 1, Parts 1-2, Pages 8-22 <u>Variables FOSS Science Stories</u>, Pages 4-6 <u>Chemical Interactions</u>, Inv.1, Parts 1-2, Pgs 41-58 <u>Diversity of Life</u>, Inv. 9, Parts 1-3, Pages 273-289 <u>Earth History</u>, Inv. 4, Parts</p>

	<p><u>Insects FOSS Science Stories</u>, Pages 8-11</p> <p><u>New Plants</u>, Investigation 2, Parts 1-3, Pages 8-28</p> <p><u>Pebbles, Sand, and Silt</u>, Investigation 1, Parts 1-2, Pages 8-17</p> <p><u>Solids and Liquids</u>, Investigation 4, Parts 1-3, Pages 7-27</p> <p><u>Solids and Liquids FOSS Science Stories</u>, Pages 8-21</p> <p><u>Plants and Animals</u> Investigation 3, Parts 1-2, Pages 120-134</p> <p><u>Insects and Plants</u> Investigation 1, parts 1-3, Pages 47-62</p>	<p><u>Sun, Moon and Stars</u> Investigation 2, Part 2, Pages 89-100</p> <p><u>Environments</u>, Investigation 2, Parts 2-3, Pages 16-25</p> <p><u>Environments FOSS Science Stories</u>, Pages 23-26</p> <p><u>Food & Nutrition</u>, Inv. 1, Parts 1-2, Pages 8-21</p> <p><u>Food and Nutrition FOSS Science Stories</u>, Pages 34-36</p> <p><u>Landforms</u>, Investigation 2, Parts 1-2, Pages 8-22</p> <p><u>Levers & Pulleys</u>, Inv. 4, Part 2, Pages 14-20</p> <p><u>Mixtures and Solutions</u>, Investigation 3, Part 3, Pages 21-24</p> <p><u>Mixtures and Solutions FOSS Science Stories</u>, Page 17</p> <p><u>Models and Designs</u>, Inv. 1, Parts 1-2, P 8-21</p> <p><u>Models and Designs FOSS Science Stories</u>, Page 16</p> <p><u>Solar Energy</u>, Inv. 1, Part 2, Pages 14-21</p> <p><u>Variables</u>, Inv. 1, Parts 1-3, Pages 8-27</p> <p><u>Variables FOSS Science Stories</u>, Pages 1-7, 34-37</p>		<p>1-2, Pages 127-137</p> <p><u>Electronics</u>, Investigation 4, Part 1, Pages 143-148</p> <p>Investigation 8, Parts 1-3, Pages 250-263</p> <p><u>Force and Motion</u>, Investigation 5, Part 4, Pages 194-201</p> <p>Investigation 7, Parts 1-3, Pages 256-272</p> <p><u>Human Brain and Senses</u>, Investigation 2, Parts 1-3, Pages 67-83</p> <p>Investigation 4, Parts 1-3, Pages 120-143</p> <p><u>Planetary Science</u>, Investigation 5, Parts 2-3, Pages 158-167</p> <p>Investigation 9, Parts 1-4, Pages 283-301</p> <p><u>Populations & Ecosystems</u> Inv. 1, Parts 1-3, Pg 41-59</p> <p>Investigation 6, Parts 1-3, Pages 179-197</p> <p><u>Weather and Water</u>, Investigation 4, Part 1, Pages 121-130</p> <p>Investigation 8, Part 3, Pages 271-275</p>
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B. Know and apply concepts that describe the interaction between science, technology and society.

Benchmarks – Early Elementary	FOSS Activities/ Investigations	Benchmarks – Late Elementary	FOSS Activities/ Investigations	Benchmarks – Middle/Junior High	FOSS Activities/ Investigations
<p>13.B.1a Explain the uses of common scientific instruments (e.g., ruler, thermometer, balance, probe, computer).</p>	<p><u>Trees</u>, <u>Tools for Observing Weather</u>, Parts 1-6, Pages 6-24 <u>Wood and Paper</u>, Investigation 1 Math Extension #1, Page 34 <u>Air and Weather</u>, Investigation 2, Parts 2-4, Pages 14-27 <u>Air and Weather FOSS Science Stories</u> P 14-15 <u>Balance and Motion</u>, Investigation 1 Math Extension #3, Page 30 <u>Insects</u>, Investigation 1, Parts 1-3, Pages 8-25 <u>New Plants</u>, Investigation 1, Part 3, Pages 23-30 <u>Pebbles, Sand, and Silt</u>, Investigation 1, Parts 1-2, Pages 8-17 <u>Solids and Liquids</u>, Investigation 3 Math Extension #3, Page 30 <u>Insects and Plants</u> Investigation 1, Parts 1-3, Pages 52-75</p>	<p>13.B.2a Explain how technology is used in science for a variety of purposes (e.g., sample collection, storage and treatment; measurement; data collection; storage and retrieval; communication of information).</p>	<p>Note: Students experience this standard first-hand when using the FOSS website www.foosweb.com to view simulations and to access and manipulate data. See also: <u>Earth Materials</u>, Inv. 1, Parts 1-3, Pages 8-29 <u>Human Body</u>, Inv. 4, Part 3, Pages 20-24 <u>Human Body FOSS Science Stories</u>, Pg 5-7 <u>Ideas and Inventions</u>, Inv. 3, Parts 1-2, P 8-17 <u>Ideas and Inventions FOSS Science Stories</u>, Pages 1-3, 22, 38 <u>Magnetism & Electricity</u>, Investigation 5, Part 2, Pages 15-20 <u>Magnetism & Electricity FOSS Science Stories</u>, Pages 12-15 <u>Measurement</u>, Inv. 3, Parts 1-3, Pages 8-21 <u>Measurement FOSS Science Stories</u> Pgs 8-9, 14-15, 21-26 <u>Physics of Sound</u>, Inv 1, Part 3, Pages 21-29 <u>Physics of Sound FOSS Science Stories</u>, Pages 17-18 <u>Matter and Energy Investigation 3, Part 2</u>,</p>	<p>13.B.3a Identify and explain ways that scientific knowledge and economics drive technological development.</p>	<p><u>Environments</u>, Inv. 6 <u>Science Ext. #1</u>, Page 24 <u>Environments FOSS Science Stories</u>, P 43-48 <u>Food & Nutrition</u>, Inv. 1 <u>Science Ext. #6</u>, Page 24 <u>Food and Nutrition FOSS Science Stories</u>, Pages 10-13, 21-25 34-36 <u>Landforms</u>, Investigation 3 <u>Science Ext. #4</u>, Page 27 <u>Landforms FOSS Science Stories</u>, Pages 6, 19-21 <u>Mixtures and Solutions FOSS Science Stories</u>, Pages 43-45 <u>Water Planet Science Resources</u>, pp. 18-19 <u>Models & Designs</u>, Inv. 4 <u>Language Ext. #1</u>, Pg 21 <u>Models and Designs FOSS Science Stories</u>, Pages 17-20, 25-28, 33-36 <u>Solar Energy</u>, Inv. 4, Parts 1-3, Pages 8-28 <u>Solar Energy FOSS Science Stories</u>, Pgs 29-31, 32-33, 35-37, 38-39 <u>Variables FOSS Science Stories</u>, Pages 18-28 <u>Chemical Interactions Resources</u>, Pgs 69-72, 80 <u>Diversity of Life</u>, Inv. 10, Parts 2-3, Pages 310-321 <u>Diversity of Life Resources</u> Pages 65-70</p>

			<p>Pages 139-150 <u>Water Planet Investigation 3, Part 1, Pages 125-135</u> <u>Structures of Life, Inv. 1, Part 3, Pages 28-33</u> <u>Water, Investigation 2, Part 1, Pages 8-14</u> <u>Sun, Moon and Stars Investigation 1, Part 1, Pages 42-55</u> <u>Environments, Inv. 3 Science Ext. #1, Pg 24</u> <u>Food & Nutrition, Inv. 2 Language Ext. #3, P 26</u> <u>Landforms, Inv. 5, Part 2, Pages 16-20</u> <u>Landforms FOSS Science Stories, Pages 6, 19-21</u> <u>Mixtures and Solutions, Inv. 2, Part 4, Pg 26-28</u> <u>Mixtures and Solutions FOSS Science Stories, Pages 30-31</u> <u>Models & Designs, Inv. 2, Part 1, Pgs 8-16</u> <u>Models and Designs FOSS Science Stories, Pages 17-20</u> <u>Solar Energy, Inv. 2, Part 1, Pages 8-15</u> <u>Variables, Inv. 3 Math Extension #2, Page 31</u></p>	<p>Pages 139-150 <u>Water Planet Investigation 3, Part 1, Pages 125-135</u> <u>Structures of Life, Inv. 1, Part 3, Pages 28-33</u> <u>Water, Investigation 2, Part 1, Pages 8-14</u> <u>Sun, Moon and Stars Investigation 1, Part 1, Pages 42-55</u> <u>Environments, Inv. 3 Science Ext. #1, Pg 24</u> <u>Food & Nutrition, Inv. 2 Language Ext. #3, P 26</u> <u>Landforms, Inv. 5, Part 2, Pages 16-20</u> <u>Landforms FOSS Science Stories, Pages 6, 19-21</u> <u>Mixtures and Solutions, Inv. 2, Part 4, Pg 26-28</u> <u>Mixtures and Solutions FOSS Science Stories, Pages 30-31</u> <u>Models & Designs, Inv. 2, Part 1, Pgs 8-16</u> <u>Models and Designs FOSS Science Stories, Pages 17-20</u> <u>Solar Energy, Inv. 2, Part 1, Pages 8-15</u> <u>Variables, Inv. 3 Math Extension #2, Page 31</u></p>	<p>13.B.2b Describe the effects on society of scientific and technological innovations (e.g., antibiotics, steam engine, digital</p>	<p>13.B.1b Explain how using measuring tools improves the accuracy of estimates.</p>	<p>13.B.3b Identify important contributions to science and technology that have been made by individuals and groups from</p>	<p><u>Earth History Resource, Pages 60-63, 87-88</u> <u>Electronics, Investigation 4, Part 1, Pages 143-148</u> <u>Electronics Resources, P 1-2, 18-21, 23-25, 30-36</u> <u>Force and Motion, Inv. 5, Parts 3-4, Pages 187-201</u> <u>Force & Motion Resources Pages 41-49, 73-74</u> <u>Human Brain and Senses, Inv. 5, Parts 1-4, P154-175</u> <u>Human Brain and Senses Resources, Pgs 49, 75-78</u> <u>Planetary Science, Inv. 7, Parts 1-5, Pages 207-238</u> <u>Planetary Science Resources, Pg 74-79, 90-103</u> <u>Populations & Ecosystems Inv. 10, Part 3, Pg 315-317</u> <u>Populations & Ecosystems Resources, Pg 8-13, 58-59</u> <u>Weather and Water Inv. 1, Part 1, Pages 43-47</u> <u>Weather and Water Resources, Pgs 20-21, 43</u></p>	<p><u>Earth History Resource, Pages 60-63, 87-88</u> <u>Electronics, Investigation 4, Part 1, Pages 143-148</u> <u>Electronics Resources, P 1-2, 18-21, 23-25, 30-36</u> <u>Force and Motion, Inv. 5, Parts 3-4, Pages 187-201</u> <u>Force & Motion Resources Pages 41-49, 73-74</u> <u>Human Brain and Senses, Inv. 5, Parts 1-4, P154-175</u> <u>Human Brain and Senses Resources, Pgs 49, 75-78</u> <u>Planetary Science, Inv. 7, Parts 1-5, Pages 207-238</u> <u>Planetary Science Resources, Pg 74-79, 90-103</u> <u>Populations & Ecosystems Inv. 10, Part 3, Pg 315-317</u> <u>Populations & Ecosystems Resources, Pg 8-13, 58-59</u> <u>Weather and Water Inv. 1, Part 1, Pages 43-47</u> <u>Weather and Water Resources, Pgs 20-21, 43</u></p>	<p>Food and Nutrition FOSS Science Stories, Pages 9, 21, 24-26, 34-36 <u>Landforms FOSS Science Stories, Pages 7-8, 10-14</u> <u>Levers and Pulleys FOSS Science Stories P 1-4, 15</u> <u>Mixtures and Solutions</u></p>
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		<p>computer).</p>	<p>Investigation 2 Science Extension #1, Page 24 Ideas and Inventions FOSS Science Stories, Pg 1-3, 9, 10-13, 17-22 <u>Magnetism & Electricity</u>, Inv. 5, Part 1, Pgs 8-14 <u>Magnetism & Electricity</u> FOSS Science Stories, Pages 12-27, 34-37 <u>Measurement</u>, Inv. 1, Part 1, Pages 8-15 <u>Measurement FOSS Science Stories</u>, Pages 11-15, 22-26 <u>Physics of Sound</u>, Inv. 4 Social Studies Ext. P 23 <u>Physics of Sound FOSS Science Stories</u> P 29-35 <u>Structures of Life FOSS Science Stories</u> Pg 6-11 <u>Water</u>, Inv. 3, Social Studies Ext. Page 28 <u>Water FOSS Science Stories</u> Pages 17-26 <u>Sun, Moon and Stars FOSS Science Resources</u>, Pages 40-43 <u>Environments</u>, Inv. 6 Science Ext. #1, Pg 24 <u>Environments FOSS Science Stories</u>, Pages 36, 43-44, 46-52 <u>Food and Nutrition</u>, Investigation 3 Lang. Extension #1, Page 26 <u>Food and Nutrition FOSS Science Stories</u>, Pages 13, 19, 21, 24-26 <u>Landforms</u>, Inv. 3 Social Studies Ext. #1, Pg 25</p>	<p>various cultures.</p>	<p>FOSS Science Stories, P 5, 9-10, 17, 24, 27, 32-36 Models & Designs, Inv. 4 Language Ext. #1, Pg 21 Models & Designs FOSS Science Stories, Pages 4-10, 15-16, 25-36 <u>Water Planet FOSS Science Resources</u>, Pages 15, 18-19 <u>Solar Energy</u>, Inv. 2 Social Studies Ext. #2, Page 25 <u>Solar Energy FOSS Sci. Stories</u>, Pages 29-31, 34 Variables, Investigation 3 Language Ext. #2, Pg 29 Variables FOSS Science Stories, Pages 4-9, 21-28 <u>Chemical Interactions Resources</u>, Pages 4-8, 60, 69-72, 78-85 <u>Earth History</u>, Investigation 2, Parts 1-2, Pages 60-67 <u>Earth History Resources</u>, Pages 50-54, 73-78, 83-87 <u>Electronics</u>, Investigation 4, Part 2, Pages 149-151 <u>Electronics Resources</u>, Pages 2, 23-25, 34-36 <u>Force and Motion</u>, Investigation 7, Part 3, Pages 267-272 <u>Force & Motion Resources</u> Pages 1-2, 3-6, 62-66 <u>Human Brain and Senses</u>, Inv. 1, Part 4, Pages 55-59 <u>Human Brain and Senses Resources</u>, Pages 23-28, 31, 47-48, 75, 80-82 <u>Planetary Science</u>, Inv. 5, Part 1, Pages 154-157 <u>Planetary Science</u></p>
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<p>13.B.1c Describe contributions men and women have made to science and technology.</p>			<p><u>Landforms FOSS Science Stories</u>, Pages 6, 13-14, 19-21 <u>Mixtures and Solutions FOSS Science Stories</u>, Pages 43-45 <u>Models and Designs FOSS Science Stories</u>, Pgs 25-28, 29-36, 44-47 <u>Solar Energy</u>, Inv. 2 <u>Science Ext. #2</u>, Pg 36 <u>Solar Energy FOSS Science Stories</u> P 29-39 <u>Variables FOSS Sci. Stories</u>, P 18-20, 27-28</p>	<p>13.B.3c Describe how occupations use scientific and technological knowledge and skills.</p>	<p><u>Resources</u>, Pages 47-53, 59-62, 67-68, 71-73, 99 <u>Populations & Ecosystems Inv. 10</u>, Part 2, Pg 311-314 <u>Populations & Ecosystems Resources</u>, Pages 29, 46-55, 58-61 <u>Weather & Water Resources</u>, Pages 20-21, 38, 55-56, 67-68</p>
<p>13.B.1c Describe contributions men and women have made to science and technology.</p>	<p><u>Air and Weather FOSS Science Stories</u>, Pages 14-16 <u>Pebbles, Sand and Silt FOSS Science Stories</u> Pages 26-31</p>	<p>13.B.2c Identify and explain ways that science and technology influence the lives and careers of people.</p>	<p><u>Earth Materials</u>, Investigation 1 Science Extension #5 Page 32 <u>Human Body</u>, Inv. 2 <u>Language Ext. #4</u> Pg 26 <u>Human Body FOSS Science Stories</u>, Pages 17-20, 25-27 <u>Ideas and Inventions</u>, Investigation 2 Science Extension #1, Page 24 <u>Ideas and Inventions FOSS Science Stories</u>, P 1-3, 9-14, 17-18, 21-22 <u>Magnetism & Electricity</u>, Investigation 5, Part 1, Pages 8-14 <u>Magnetism & Electricity FOSS Science Stories</u>, Pages 12-27, 34-37 <u>Water Planet FOSS Science Resources</u>, Pages 15, 18-19 <u>Measurement</u>, Inv. 3, Part 3, Pages 18-21 <u>Measurement FOSS Science Stories</u>, Pages</p>	<p>13.B.3c Describe how occupations use scientific and technological knowledge and skills.</p>	<p><u>Environments</u>, Inv. 6 Lang. Extension #2, Page 23 <u>Environments FOSS Science Stories</u> P 47-48 <u>Food and Nutrition</u>, Inv. 4 <u>Math Extension #5</u>, Pg 23 <u>Food and Nutrition FOSS Science Stories</u>, Page 5 <u>Landforms</u>, Investigation 3 <u>Science Extension #4</u> P 27 <u>Landforms FOSS Science Stories</u> Pages 3-6 <u>Levers and Pulleys FOSS Science Stories</u>, Pages 11, 23-25 <u>Water Planet Science Resources</u>, pp. 15, 18-19 <u>Mixtures and Solutions FOSS Science Stories</u>, Pages 13-15, 21-22, 29-31 <u>Models & Designs</u>, Inv. 3 <u>Language Ext. #1</u>, Pg 24 <u>Models and Designs FOSS Science Stories</u>, P 11-16, 17-20, 25-28, 33-36 <u>Solar Energy</u>, Inv. 2</p>

<p>11-15, 22-26 <u>Physics of Sound, Inv. 4</u> <u>Language Ext. #1 Pg 21</u> <u>Physics of Sound FOSS</u> <u>Science Stories P 29-35</u> <u>Structures of Life FOSS</u> <u>Science Stories Pg 6-11</u> <u>Water, Investigation 3</u> <u>Language Ext. #1, P 27</u> <u>Water FOSS Science</u> <u>Stories Pages 17-26</u> <u>Sun, Moon and Stars</u> <u>FOSS Science</u> <u>Resources, Pages 44-46</u> <u>Environments, Inv. 6</u> <u>Language Ext. #2, P 23</u> <u>Environments FOSS</u> <u>Science Stories,</u> <u>Pages 36, 43-44</u> <u>Food and Nutrition,</u> <u>Investigation 4 Lang.</u> <u>Extension #1, Page 21</u> <u>Food and Nutrition</u> <u>FOSS Science Stories,</u> <u>Pages 16-19, 21, 24-26</u> <u>Landforms, Inv. 2</u> <u>Science Ext. #2, Pg 24</u> <u>Landforms FOSS</u> <u>Science Stories P 19-21</u> <u>Levers & Pulleys, Inv. 1</u> <u>Science Ext. #2, Pg 31</u> <u>Mixtures and Solutions</u> <u>FOSS Science Stories,</u> <u>Pages 14-15, 21-22</u> <u>Models & Designs Inv. 3</u> <u>Language Ext. #1, P 24</u> <u>Models and Designs</u> <u>FOSS Science Stories,</u> <u>Pgs 25-28, 29-36, 37-40</u> <u>Solar Energy, Inv. 3</u> <u>Social Studies</u></p>			
		<p><u>Language Ext. #2 Page 25</u> <u>Solar Energy FOSS</u> <u>Science Stories Pgs 26-28</u> <u>Variables, Inv. 3 Language</u> <u>Extension #2, Page 29</u> <u>Variables FOSS Science</u> <u>Stories, Pages 7, 15-28</u> <u>Chemical Interactions</u> <u>Resources,</u> <u>Pages 60, 78-85</u> <u>Diversity of Life Resources</u> <u>Pages 65-70</u> <u>Earth History, Inv. 1, Ext.</u> <u>the Experience #2, Pg 49</u> <u>Earth History Resources</u> <u>Pages 60-67, 74-75, 98-99</u> <u>Electronics, Investigation</u> <u>4, Part 2, Pages 149-151</u> <u>Electronics Resources,</u> <u>Pages 18-21, 23-25, 34-36</u> <u>Force & Motion Resources</u> <u>Pages 11-16</u> <u>Human Brain and Senses,</u> <u>Inv. 5, Parts 1-4,</u> <u>Pages 152-175</u> <u>Human Brain and Senses</u> <u>Resources</u> <u>Pages 47-48, 80-82</u> <u>Planetary Science, Inv. 7,</u> <u>Parts 1-5, Pages 218-237</u> <u>Planetary Science</u> <u>Resources, Pages 59-62,</u> <u>71-73, 78-82, 90-103</u> <u>Populations & Ecosystems</u> <u>Investigation 10, Part 3,</u> <u>Pages 315-317</u> <u>Populations & Ecosystems</u> <u>Resources,</u> <u>Pages 8-13, 29, 58-63</u> <u>Weather and Water, Inv. 1,</u> <u>Part 1, Pages 43-47</u> <u>Weather and Water</u></p>	

	<p>13.B.1d Identify and describe ways that science and technology affect people's everyday lives (e.g., transportation, medicine, agriculture, sanitation, communication occupations).</p>		<p><u>Animals Two by Two</u>, Investigation 3 Science Extension #4, Page 23 <u>Fabric</u>, Investigation 2, Parts 1-4, Pages 7-25 <u>Trees</u>, Tools For Observing Weather, Tools 1-6, Pages 6-24 <u>Wood</u>, Investigation 2, Parts 3-4, Pages 16-23 <u>Air and Weather</u>, Investigation 4, Part 2, Pages 12-18 <u>Air and Weather FOSS Science Stories</u>, Pages 14-17 <u>Balance and Motion FOSS Science Stories</u>, Pages 14-17 <u>Insects</u>, Investigation 6 Science Ext. #1, Pg 23 <u>New Plants</u>, Inv. 3 Science Ext. #1, Pg 27 <u>New Plants FOSS Science Stories</u>, Pages 3, 16-21 <u>Pebbles, Sand, and Silt</u>, Inv. 3, Part 1, Pgs 8-11 <u>Pebbles, Sand, and Silt FOSS Science Stories</u>, Pages 16-19, 24-25 <u>Solids & Liquids</u>, Inv. 1, Part 3, Pages 21-24</p>	<p>13.B.2d Compare the relative effectiveness of reducing, reusing and recycling in actual situations.</p>	<p>Extension #3, Page 26 <u>Solar Energy FOSS Science Stories</u>, Pgs 26-28, 29-33, 34-39 <u>Variables</u>, Inv 4 Science Extension #4, Page 31 <u>Variables FOSS Science Stories</u>, Pages 18-20, 21-28</p> <p>Conservation is top priority in FOSS. In FOSS modules most materials like plastic cups and paper plates are re-used or recycled. See for example: <u>Water</u>, Investigation 4, Math Extensions #1, #2 Pages 30-31 www.FOSSWEB.com <u>Water FOSS Science Stories</u>, Pages 17-21 <u>Environments</u>, Investigation 6 Science Extension #3, Page 24 <u>Environments FOSS Science Stories</u>, Pages 36, 43-45 <u>Solar Energy</u>, Investigation 3 Science Extension #6 Page 27</p>	<p>13.B.1d Identify and describe ways that science and technology affect people's everyday lives (e.g., transportation, medicine, agriculture, sanitation, communication occupations).</p>	<p><u>Animals Two by Two</u>, Investigation 3 Science Extension #4, Page 23 <u>Fabric</u>, Investigation 2, Parts 1-4, Pages 7-25 <u>Trees</u>, Tools For Observing Weather, Tools 1-6, Pages 6-24 <u>Wood</u>, Investigation 2, Parts 3-4, Pages 16-23 <u>Air and Weather</u>, Investigation 4, Part 2, Pages 12-18 <u>Air and Weather FOSS Science Stories</u>, Pages 14-17 <u>Balance and Motion FOSS Science Stories</u>, Pages 14-17 <u>Insects</u>, Investigation 6 Science Ext. #1, Pg 23 <u>New Plants</u>, Inv. 3 Science Ext. #1, Pg 27 <u>New Plants FOSS Science Stories</u>, Pages 3, 16-21 <u>Pebbles, Sand, and Silt</u>, Inv. 3, Part 1, Pgs 8-11 <u>Pebbles, Sand, and Silt FOSS Science Stories</u>, Pages 16-19, 24-25 <u>Solids & Liquids</u>, Inv. 1, Part 3, Pages 21-24</p>	<p>13.B.3d Analyze the interaction of resource acquisition, technological development and ecosystem impact (e.g., diamond, coal or gold mining; deforestation).</p>	<p><u>Resources</u>, Pages 37, 55</p> <p><u>Environments</u>, Investigation 6 Language Extension #1, Page 23 <u>Environments FOSS Science Stories</u>, Pages 36, 43-45 <u>Solar Energy</u>, Investigation 4 Language Extension #1 Page 34 <u>Chemical Interactions Resources</u>, Pages 60-61, 100 <u>Earth History Resources</u> Pages 64-67, 98-99 <u>Electronics Resources</u> Pages 18-21 <u>Planetary Science</u>, Investigation 8 Part 2, Pages 255-259 <u>Populations & Ecosystems</u> Investigation 4 Parts 1-2 Pages 119-129 <u>Populations & Ecosystems Resources</u>, Pages 8-13, 25-45 <u>Weather and Water</u> Investigation 9, Part 4, Pages 315-319 <u>Weather and Water Resources</u>, Pages 45-47</p>
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<p>13.B.1e Demonstrate ways to reduce, reuse and recycle materials.</p>	<p>Solids & Liquids FOSS Science Stories, Page 6 Plants and Animals FOSS Science Resources, Pages 9-14</p> <p>Conservation is top priority in FOSS. In FOSS modules most materials are re-used or recycled, even items like plastic cups and paper plates. See for example: <u>Wood and Paper</u>, Inv. 3, Parts 2-3, Pages 13-21 Investigation 4, Part 1, Pages 8-13 <u>Wood and Paper FOSS Science Stories</u>, Pages 19-23 <u>New Plants</u>, Investigation 1, Part 4, Pages 28-29 <u>Pebbles, Sand, and Silt</u>, Investigation 3, Language Extension #1, Page 30 <u>Sun, Moon and Stars</u> Investigation 2, Part 3, Page 113</p>	<p>13.B.2e Identify and explain ways that technology changes ecosystems (e.g., dams, highways, buildings, communication networks, power plants).</p>	<p><u>Earth Materials</u>, Investigation 3 Science Extension #4, Page 24 <u>Water</u>, Inv. 3, Social Studies Ext. Page 28 <u>Water FOSS Science Stories</u>, Pages 18-26, 24-26 <u>Environments</u>, Inv. 6 Language Ext. #2, P 23 <u>Environments FOSS Science Stories</u> Pages 30, 31-35, 36, 37, 43-45 <u>Landforms</u>, Investigation 3 Social Studies Extension #1, Page 25 <u>Landforms FOSS Sci. Stories</u>, Pages 15-21</p>	<p>13.B.3e Identify advantages and disadvantages of natural resource conservation and management programs.</p>	<p><u>Environments</u>, Inv. 5 Language Ext. #1, Page 23 <u>Environments FOSS Science Stories</u> Pages 30, 31-35, 36, 37, 43-45 <u>Landforms</u>, Inv. 3 Social Studies Ext. #1, Page 25 <u>Landforms FOSS Science Stories</u>, Pages 15-21 <u>Solar Energy</u>, Investigation 4 Language Ext. #1 Pg 34 <u>Solar Energy FOSS Science Stories</u>, P 29-39 <u>Chemical Interactions Resources</u>, Pages 60-61 <u>Diversity of Life</u>, Inv. 9, Extending the Experience #1 Page 290 <u>Electronics Resources</u>, Pages 18-21 <u>Populations & Ecosystems</u> Investigation 7, P 210-218 <u>Populations & Ecosystems Resources</u>, Pg 8-13, 25-45 <u>Weather and Water</u> Inv. 9, Extending the Experience #2 Page 320 <u>Weather and Water Resources</u>, P 45-47, 63-66 <u>Environments</u>, Inv. 6 Language Ext. # 2, Pg 23 <u>Landforms</u>, Inv. 3 Social Studies Ext. #1, Page 25 <u>Electronics Resources</u>, Pages 18-21 <u>Populations & Ecosystems</u></p>
<p>13.B.1e Demonstrate ways to reduce, reuse and recycle materials.</p>	<p>Solids & Liquids FOSS Science Stories, Page 6 Plants and Animals FOSS Science Resources, Pages 9-14</p> <p>Conservation is top priority in FOSS. In FOSS modules most materials are re-used or recycled, even items like plastic cups and paper plates. See for example: <u>Wood and Paper</u>, Inv. 3, Parts 2-3, Pages 13-21 Investigation 4, Part 1, Pages 8-13 <u>Wood and Paper FOSS Science Stories</u>, Pages 19-23 <u>New Plants</u>, Investigation 1, Part 4, Pages 28-29 <u>Pebbles, Sand, and Silt</u>, Investigation 3, Language Extension #1, Page 30 <u>Sun, Moon and Stars</u> Investigation 2, Part 3, Page 113</p>	<p>13.B.2f Analyze how specific personal and societal choices that humans make affect local, regional</p>	<p><u>Water</u>, Investigation 4, Part 3, Pages 19-23 <u>Water FOSS Science Stories</u>, Pages 17-21, 24-26 <u>Environments</u>, Inv. 6 Language Ext. # 2, P 23</p>	<p>13.B.3f Apply classroom-developed criteria to determine the effects of policies on local science</p>	<p><u>Environments</u>, Inv. 6 Language Ext. # 2, Pg 23 <u>Landforms</u>, Inv. 3 Social Studies Ext. #1, Page 25 <u>Electronics Resources</u>, Pages 18-21 <u>Populations & Ecosystems</u></p>

		<p>and global ecosystems (e.g., lawn and garden care, mass transit).</p>	<p><u>Environments FOSS</u> <u>Science Stories</u>, Pages 30, 31-35, 36, 37, 43-45 <u>Landforms</u>, Inv. 3 Social Studies Ext. #1 Page 25 <u>Landforms FOSS</u> <u>Science Stories</u>, P15-21 <u>Solar Energy</u>, Inv. 4 Language Ext. #1 Pg 34 <u>Water Planet FOSS</u> <u>Science Resources</u>, Pages 65-66</p>	<p>and technology issues (e.g., energy consumption, landfills, water quality).</p>	<p>Investigation 7, Extending the Experience, Page 218 <u>Weather and Water</u> Investigation 9, Extending the Experience #2 Page 320</p>
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