

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
KINDERGARTEN		
PS1. Properties of materials can be observed, measured, and predicted. As a basis for understanding this concept:		
PS1a. Students know objects can be described in terms of the materials they are made of (e.g., clay, cloth, paper) and their physical properties (e.g., color, size, shape, weight, texture, flexibility, attraction to magnets, floating, sinking).	<p><i>Fabric Science Stories (CA Edition)</i> -"What Is Fabric Made From?" pp. 3-15 -"How Are Fabrics Used?" pp. 16-24</p> <p><i>Fabric Teacher Guide (CA Edition)</i> -Investigation 1, pp. 7-33 -Investigation 2, pp. 9-25 -Investigation Duplication Masters, nos. 2, 4-11</p> <p><i>Wood and Paper Teacher Guide (CA Edition)</i> -Investigation 1, pp. 12-27 -Investigation 3, pp. 11-25 -Investigation 2, pp. 10-23 -Investigation 4, pp. 11-18 -Investigation 5, pp. 10-21 -Investigation Duplication Masters, nos. 3-9, 11-18, 22-27</p>	<p><i>Wood and Paper Science Stories (CA Edition)</i> -"The Story of a Chair" pp. 3-8 -"The Story of a Box" pp. 13-18</p>
PS1b. Students know water can be a liquid or a solid and can be made to change back and forth from one form to the other.	<p><i>Trees Science Stories (CA Edition)</i> -"My Apple Tree" pp. 14-15</p> <p><i>Trees Teacher Guide (CA Edition)</i> -Reading Connections, pp. 12-13</p>	
PS1c. Students know water left in an open container evaporates (goes into the air) but water in a closed container does not.	<p><i>Fabric Teacher Guide (CA Edition)</i> -Investigation 2, p. 10</p>	
LS2. Different types of plants and animals inhabit the earth. As a basis for understanding this concept:		

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<p>LS2a. Students know how to observe and describe similarities and differences in the appearance and behavior of plants and animals (e.g., seed-bearing plants, birds, fish, insects).</p>	<p>Animals Two by Two Science Stories (CA Edition) -"Goldfish and Guppies" pp. 4-7 -"Eggs and Chicks" pp. 20-24 -"Learning About Animals" p. 3 -"Land and Water Snails" pp. 8-11 -"Big and Little Worms" pp. 12-15 -"Isopods" pp. 16-19</p> <p>Animals Two by Two Big Book (big book included in the Animals Two by Two kit) -p. 4, Bats & Birds (author - Dr. Lowery, included in Animals Two by Two Kit)</p> <p>Animals Two by Two Teacher Guide (CA Edition) -Investigation 1, pp. 15-29 -Investigation 2, pp. 11-21 -Investigation 3, pp. 10-20 -Investigation 4, pp. 10-23 -Investigation 5, pp. 12-27 -Investigation Duplication Masters, nos. 4, 6-8, 10-11, 14-22, 24-25</p> <p>Trees Teacher Guide (CA Edition) -Investigation 1, pp. 11-14, 18-19, 22,24 -Investigation 3, pp. 10-38 -Investigation Duplication Masters, nos. 15, 19, 21-23, 34</p>	<p>Trees Science Stories (CA Edition) -"Where Do Trees Grow?" pp. 3-13 -"My Apple Tree" pp. 14-17 -"Orange Trees" pp. 18-21 -"Maple Trees" pp. 22-24</p> <p>Our Very Own Tree Big Book (big book included in the Trees kit) -p. 7, Pictures of Trees (author - Dr. Lowery, included in Trees Kit)</p> <p>Trees Teacher Guide (CA Edition) -Investigation 1, pp. 25-30 -Investigation 2, pp. 8-28</p>
<p>LS2b. Students know stories sometimes give plants and animals attributes they do not really have.</p>	<p>Animals Two by Two Teacher Guide (CA Edition) -Reading Connections, pp. 3, 9-10 -Investigation 1, p. 27</p> <p>Trees Teacher Guide (CA Edition) -Reading Connections, pp. 3, 9-10</p>	<p>-A Fish Out of Water (trade book included in the Animals Two by Two kit, author Dr. Lowery)</p>

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<p>LS2c. Students know how to identify major structures of common plants and animals (e.g., stems, leaves, roots, arms, wings, legs)</p>	<p><i>Animals Two by Two Science Stories (CA Edition)</i> -"Goldfish and Guppies" pp. 5-7 -"Land and Water Snails" pp. 8-11 -"Big and Little Worms" pp. 12-15 -"Isopods" pp. 16-19 -"Eggs and Chicks" pp. 20-24</p> <p><i>Trees Science Stories (CA Edition)</i> -"Where Do Trees Grow?" pp. 3, 9</p> <p><i>Animals Two by Two Teacher Guide (CA Edition)</i> -Investigation 1, pp. 15-16 -Investigation 2, pp. 11-13, 20-21 -Investigation 3, pp. 10-12, 19-20 -Investigation 4, pp. 10-13 -Investigation 5, pp. 22-24 -Investigation Duplication Masters, nos. 3, 8, 14, 18</p> <p><i>Trees Teacher Guide (CA Edition)</i> -Investigation 1, pp. 11-14, 27, 29-30 -Investigation 2, pp. 8-9, 13-15, 18-19</p>	<p><i>Animals Two by Two Big Book</i> (big book included in the Animals Two by Two kit, author-Dr. Lowery)</p> <p><i>Trees Science Stories (CA Edition)</i> -"My Apple Tree" pp. 14-17 -"Orange Trees" pp. 18-21</p> <p><i>Our Very Own Tree Big Book</i> (big book included in the Trees kit, author-Dr. Lowery)</p> <p><i>Trees Teacher Guide (CA Edition)</i> -Investigation 3, pp. 9-34</p>
<p>ES3. Earth is composed of land, air, and water. As a basis for understanding this concept:</p>		
<p>ES3a. Students know characteristics of mountains, rivers, oceans, valleys, deserts, and local landforms.</p>	<p><i>Trees Science Stories (CA Edition)</i> -"Where Do Trees Grow?" pp. 6-11</p>	<p><i>Trees Teacher Guide (CA Edition)</i> -Reading Connections pp., 8-9</p>
<p>ES3b. Students know changes in weather occur from day to day and across seasons, affecting Earth and its inhabitants.</p>	<p><i>Trees Science Stories (CA Edition)</i> -"My Apple Tree" pp. 14-17 -"Orange Trees" pp. 18-21 -"Maple Trees" pp. 22-24</p>	<p><i>Our Very Own Tree Big Book</i> (big book included in the Trees kit) -p. 10, Seasons (written by Dr. Lowery & included in Trees Kit)</p> <p><i>Trees Teacher Guide (CA Edition)</i> -Investigation 3, pp. 10-34 -Reading Connections, p. 13</p>

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<p>ES3c. Students know how to identify resources from Earth that are used in everyday life and understand that many resources can be conserved.</p>	<p>Wood and Paper Science Stories (CA Edition) -"The Story of a Chair" pp. 3-8 -"The Story of a Box" pp. 13-18 -"Land, Air, and Water" pp. 19-23</p> <p>Wood and Paper Teacher Guide (CA Edition) -Investigation 3, pp. 11-12 -Investigation 4, pp. 11-13</p> <p>Trees Teacher Guide (CA Edition) -Investigation 3, pp. 13-14</p>	<p>Fabric Science Stories (CA Edition) -"What Is Fabric Made From?" pp. 4-5, 6-7, 8-9, 10-11, 12-13, 14-15</p> <p>Wood and Paper Teacher Guide (CA Edition) -Investigation 2, pp. 10-23</p>
<p>IE4. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:</p>		

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<p>IE4a. Observe common objects by using the five senses.</p>	<p>Observation is an important science process skill in all FOSS kindergarten units. Students use the senses of sight and touch in almost every investigation. Smell and hearing are also included where appropriate. For health and safety reasons, the sense of taste is rarely used in FOSS.</p> <p>Wood and Paper Science Stories (CA Edition) -"Are You a Scientist?" pp. 9-12</p> <p>Fabric Teacher Guide (CA Edition) -Investigation 1, pp. 7-11</p> <p>Wood and Paper Teacher Guide (CA Edition) -Investigation 1, p. 12</p>	<p>Animals Two by Two Science Stories (CA Edition) -"Learning about Animals" p. 3 -"Goldfish and Guppies" pp. 5, 7 -"Land and Water Snails" pp. 9, 11 -"Big and Little Worms" pp. 13-15 -"Isopods" pp. 17-19 -"Eggs and Chicks" pp. 21, 23, 24</p> <p>Trees Teacher Guide (CA Edition) -Investigation 3, p. 34 -Reading Connections, pp. 10-11</p>
<p>IE4b. Describe the properties of common objects.</p>	<p>Fabric Science Stories (CA Edition) -"What Is Fabric Made From?" pp. 3, 14-15 -"How Are Fabrics Used?" pp. 16-24</p> <p>Wood and Paper Science Stories (CA Edition) -"The Story of a Box" p. 13</p> <p>Fabric Teacher Guide (CA Edition) -Investigation 1, pp. 7, 11, 18, 19 -Investigation 2, pp. 9-25 -Investigation Duplication Masters, no. 14</p> <p>Wood and Paper Teacher Guide (CA Edition) -Investigation 1, pp. 12-27 -Investigation 2, pp. 14-23 -Investigation 3, pp. 11-25 -Investigation 4, pp. 11-18 -Investigation 5, pp. 10-21 -Investigation Duplication Masters nos. 22-27</p>	<p>Wood and Paper Science Stories (CA Edition) -"The Story of a Box" pp. 13-18</p>

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<p>IE4c. Describe the relative position of objects by using one reference (e.g., above or below).</p>	<p><i>Animals Two by Two Teacher Guide (CA Edition)</i> -Investigation 1, pp. 24-25</p> <p><i>Wood and Paper Teacher Guide (CA Edition)</i> -Investigation 1, pp. 26-27, 30-32 -Investigation Duplication Masters, nos. 4-5 -Investigation 5, p. 15</p>	<p><i>Animals Two by Two Teacher Guide (CA Edition)</i> -Investigation 2, pp. 16-17 -Investigation 3, pp. 15-16</p>
<p>IE4d. Compare and sort common objects by one physical attribute (e.g., color, shape, texture, size, weight).</p>	<p><i>Trees Teacher Guide (CA Edition)</i> -Investigation 2, pp. 13-15, 18-19, 22, 25, 28</p> <p><i>Animals Two by Two Teacher Guide (CA Edition)</i> -Investigation 2, pp. 22-24 -Investigation 4, pp. 14-15 -Investigation Duplication Masters, no. 19</p> <p><i>Wood and Paper Teacher Guide (CA Edition)</i> -Investigation 3, pp. 15-25 -Investigation 1, pp. 26-32</p> <p><i>Fabric Teacher Guide (CA Edition)</i> -Investigation 1, pp. 10-15</p>	<p><i>Fabric Science Stories (CA Edition)</i> -"What Is Fabric Made From?" p. 3 -"How Are Fabrics Used?" pp. 20, 23</p> <p><i>Fabric Teacher Guide (CA Edition)</i> -Investigation 2, pp. 24-25</p> <p><i>Trees Teacher Guide (CA Edition)</i> -Investigation 2, pp. 22, 25</p>
<p>IE4e. Communicate observations orally and through drawings.</p>	<p><i>Animals Two by Two Teacher Guide (CA Edition)</i> -Investigation 1, pp. 16, 25 -Investigation Duplication Masters, nos. 25-26 -Investigation 2, p. 12</p> <p><i>Trees Teacher Guide (CA Edition)</i> -Investigation 1, p. 11 -Investigation 2, p. 28</p> <p><i>Fabric Teacher Guide (CA Edition)</i> -Investigation 1, pp. 34-35 -Investigation 2, p. 26</p>	<p><i>Trees Science Stories (CA Edition)</i> -"Maple Trees" pp. 22-24</p> <p><i>Trees Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, nos. 4-5 ("A Tree Comes to Class" poster story) -Reading Connections pp. 4-5</p>

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GRADE ONE		
PS1. Materials come in different forms (states), including solids, liquids, and gases. As a basis for understanding this concept:		
PS1a. Students know solids, liquids, and gases have different properties.	<p><i>Solids and Liquids Science Stories (CA Edition)</i> -"Solids and Liquids" pp. 8-12, 13</p> <p><i>Solids and Liquids Teacher Guide (CA Edition)</i> -Investigation 1, pp. 13-16, 19-20 -Investigation 2, pp. 13-14, 18-20</p> <p><i>Air and Weather Teacher Guide (CA Edition)</i> -Investigation 1, pp. 11-12, 15-16</p>	<p><i>Solids and Liquids Science Stories (CA Edition)</i> -"Everything Matters" pp. 3-7</p> <p><i>Solids and Liquids Teacher Guide (CA Edition)</i> -Investigation 3, pp. 11-13, 17-18, 22-23, 27</p>
PS1b. Students know the properties of substances can change when the substances are mixed, cooled, or heated.	<p><i>Solids and Liquids Science Stories (CA Edition)</i> -"Solids to Liquids and Back Again" pp. 14-17 -"Mix It Up!" pp. 18-21, 22-23 -Glossary p. 24</p> <p><i>Solids and Liquids Teacher Guide (CA Edition)</i> -Investigation 4, pp. 10-16, 20-22, 25-27</p>	<p><i>Solids and Liquids Teacher Guide (CA Edition)</i> -Investigation 4, pp. 29, 31</p>
LS2. Plants and animals meet their needs in different ways. As a basis for understanding this concept:		
LS2a. Students know different plants and animals inhabit different kinds of environments and have external features that help them thrive in different kinds of places.	<p><i>New Plants Science Stories (CA Edition)</i> -"Plants and Animals around the World" pp. 22-39</p>	<p><i>New Plants Teacher Guide (CA Edition)</i> -Science Stories, pp. 10-12</p>

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<p>LS2b. Students know both plants and animals need water, animals need food, and plants need light.</p>	<p>New Plants Science Stories (CA Edition) -"What Do Plants Need?" pp. 3-7</p> <p>New Plants Teacher Guide (CA Edition) -Investigation 1, pp. 11-12, 20-21, 25-30 -Investigation 2, p. 13</p>	<p>New Plants Science Stories (CA Edition) -"Plants and Animals around the World" pp. 22-39</p>
<p>LS2c. Students know animals eat plants or other animals for food and may also use plants or even other animals for shelter and nesting.</p>	<p>New Plants Science Stories (CA Edition) -"Plants and Animals around the World" pp. 27, 30</p>	<p>New Plants Science Stories (CA Edition) -"How Seeds Travel" p. 11</p> <p>New Plants Teacher Guide (CA Edition)- -Investigation 1, p. 32 -Investigation Duplication Masters, no. 21</p>
<p>LS2d. Students know how to infer what animals eat from the shapes of their teeth (e.g., sharp teeth: eats meat; flat teeth: eats plants).</p>	<p>New Plants Science Stories (CA Edition) -"Animal Teeth" pp. 40-43</p>	
<p>LS2e. Students know roots are associated with the intake of water and soil nutrients and green leaves are associated with making food from sunlight.</p>	<p>New Plants Science Stories (CA Edition) -"What Do Plants Need?" pp. 4-6</p> <p>New Plants Teacher Guide (CA Edition) -Investigation 4, pp. 16-19 -Investigation 2, pp. 24-29 -Investigation 1, pp. 25-30</p>	<p>New Plants Science Stories (CA Edition) -"Plants and Animals around the World" pp. 22, 28, 37</p> <p>New Plants Teacher Guide (CA Edition) -Investigation 3, pp. 16-18</p>
<p>ES3. Weather can be observed, measured, and described. As a basis for understanding this concept:</p>		
<p>ES3a. Students know how to use simple tools (e.g., thermometer, wind vane) to measure weather conditions and record changes from day to day across the seasons.</p>	<p>Air and Weather Teacher Guide (CA Edition) -Investigation 2, pp. 17-19, 26-27 -Investigation 3, pp. 14-16, 25-27</p>	<p>Air and Weather Science Stories (CA Edition) -"Understanding the Weather" pp. 14-15 -Glossary p. 24</p>

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ES3b. Students know that the weather changes from day to day but that trends in temperature or of rain (or snow) tend to be predictable during a season.	<i>Air and Weather Teacher Guide (CA Edition)</i> -Investigation 4, pp. 10-11,16-18	<i>Air and Weather Science Stories (CA Edition)</i> -"Seasons" pp.18-23
ES3c. Students know the sun warms the land, air, and water.	<i>Air and Weather Teacher Guide (CA Edition)</i> -Investigation 4, p. 16	<i>Air and Weather Science Stories (CA Edition)</i> -"Seasons" p. 21
IE4. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:		
IE4a. Draw pictures that portray some features of the thing being described.	<i>New Plants Teacher Guide (CA Edition)</i> -Investigation 2, pp. 11-14, 17-19, 24-28 <i>Air and Weather Teacher Guide (CA Edition)</i> -Investigation 2, pp. 13, 27 -Investigation 3, pp. 25-27 -Investigation 4, pp. 18, 24 -Investigation Duplication Masters, nos. 2-7, 30	<i>Solids and Liquids Teacher Guide (CA Edition)</i> -Investigation 2, pp. 7, 11 -Investigation 4, pp. 21-22, 26 -Investigation Duplication Masters, nos. 17, 18, 28-30, 40
IE4b. Record observations and data with pictures, numbers, or written statements.	<i>Air and Weather Teacher Guide (CA Edition)</i> -Investigation 2, pp. 11-13, 17-19, 22-23, 26-27 -Investigation Duplication Masters, nos. 2-7, 30 <i>New Plants Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, nos. 3, 5, 8, 10, 11, 13, 16	<i>Solids and Liquids Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, nos. 3, 4, 20, 28-30, 33, 37, 40-42

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IE4c. Record observations on a bar graph.	<p><i>Air and Weather Teacher Guide (CA Edition)</i> -Investigation 4, pp. 10-11, 16-18 -Investigation Duplication Masters, nos. 25, 27-28, 37, 40</p> <p><i>Solids and Liquids Teacher Guide (CA Edition)</i> -Investigation 3, p. 28 -Investigation 4, p. 13 -Investigation Duplication Masters, nos. 33, 35</p>	<p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, p. 24 -Investigation 2, pp. 23, 27</p>
IE4d. Describe the relative position of objects by using two references (e.g., above and next to, below and left of).	<p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, p. 27</p> <p><i>Air and Weather Teacher Guide (CA Edition)</i> -Investigation 4, pp. 22-24</p>	<p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, p. 31 -Investigation Duplication Masters no. 13</p>
IE4e. Make new observations when discrepancies exist between two descriptions of the same object or phenomenon.	<p><i>Solids and Liquids Teacher Guide (CA Edition)</i> -Investigation 4, pp. 25-27</p>	

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GRADE TWO		
PS1. The motion of objects can be observed and measured. As a basis for understanding this concept:		
PS1a. Students know the position of an object can be described by locating it in relation to another object or to the background.	<i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation 1, pp. 15-18	<i>Balance and Motion Science Stories (CA Edition)</i> -"Rolling, Rolling, Rolling!" pp. 26-31 <i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation Duplication Masters no. 11
PS1b. Students know an object's motion can be described by recording the change in position of the object over time.	<i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation 2, pp. 11-13 -Investigation 3, pp. 9-12, 19-25	<i>Balance and Motion Science Stories (CA Edition)</i> -"Rolling, Rolling, Rolling!" p. 28 <i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation Duplication Masters no. 10
PS1c. Students know the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force of the push or pull.	<i>Balance and Motion Science Stories (CA Edition)</i> -"Make It Balance" p. 3 -"Push or Pull?" pp. 10-13	<i>Balance and Motion Teacher Guide (CA Edition)</i> -Science Stories, pp.4-5 -Investigation 2, pp. 17-19
PS1d. Students know tools and machines are used to apply pushes and pulls (forces) to make things move.	<i>Balance and Motion Science Stories (CA Edition)</i> -"Tools and Machines" pp. 14-17 -"Push or Pull?" pp. 10-13	
PS1e. Students know objects fall to the ground unless something holds them up.	<i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation 1, pp. 11-13, 16-18, 21-23	<i>Balance and Motion Teacher Guide (CA Edition)</i> -Teacher Guide Supplement pp. 3, 7 (<i>found under "California FOSS Introduction" Tab</i>)

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PS1f. Students know magnets can be used to make some objects move without being touched.	<i>Balance and Motion Science Stories (CA Edition)</i> -"Move It, But Don't Touch It" pp. 19-20	<i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation 3, p. 28 -Investigation Duplication Masters, no. 11
PS1g. Students know sound is made by vibrating objects and can be described by its pitch and volume.	<i>Balance and Motion Science Stories (CA Edition)</i> -"Strings in Motion" pp. 32-35	<i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation 2, p. 27 -Investigation Duplication Masters, no. 9
LS2. Plants and animals have predictable life cycles. As a basis for understanding this concept:		
LS2a. Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another.	<i>Insects Science Stories (CA Edition)</i> -"Life Goes Around" pp. 22-33 <i>New Plants Science Stories (CA Edition)</i> -"Flowers and Seeds" pp. 12-15 <i>Insects Teacher Guide (CA Edition)</i> -Investigation 1, pp. 8-23 -Investigation 2, pp. 11-24 -Investigation 3, pp. 23-26 -Investigation 4, pp. 10-31 <i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, pp. 11-12, 18-22, 25-30	<i>Insects Science Stories (CA Edition)</i> -"Insect Life Cycles" pp. 16-21 -"Environment" pp. 36-41 <i>New Plants Science Stories (CA Edition)</i> -"How Seeds Travel" pp. 8-11

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<p>LS2b. Students know the sequential stages of life cycles are different for different animals, such as butterflies, frogs, and mice.</p>	<p><i>Insects Science Stories (CA Edition)</i> -"Life Goes Around" pp. 22-33</p> <p><i>Insects Teacher Guide (CA Edition)</i> -Investigation 1, pp. 24-25, 27 -Investigation 2, pp. 24, 27 -Investigation 3, pp. 24-26, 28 -Investigation 4, pp. 30-32 -Investigation 5, pp. 12-13, 19, 22-24 -Investigation Duplication Masters, nos. 34, 38, 40, 44, 48</p>	<p><i>Insects Science Stories (CA Edition)</i> -"Insect Life Cycles" pp. 16-21</p>
<p>LS2c. Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment.</p>	<p><i>Insects Science Stories (CA Edition)</i> -"Environment" pp. 36-41 -"Insect Life Cycles" pp. 16-21 -"Life Goes Around" pp. 22-33</p>	<p><i>Insects Teacher Guide (CA Edition)</i> -Investigation 3, pp. 10-11, 17-20, 23-26</p> <p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, pp. 18-22, 25-30</p>
<p>LS2d. Students know there is a variation among individuals of one kind within a population.</p>	<p><i>Insects Science Stories (CA Edition)</i> -"Variation" pp. 42-46</p> <p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, pp. 18-22, 25-30</p>	<p><i>Insects Science Stories (CA Edition)</i> -"Insect Life Cycles" pp. 16-21</p> <p><i>Insects Teacher Guide (CA Edition)</i> -Investigation 2, pp. 12-15, 18-19, 22-24 -Investigation 3, p. 24</p>
<p>LS2e. Students know light, gravity, touch, or environmental stress can affect the germination, growth, and development of plants.</p>	<p><i>Insects Science Stories (CA Edition)</i> -"Environment" pp. 39-41</p> <p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 2, pp. 11-14, 17-19, 24-28</p>	<p><i>New Plants Science Stories (CA Edition)</i> -"What Do Plants Need?" pp. 6-7</p> <p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, p. 20</p>

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LS2f. Students know flowers and fruits are associated with reproduction in plants.	<p><i>New Plants Science Stories (CA Edition)</i> -Flowers and Seeds" pp. 12-15</p> <p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, pp. 27-30</p>	<p><i>New Plants Science Stories (CA Edition)</i> -"How Seeds Travel" pp. 9, 11</p>
ES3. Earth is made of materials that have distinct properties and provide resources for human activities. As a basis for understanding this concept:		
ES3a. Students know how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals.	<p><i>Pebbles, Sand, and Silt Science Stories (CA Edition)</i> -"Colorful Rocks" pp. 8-9 -"Exploring Rocks" pp. 3-7</p> <p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 1, pp. 11-12, 15-17, 20-21, 24-25, 28-29</p>	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 2, pp. 8-32</p>
ES3b. Students know smaller rocks come from the breakage and weathering of larger rocks.	<p><i>Pebbles, Sand, and Silt Science Stories (CA Edition)</i> -"The Story of Sand" pp. 10-13</p>	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 1, pp. 11-12 -Investigation 2, pp. 8-32</p>
ES3c. Students know that soil is made partly from weathered rock and partly from organic materials and that soils differ in their color, texture, capacity to retain water, and ability to support the growth of many kinds of plants.	<p><i>Pebbles, Sand, and Silt Science Stories (CA Edition)</i> -"What Is In Soil?" pp. 20-23 -"Testing Soil" pp. 24-25</p> <p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 4, pp. 10-14, 17-18, 22-25</p>	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Science Stories, pp. 12-17</p>
ES3d. Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils.	<p><i>Pebbles, Sand, and Silt Science Stories (CA Edition)</i> -"Fossils" pp. 26-31</p>	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Science Stories, pp. 18-19</p>

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GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>ES3e. Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use.</p>	<p><i>Pebbles, Sand, and Silt Science Stories (CA Edition)</i> -"Making Things with Rocks" pp.16-19</p> <p><i>New Plants Science Stories (CA Edition)</i> -"The Story of Wheat" pp. 16-21</p> <p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 3, pp. 10-11, 14-15, 18-19, 22-23, 27-29</p>	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 2, p. 31</p> <p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, p. 32 -Investigation Duplication Masters, no. 21</p>
<p>IE4. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:</p>		
<p>IE4a. Make predictions based on observed patterns and not random guessing.</p>	<p><i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation 1, pp. 14-18</p> <p><i>Insects Teacher Guide (CA Edition)</i> -Investigation 5, p. 13</p> <p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 2, p. 29 -Investigation Duplication Masters, no. 9</p>	<p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, pp. 25-28, 30 -Investigation Duplication Masters, no. 14</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
IE4b. Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units.	<p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, pp. 20-21, 24-31 -Investigation 2, p. 23</p>	<p><i>Insects Teacher Guide (CA Edition)</i> -Investigation 2, p. 12 -Investigation 6, p. 12</p>
IE4c. Compare and sort common objects according to two or more physical attributes (e.g., color, shape, texture, size, weight).	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 1, pp. 18-29</p>	<p><i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation 2, pp. 11-13</p> <p><i>Pebbles, Sand, and Silt Science Stories (CA Edition)</i> -"Exploring Rocks" pp. 3-7 -"Colorful Rocks" pp. 8-9</p>
IE4d. Write or draw descriptions of a sequence of steps, events, and observations.	<p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, pp. 25-30 -Investigation Duplication Masters, nos. 2, 3</p> <p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 2, pp. 9-23, 26-29 -Investigation Duplication Masters, nos. 7-9</p>	<p><i>Insects Teacher Guide (CA Edition)</i> -Investigation 5, p. 24</p>
IE4e. Construct bar graphs to record data, using appropriately labeled axes.	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 2, p. 30 -Investigation Duplication Masters, no. 16</p>	<p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, p. 30</p>
IE4f. Use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects.	<p><i>Insects Teacher Guide (CA Edition)</i> -Investigation 1, pp. 12, 18-19</p> <p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 1, p. 15</p>	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 2, pp. 10, 20</p>

FOSS California Standards Matrix, K-5

<i>GRADE LEVEL AND CA STATE SCIENCE STANDARDS</i>	<i>PRIMARY CITATIONS</i>	<i>SUPPORTING CITATIONS</i>
IE4g. Follow oral instructions for a scientific investigation.	<p><i>New Plants Teacher Guide (CA Edition)</i> -Investigation 1, pp. 18-21</p> <p><i>Balance and Motion Teacher Guide (CA Edition)</i> -Investigation 2, pp. 23-25</p>	<p><i>Pebbles, Sand, and Silt Teacher Guide (CA Edition)</i> -Investigation 4, p. 17</p> <p><i>Insects Teacher Guide (CA Edition)</i> -Investigation 3, pp. 17-19</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
GRADE THREE		
PS1. Energy and matter have multiple forms and can be changed from one form to another. As a basis for understanding this concept:		
PS1a. Students know energy comes from the Sun to Earth in the form of light.	Physics of Sound Science Stories (CA Edition) -"Energy" p. 22	
PS1b. Students know sources of stored energy take many forms, such as food, fuel, and batteries.	Physics of Sound Science Stories (CA Edition) -"Energy" pp. 23-26	Structures of Life Science Stories (CA Edition) -"Seeds Are Everywhere" p. 2 -"The Most Important Seed" pp. 4-5
PS1c. Students know machines and living things convert stored energy to motion and heat.	Physics of Sound Science Stories (CA Edition) -"Energy" pp. 22-25	
PS1d. Students know energy can be carried from one place to another by waves, such as water waves and sound waves, by electric current, and by moving objects.	Physics of Sound Science Stories (CA Edition) -"Energy" pp. 26-28 -"Making Waves" p. 14	Physics of Sound Science Stories (CA Edition) -"Scoping Out Sound" pp. 17-18 -"Moving Along" pp. 19-20 Physics of Sound Teacher Guide (CA Edition) -Investigation 3, pp. 11-14, 17-19
PS1e. Students know matter has three forms: solid, liquid, and gas.	Measurement Science Stories (CA Edition) -"Everything Is Made of Atoms" p. 32-33	Physics of Sound Science Stories (CA Edition) -"Moving Along" pp. 19-20 Physics of Sound Teacher Guide (CA Edition) -Investigation 3, pp. 11-14, 17-19
PS1f. Students know evaporation and melting are changes that occur when the objects are heated.	Measurement Science Stories (CA Edition) -"Everything Is Made of Atoms" p. 33	

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
PS1g. Students know that when two or more substances are combined, a new substance may be formed with properties that are different from those of the original materials.	Measurement Science Stories (CA Edition) -"Everything is Made of Atoms" pp. 31-32	Measurement Teacher Guide (CA Edition) -Science Stories, pp. 26-27
PS1h. Students know all matter is made of small particles called atoms, too small to see with the naked eye.	Measurement Science Stories (CA Edition) -"Everything is Made of Atoms" pp. 30-31	Measurement Teacher Guide (CA Edition) -Science Stories, pp. 26-27
PS1i. Students know people once thought that earth, wind, fire, and water were the basic elements that made up all matter. Science experiments show that there are more than 100 different types of atoms, which are presented on the periodic table of the elements.	Measurement Science Stories (CA Edition) -"Everything is Made of Atoms" pp. 30	
PS2. Light has a source and travels in a direction. As a basis for understanding this concept:		
PS2a. Students know sunlight can be blocked to create shadows.	Ideas and Inventions Science Stories (CA Edition) -"Into the Shadows" pp. 26-27	
PS2b. Students know light is reflected from mirrors and other surfaces.	Ideas and Inventions Science Stories (CA Edition) -"Throw a Little Light on Sight" pp. 23-25 -"Light and Reflection" pp. 28-31 Ideas and Inventions Teacher Guide (CA Edition) -Investigation 4, pp. 10, 13, 17, 20-21	Ideas and Inventions Science Stories (CA Edition) -"Making Mirrors" p. 32
PS2c. Students know the color of light striking an object affects the way the object is seen.	Ideas and Inventions Science Stories (CA Edition) -"Throw a Little Light on Sight" p. 25	

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
PS2d. Students know an object is seen when light traveling from the object enters the eye.	<p>Ideas and Inventions Science Stories (CA Edition)</p> <ul style="list-style-type: none"> - "Throw a Little Light on Sight" pp. 24-25 - "Light and Reflection" pp. 28-31 	<p>Ideas and Inventions Teacher Guide (CA Edition)</p> <ul style="list-style-type: none"> - Investigation 4, pp. 10, 13
<p>LS3. Adaptations in physical structure or behavior may improve an organism's chance for survival. As a basis for understanding this concept:</p>		
LS3a. Students know plants and animals have structures that serve different functions in growth, survival, and reproduction.	<p>Structures of Life Science Stories (CA Edition)</p> <ul style="list-style-type: none"> - "Answering Kids' Questions: <i>Crayfish, Crawfish, Crawdaddy</i>" pp. 17-18 - "Inside a Snail's Shell" p. 39 - "Crayfish, Snails, and Kids" pp. 41-42 <p>Structures of Life Teacher Guide (CA Edition)</p> <ul style="list-style-type: none"> - Investigation 1, pp. 13, 17, 32-33 - Investigation 2, pp. 11-13 - Investigation 3, pp. 12-14 - Investigation 4, pp. 10, 13, 16-19 - Investigation Duplication Masters, nos. 10-11, 14-15, 18 	<p>Structures of Life Science Stories (CA Edition)</p> <ul style="list-style-type: none"> - "Seeds Are Everywhere!" pp. 2, 3 - "Life Cycle of a Crayfish" pp. 20-21 - "Basic Snail Facts" p. 40
LS3b. Students know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands.	<p>Structures of Life Science Stories (CA Edition)</p> <ul style="list-style-type: none"> - "Life on Earth" pp. 22-34 	<p>Structures of Life Science Stories (CA Edition)</p> <ul style="list-style-type: none"> - "The Most Important Seed" pp. 4-5 - "Hydro-growing" pp. 10-11 - "Answering Kids' Questions: <i>Crayfish, Crawfish, Crawdaddy</i>" p. 19 - "The Food Web" p. 43

FOSS California Standards Matrix, K-5

<i>GRADE LEVEL AND CA STATE SCIENCE STANDARDS</i>	<i>PRIMARY CITATIONS</i>	<i>SUPPORTING CITATIONS</i>
<p>LS3c. Students know living things cause changes in the environment in which they live: some of these changes are detrimental to the organism or other organisms, and some are beneficial.</p>	<p>Structures of Life Science Stories (CA Edition) -"A Change in the Environment" pp. 35-36</p>	<p>Structures of Life Science Stories (CA Edition) -"Life on Earth" p. 34</p> <p>Structures of Life Teacher Guide (CA Edition) -Science Stories, pp. 18-19</p>
<p>LS3d. Students know when the environment changes, some plants and animals survive and reproduce; others die or move to new locations.</p>	<p>Structures of Life Science Stories (CA Edition) -"A Change in the Environment" pp. 35-36</p>	<p>Structures of Life Science Stories (CA Edition) -"Life in Los Angeles" p. 48 -"Life on Earth" p. 24</p>
<p>LS3e. Students know that some kinds of organisms that once lived on Earth have completely disappeared and that some of those resembled others that are alive today.</p>	<p>Structures of Life Science Stories (CA Edition) -"Life in Los Angeles" pp. 45-48</p>	<p>Structures of Life Teacher Guide (CA Edition) -Science Stories, pp. 26-27</p>
<p>ES4. Objects in the sky move in regular and predictable patterns. As a basis for understanding the concept:</p>		
<p>ES4a. Students know the patterns of stars stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons.</p>	<p>Ideas and Inventions Science Stories (CA Edition) -"Looking at the Sky" p. 37</p>	<p>Ideas and Inventions Teacher Guide (CA Edition) -Science Stories, pp. 24-25</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
ES4b. Students know the way in which the Moon's appearance changes during the four-week lunar cycle.	<i>Ideas and Inventions Science Stories (CA Edition)</i> -"Looking at the Sky" pp. 33-36	<i>Ideas and Inventions Teacher Guide (CA Edition)</i> -Science Stories, pp. 24-25 <i>Ideas and Inventions Teacher Guide (CA Edition)</i> -Teacher Guide Supplement, pp. 9-11 (<i>found under "California FOSS Introduction" Tab</i>) -Teacher Guide Supplement Sheets, nos. 2-3 (Night-Sky Home Log and Moon Calendar) (<i>found under "California FOSS Introduction" Tab</i>)
ES4c. Students know telescopes magnify the appearance of some distant objects in the sky, including the Moon and the planets. The number of stars that can be seen through telescopes is dramatically greater than the number that can be seen by the unaided eye.	<i>Ideas and Inventions Science Stories (CA Edition)</i> "Looking at the Sky" p. 38	<i>Ideas and Inventions Teacher Guide (CA Edition)</i> -Science Stories, pp. 24-25
ES4d. Students know that Earth is one of several planets that orbit the Sun and that the Moon orbits the Earth.	<i>Ideas and Inventions Science Stories (CA Edition)</i> -"Looking at the Sky" pp. 33-38	<i>Ideas and Inventions Teacher Guide (CA Edition)</i> -Science Stories, pp. 24-25
ES4e. Students know the position of the Sun in the sky changes during the course of the day and from season to season.	<i>Ideas and Inventions Science Stories (CA Edition)</i> -"Looking at the Sky" p. 33	<i>Ideas and Inventions Teacher Guide (CA Edition)</i> -Science Stories, pp. 24-25
IE5. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:		

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
IE5a. Repeat observations to improve accuracy and know that the results of similar scientific investigations seldom turn out exactly the same because of differences in the things being investigated, methods being used, or uncertainty in the observation.	<p>Measurement Teacher Guide (CA Edition) -Investigation 2, pp. 10-13, 16-17</p> <p>Structures of Life Teacher Guide (CA Edition) -Investigation 1, pp. 13-17</p> <p>Ideas and Inventions Teacher Guide (CA Edition) -Investigation 2, pp. 8-24</p>	<p>Structures of Life Science Stories (CA Edition) -"Barbara McClintock" pp. 6-9</p>
IE5b. Differentiate evidence from opinion and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed.	<p>Structures of Life Science Stories (CA Edition) -"Barbara McClintock" pp. 6-9</p> <p>Measurement Science Stories (CA Edition) -"Angela Amato, School Reporter" pp. 19-20</p> <p>Measurement Teacher Guide (CA Edition) -Investigation 3, pp. 20-21</p>	
IE5c. Use numerical data in describing and comparing objects, events, and measurements.	<p>Measurement Science Stories (CA Edition) -"Water Everywhere" pp. 16-17 -"Measurements in the Marketplace" p. 18 -"Angela Amato, School Reporter" pp. 19-20</p> <p>Measurement Teacher Guide (CA Edition) -Investigation 1, pp. 11-15, 18-19, 22-24 -Investigations 2, 3, and 4</p> <p>Structures of Life Teacher Guide (CA Edition) -Investigation 1, pp. 13-17 -Investigation 2, pp. 19-21 -Investigation Duplication Masters, no. 9</p>	<p>Ideas and Inventions Teacher Guide (CA Edition) -Investigation 2, pp. 9-15</p> <p>Measurement Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 18-21, 24-25</p> <p>Structures of Life Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 24-27</p> <p>Physics of Sound Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 29-32</p>

FOSS California Standards Matrix, K-5

<i>GRADE LEVEL AND CA STATE SCIENCE STANDARDS</i>	<i>PRIMARY CITATIONS</i>	<i>SUPPORTING CITATIONS</i>
IE5d. Predict the outcome of a simple investigation and compare the result with the prediction.	<p>Structures of Life Teacher Guide (CA Edition) -Investigation 1, pp. 14, 22 -Investigation 3, p. 27 -Investigation 4, pp. 22-23</p> <p>Physics of Sound Teacher Guide (CA Edition) -Investigation 2, p. 18</p>	<p>Measurement Teacher Guide (CA Edition) -Investigation 2, pp. 10-11 -Investigation 4, p. 13</p>
IE5e. Collect data in an investigation and analyze those data to develop a logical conclusion.	<p>Ideas and Inventions Teacher Guide (CA Edition) -Investigation 2, pp. 11-15, 18-19</p> <p>Structures of Life Teacher Guide (CA Edition) -Investigation 1, pp. 8-17, 30-33</p> <p>Physics of Sound Teacher Guide (CA Edition) -Investigation 2, pp. 10-12, 16-19, 23-24</p> <p>Measurement Teacher Guide (CA Edition) -Investigation 2, pp. 20-21 -Investigation 4, pp. 8-18</p>	

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
GRADE FOUR		
PS1. Electricity and magnetism are related effects that have many useful applications in everyday life. As a basis for understanding this concept:		
PS1a. Students know how to design and build simple series and parallel circuits by using components such as wires, batteries, and bulbs.	Magnetism and Electricity Teacher Guide (CA Edition) -Investigation 3, pp. 12-15, 18-21, 24-26	
PS1b. Students know how to build a simple compass and use it to detect magnetic effects, including Earth's magnetic field.	Magnetism and Electricity Science Stories (CA Edition) -"Make a Compass" pp. 7-9	Magnetism and Electricity Science Stories (CA Edition) -"How Magnets Interact" p. 6
PS1c. Students know electric currents produce magnetic fields and know how to build a simple electromagnet.	Magnetism and Electricity Science Stories (CA Edition) -"From Rags to Science" pp. 21-23 -"How Electromagnetism Stopped a War" pp. 24-27 Magnetism and Electricity Teacher Guide (CA Edition) -Investigation 4, pp. 11-13, 16-18, 21-22	Magnetism and Electricity Science Stories (CA Edition) -"Magnets and Electricity in Your Life" pp. 28-33
PS1d. Students know the role of electromagnets in the construction of electric motors, electric generators, and simple devices, such as doorbells and earphones.	Magnetism and Electricity Science Stories (CA Edition) -"Magnets and Electricity in Your Life" pp. 28-33 Magnetism and Electricity Teacher Guide (CA Edition) -Investigation 5, pp. 10-14, 17-20	Magnetism and Electricity Science Stories (CA Edition) -"How Electromagnetism Stopped a War" pp. 24-27 -"From Rags to Science", pp. 21-23
PS1e. Students know electrically charged objects attract or repel each other.	Magnetism and Electricity Science Stories (CA Edition) -"Making Static" pp. 10-11	

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>PS1f. Students know that magnets have two poles (north and south) and that like poles repel each other while unlike poles attract each other.</p>	<p><i>Magnetism and Electricity Science Stories (CA Edition)</i> -"How Magnets Interact" p. 6</p>	<p><i>Magnetism and Electricity Science Stories (CA Edition)</i> -"Make a Compass" pp. 7-9 -Glossary p. 38</p> <p><i>Magnetism and Electricity Teacher Guide (CA Edition)</i> -Investigation 1, pp. 15-16</p>
<p>PS1g. Students know electrical energy can be converted to heat, light, and motion.</p>	<p><i>Magnetism and Electricity Science Stories (CA Edition)</i> -"Magnets and Electricity in Your Life" pp. 28-33</p> <p><i>Magnetism and Electricity Teacher Guide (CA Edition)</i> -Investigation 2, pp. 10-13, 16-19</p>	<p><i>Magnetism and Electricity Science Stories (CA Edition)</i> -"Two Reference Sources about Edison" pp. 14-15 -"Illuminating Teamwork" pp. 16-19 -"A True Pioneer" p. 20</p> <p><i>Magnetism and Electricity Teacher Guide (CA Edition)</i> -Investigation 3, pp. 12-15, 18-21, 24-26</p>
<p>LS2. All organisms need energy and matter to live and grow. As a basis for understanding this concept:</p>		
<p>LS2a. Students know plants are the primary source of matter and energy entering most food chains.</p>	<p><i>Environments Science Stories (CA Edition)</i> -"What Is an Ecosystem?" pp. 38-41</p>	<p><i>Environments Teacher Guide (CA Edition)</i> -Science Stories, pp. 18-19 (Food Chain/Food Web Game)</p>
<p>LS2b. Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.</p>	<p><i>Environments Science Stories (CA Edition)</i> -"What Is an Ecosystem?" p. 40 -"Aquatic Environments around the World" pp. 27-35 -"The Mono Lake Story" pp. 43-45</p>	<p><i>Environments Teacher Guide (CA Edition)</i> -Science Stories, pp. 18-19 (Food Chain/Food Web Game)</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>LS2c. Students know decomposers, including many fungi, insects, and microorganisms, recycle matter from dead plants and animals.</p>	<p>Environments Science Stories (CA Edition) -"What Is an Ecosystem?" p. 40 -"Isopods" p. 22</p>	<p>Environments Teacher Guide (CA Edition) -Science Stories, pp. 18-19 (Food Chain/Food Web Game)</p>
<p>LS3. Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept:</p>		
<p>LS3a. Students know ecosystems can be characterized by their living and nonliving components.</p>	<p>Environments Teacher Guide (CA Edition) -Investigation 1, pp. 14, 18 -Investigation Duplication Masters, nos. 4, 29</p> <p>Environments Science Stories (CA Edition) -"What Is an Ecosystem?" pp. 38-41 -"Aquatic Environments around the World" pp. 27-35</p>	<p>Environments Science Stories (CA Edition) -"Amazon Rainforest Journal" pp. 1-8 -"Terrestrial Environments around the World" pp. 9-17 -"Brine Shrimp" p. 42 -"The Mono Lake Story" pp. 43-45</p>
<p>LS3b. Students know that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.</p>	<p>Environments Science Stories (CA Edition) -"What Happens When Ecosystems Change?" pp. 49-52</p> <p>Environments Teacher Guide (CA Edition) -Investigation 3, pp. 11-13, 16-17, 20-22 -Investigation 5, pp. 11-13, 16-18, 20-22 -Investigation 6, pp. 11-13, 16-17 -Investigation Duplication Masters, nos. 9-10, 12, 17-19</p>	<p>Environments Science Stories (CA Edition) -"Terrestrial Environments around the World" pp. 9-17 -"Isopods" p. 22 -"Auntie's Plants" pp. 23-26 -"Water Pollution: <i>The Lake Erie Story</i>" p. 36 -"Sources of Water Pollution" p. 37 -"Brine Shrimp" p. 42 -"The Mono Lake Story" pp. 43-45</p> <p>Environments Teacher Guide (CA Edition) -Investigation 1, pp. 12-15, 18-19 -Investigation Duplication Masters, no. 3</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
LS3c. Students know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter.	Environments Science Stories (CA Edition) -"How Organisms Depend on Each Other" pp. 53-55	Environments Science Stories (CA Edition) -"What Is an Ecosystem?" pp. 38-41
LS3d. Students know that most microorganisms do not cause disease and that many are beneficial.	Environments Science Stories (CA Edition) -"What Is an Ecosystem?" p. 40 Environments Teacher Guide (CA Edition) -Science Stories, pp. 18-19 (Food Chain/Food Web Game)	
ES4. The properties of rocks and minerals reflect the processes that formed them. As a basis for understanding this concept:		
ES4a. Students know how to differentiate among igneous, sedimentary, and metamorphic rocks by referring to their properties and methods of formation (the rock cycle).	Earth Materials Science Stories (CA Edition) -"Where Do Rocks Come From?" pp. 34-37 -Glossary p. 38	Earth Materials Science Stories (CA Edition) -"Written in Stone" pp. 2-4
ES4b. Students know how to identify common rock-forming minerals (including quartz, calcite, feldspar, mica, and hornblende) and ore minerals by using a table of diagnostic properties.	Earth Materials Science Stories (CA Edition) -"Identifying Minerals" pp. 30-33 Earth Materials Teacher Guide (CA Edition) -Investigation 4, pp. 10-13 -Investigation 2, pp. 10-12, 16-21 -Investigation 3, pp. 10-13 -Investigation Duplication Masters, nos. 3-10	
ES5. Waves, wind, water, and ice shape and reshape Earth's land surface. As a basis for understanding this concept:		

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>ES5a. Students know some changes in the earth are due to slow processes, such as erosion, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.</p>	<p>Landforms Science Stories (CA Edition) -"Shapes of the Earth" pp. 22-29</p> <p>Landforms Teacher Guide (CA Edition) -Investigation 2, pp. 11-15, 18-22 -Investigation 3, pp. 11-14, 17-19, 22-24</p>	<p>Landforms Science Stories (CA Edition) -"Real People in the Grand Canyon" pp. 13-14 -"Rivers and Controlling the Flow" pp. 15-21 -Glossary p. 45</p> <p>Earth Materials Science Stories (CA Edition) -"Postcards from the Ledge" pp. 5-7</p>
<p>ES5b. Students know natural processes, including freezing and thawing and the growth of roots, cause rocks to break down into smaller pieces.</p>	<p>Earth Materials Science Stories (CA Edition) -"Where Do Rocks Come From?" pp. 34-35</p>	<p>Earth Materials Teacher Guide (CA Edition) -Investigation 3, p. 24</p>
<p>ES5c. Students know moving water erodes landforms, reshaping the land by taking it away from some places and depositing it as pebbles, sand, silt, and mud in other places (weathering, transport, and deposition).</p>	<p>Landforms Science Stories (CA Edition) -"Rivers and Controlling the Flow" p. 15-21</p> <p>Landforms Teacher Guide (CA Edition) -Investigation 2, pp. 11-15, 18-22 -Investigation 3, pp. 11-14, 17-19, 22-24</p>	<p>Landforms Science Stories (CA Edition) -"Real People in the Grand Canyon" pp. 9-14 -"Shapes of the Earth" pp. 25-29 -Glossary p. 45</p>
<p>IE6. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:</p>		

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>IE6a. Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations.</p>	<p>Human Body Science Stories (CA Edition) -"The Frozen Man" pp. 21-24</p> <p>Magnetism and Electricity Science Stories (CA Edition) -"A Fictional Interview with Benjamin Franklin" pp. 12-13</p> <p>Magnetism and Electricity Teacher Guide (CA Edition) -Science Stories, p. 11</p>	
<p>IE6b. Measure and estimate the weight, length, or volume of objects.</p>	<p>Earth Materials Teacher Guide (CA Edition) -Investigation 1, pp. 12-14, 21</p> <p>Human Body Teacher Guide (CA Edition) -Investigation 4, p. 13</p> <p>Environments Teacher Guide (CA Edition) -Investigation 3, p. 12 -Investigation 5, p. 12</p>	
<p>IE6c. Formulate and justify predictions based on cause-and-effect relationships.</p>	<p>Magnetism and Electricity Teacher Guide (CA Edition) -Investigation 1, pp. 25-29 -Investigation 4, pp. 16-18 -Investigation Duplication Masters, no. 31</p>	<p>Human Body Teacher Guide (CA Edition) -Investigation 4, pp. 11-16, 19, 22-24</p>

FOSS California Standards Matrix, K-5

<i>GRADE LEVEL AND CA STATE SCIENCE STANDARDS</i>	<i>PRIMARY CITATIONS</i>	<i>SUPPORTING CITATIONS</i>
IE6d. Conduct multiple trials to test a prediction and draw conclusions about the relationships between predictions and results.	<p><i>Magnetism and Electricity Teacher Guide (CA Edition)</i> -Investigation 1, pp. 25-29 -Investigation 4, pp. 21-25 -Investigation Duplication Masters, no. 32</p>	<p><i>Human Body Teacher Guide (CA Edition)</i> -Investigation 4, pp. 11-16, 19, 22-24</p> <p><i>Earth Materials Teacher Guide (CA Edition)</i> -Investigation 3, pp. 10-13, 16-19</p>
IE6e. Construct and interpret graphs from measurements.	<p><i>Magnetism and Electricity Teacher Guide (CA Edition)</i> -Investigation 1, pp. 25-29 -Investigation Duplication Masters, no. 5</p> <p><i>Human Body Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, no. 29</p> <p><i>Landforms Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, no. 31</p>	
IE6f. Follow a set of written instructions for a scientific investigation.	<p><i>Human Body Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, nos. 7, 13, 18</p> <p><i>Landforms Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, no. 7</p>	<p><i>Magnetism and Electricity Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, no. 11</p> <p><i>Earth Materials Teacher Guide (CA Edition)</i> -Investigation Duplication Masters, nos. 3-10</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
GRADE FIVE		
<p>PS1. Elements and their combinations account for all the varied types of matter in the world. As a basis for understanding this concept:</p>		
<p>PS1a. Student know that during chemical reactions the atoms in the reactants rearrange to form products with different properties.</p>	<p><i>Mixtures and Solutions Science Stories (CA Edition)</i> -"What Is Matter Made Of?" p. 28</p> <p><i>Mixtures and Solutions Teacher Guide (CA Edition)</i> -Investigation 4, pp. 11-15, 18-19, 22-24</p>	<p><i>Mixtures and Solutions Science Stories (CA Edition)</i> -"What a Reaction!" pp. 23-24 -"The Metals" pp. 37-42 -Glossary p. 46</p>
<p>PS1b. Students know all matter is made of atoms, which may combine to form molecules.</p>	<p><i>Mixtures and Solutions Science Stories (CA Edition)</i> -"What Is Matter Made Of?" pp. 25-28</p>	<p><i>Mixtures and Solutions Science Stories (CA Edition)</i> -"The Periodic Table" pp. 32-36 -"Mixtures and Solutions" pp. 4-6 -"Earth Elements" p. 11</p>
<p>PS1c. Students know metals have properties in common, such as high electrical and thermal conductivity. Some metals, such as aluminum (Al), iron (Fe), nickel (Ni), copper (Cu), silver (Ag), and gold (Au), are pure elements; others such as steel and brass, are composed of a combination of elemental metals.</p>	<p><i>Mixtures and Solutions Science Stories (CA Edition)</i> -"The Metals" pp. 37-42</p>	<p><i>Mixtures and Solutions Teacher Guide (CA Edition)</i> -Science Stories, pp. 20-21</p>
<p>PS1d. Students know that each element is made of one kind of atom and that the elements are organized in the periodic table by their chemical properties.</p>	<p><i>Mixtures and Solutions Science Stories (CA Edition)</i> -"What Is Matter Made Of?" pp. 25-28 -"The Periodic Table" pp. 32-36</p>	<p><i>Mixtures and Solutions Science Stories (CA Edition)</i> -"Mixtures and Solutions" pp. 3, 4-6 -"Earth Elements" pp. 11-12 -Glossary p. 46</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
PS1e. Students know scientists have developed instruments that can create discrete images of atoms and molecules that show that the atoms and molecules often occur in well-ordered arrays.	<p>Mixtures and Solutions Science Stories (CA Edition) -"What Is Matter Made Of?" pp. 26-27</p>	
PS1f. Students know differences in chemical and physical properties of substances are used to separate mixtures and identify compounds.	<p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation 1, pp. 12-15, 18-20, 23-24, 27-29 -Investigation 4, pp. 11-15, 18-19, 22-24 -Investigation 2, p. 13</p>	<p>Mixtures and Solutions Science Stories (CA Edition) -"Mixtures and Solutions" p. 3</p>
PS1g. Students know properties of solid, liquid, and gaseous substances, such as sugar (C ₆ H ₁₂ O ₆), water (H ₂ O), helium (He), oxygen (O ₂), nitrogen (N ₂), and carbon dioxide (CO ₂).	<p>Mixtures and Solutions Science Stories (CA Edition) -"A Salty Story" pp. 7-10 -"The Air You Breathe" pp. 20-22</p> <p>Food and Nutrition Science Stories (CA Edition) -"A Sweet Story" pp. 10-15 -"Living Cells" p. 43</p> <p>Water Teacher Guide (CA Edition) -Investigation 1, pp. 11-13, 16-18</p> <p>Food and Nutrition Teacher Guide (CA Edition) -Investigation 2, pp. 13-16, 20-22</p> <p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation 3, pp. 10-14, 17-20, 23-24 -Investigation 4, pp. 22-24</p>	<p>Mixtures and Solutions Science Stories (CA Edition) -"Mixtures and Solutions" pp. 3-6 -"Earth Elements" p. 11 -"Decompression Sickness" pp. 13-15 -"Sour Power" pp. 16-17 -"What Is It Made Of?" pp. 25-28</p> <p>Water Science Stories (CA Edition) -"A Report from the Blue Planet" pp. 1-2 -"Surface Tension" p. 3 -"Ice Is Everywhere" pp. 8-9 -"Why Pipes Burst" p. 11 -"The Water Cycle" pp. 14-16 -Glossary p. 30</p> <p>Food and Nutrition Science Stories (CA Edition) -"Vitamins" pp. 21-23 -"The Scourge of Seafarers" pp. 24-25 -"Blood: <i>The Fluid That Connects</i>" pp. 44-46 -Glossary pp. 51-53</p>
PS1h. Students know living organisms and most materials are composed of just a few elements.	<p>Mixtures and Solutions Science Stories (CA Edition) -"Earth Elements" pp. 11-12</p>	

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>PS1i. Students know the common properties of salts, such as sodium chloride (NaCl).</p>	<p>Mixtures and Solutions Science Stories (CA Edition) -"A Salty Story" pp. 7-10</p> <p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation 2, pp. 10-14, 23-25, 28 -Investigation 1, pp. 12-15, 18-20, 23-24, 27-29 -Investigation 3, pp. 17-20 -Investigation 4, pp. 11-15, 18-19, 22-24</p>	<p>Mixtures and Solutions Science Stories (CA Edition) -"Mixtures and Solutions" pp. 1-6 -"The Metals" p. 42</p>
<p>LS2. Plants and animals have structures for respiration, digestion, waste disposal, and transport of materials. As a basis for understanding this concept:</p>		
<p>LS2a. Students know many multicellular organisms have specialized structures to support the transport of materials.</p>	<p>Food and Nutrition Science Stories (CA Edition) -"Living Cells" pp. 41-43 -"Blood: <i>The Fluid That Connects</i>" pp. 44-50</p>	<p>Food and Nutrition Science Stories (CA Edition) -"The Digestive System" pp. 6-9</p>
<p>LS2b. Students know how blood circulates through the heart chambers, lungs, and body and how carbon dioxide (CO₂) and oxygen (O₂) are exchanged in the lungs and tissues.</p>	<p>Food and Nutrition Science Stories (CA Edition) -"Blood: <i>The Fluid That Connects</i>" pp. 44-50</p>	
<p>LS2c. Students know the sequential steps of digestion and the roles of teeth and the mouth, esophagus, stomach, small intestine, large intestine, and colon in the function of the digestive system.</p>	<p>Food and Nutrition Science Stories (CA Edition) -"The Digestive System" pp. 6-9 -"Blood: <i>The Fluid That Connects</i>" pp. 48-49</p>	
<p>LS2d. Students know the role of the kidney in removing cellular waste from blood and converting it into urine, which is stored in the bladder.</p>	<p>Food and Nutrition Science Stories (CA Edition) -"Blood: <i>The Fluid That Connects</i>" p. 50</p>	

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
LS2e. Students know how sugar, water, and minerals are transported in a vascular plant.	Food and Nutrition Science Stories (CA Edition) -"Living Cells" pp. 41-43	Food and Nutrition Science Stories (CA Edition) -"A Sweet Story" pp. 10-14
LS2f. Students know plants use carbon dioxide (CO ₂) and energy from sunlight to build molecules of sugar and release oxygen.	Food and Nutrition Science Stories (CA Edition) -"Living Cells" p. 43	Solar Energy Science Stories (CA Edition) -"The Sun" p. 1
LS2g. Students know plant and animal cells break down sugar to obtain energy, a process resulting in carbon dioxide (CO ₂) and water (respiration).	Food and Nutrition Science Stories (CA Edition) -"Living Cells" pp. 41-43 -"Sugar Smarts" pp. 14-15 -"Blood: <i>The Fluid That Connects</i> " pp. 44-46	Food and Nutrition Teacher Guide (CA Edition) -Investigation 2, pp. 11-17, 20-21, 24
ES3. Water on Earth moves between the oceans and land through the processes of evaporation and condensation. As a basis for understanding this concept:		
ES3a. Students know most of Earth's water is present as salt water in the oceans, which cover most of Earth's surface.	Water Science Stories (CA Edition) -"A Report from the Blue Planet" pp. 1-2 -"The Water Cycle" pp. 14-16 -"Water: <i>A Vital Resource</i> " p. 17	
ES3b. Students know when liquid water evaporates, it turns into water vapor in the air and can reappear as a liquid when cooled or as a solid if cooled below the freezing point of water.	Water Science Stories (CA Edition) -"Evaporation and Condensation" p. 13 -"The Water Cycle" pp. 14-16 Solar Energy Science Stories (CA Edition) -"The Sun, the Ocean, and the Weather" pp. 23-24 Water Teacher Guide (CA Edition) -Investigation 2, pp. 21-24 -Investigation 3, pp. 10-11, 14-16, 19-20, 23-26	Water Science Stories (CA Edition) -"Wet and Dry Places" p. 12

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
ES3c. Students know water vapor in the air moves from one place to another and can form fog or clouds, which are tiny droplets of water or ice, and can fall to Earth as rain, hail, sleet, or snow.	<p>Water Science Stories (CA Edition) -"The Water Cycle" pp. 14-16</p> <p>Solar Energy Science Stories (CA Edition) -"The Sun" pp. 1-2 -"The Sun, the Ocean, and the Weather" pp. 23-24</p>	<p>Water Science Stories (CA Edition) -"Wet and Dry Places" p. 12 -"Evaporation and Condensation" p. 13</p>
ES3d. Students know that the amount of fresh water located in rivers, lakes, underground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing the use of water.	<p>Water Science Stories (CA Edition) -"Water: A Vital Resource" pp. 17-21</p>	<p>Water Teacher Guide (CA Edition) -Investigation Duplication Masters, no. 26</p>
ES3e. Students know the origin of the water used by their local communities.	<p>Water Teacher Guide (CA Edition) -Investigation 4, p. 29</p>	<p>Water Science Stories (CA Edition) -"Water Coming Into Our Homes" p. 18 -"Water Leaving Our Homes" p. 19</p>
ES4. Energy from the Sun heats Earth unevenly, causing air movements that result in changing weather patterns. As a basis for understanding this concept:		
ES4a. Students know uneven heating of Earth causes air movements (convection currents).	<p>Solar Energy Science Stories (CA Edition) -"The Sun" p. 2 -"Differential Heating" pp. 16-17 -"The Sun, the Ocean, and the Weather" pp. 22-25</p>	
ES4b. Students know the influence that the ocean has on the weather and the role that the water cycle plays in weather patterns.	<p>Solar Energy Science Stories (CA Edition) -"The Sun, the Ocean, and the Weather" pp. 22-25</p>	<p>Solar Energy Science Stories (CA Edition) -"The Sun" p. 2 -"Differential Heating" pp. 16-17</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
ES4c. Students know the causes and effects of different types of severe weather.	Solar Energy Science Stories (CA Edition) -"The Sun, the Ocean, and the Weather" pp. 22-25	
ES4d. Students know how to use weather maps and data to predict local weather and know that weather forecasts depend on many variables.	Solar Energy Science Stories (CA Edition) -"Predicting the Weather" pp. 26-28	Solar Energy Science Stories (CA Edition) -"The Sun, the Ocean, and the Weather" pp. 22-25
ES4e. Students know that the Earth's atmosphere exerts a pressure that decreases with distance above Earth's surface and that at any point it exerts this pressure equally in all directions.	Solar Energy Science Stories (CA Edition) -"The Pressure Is On" pp. 18-21	Mixtures and Solutions Science Stories (CA Edition) -"Decompression Sickness" pp. 13-14
ES5. The solar system consists of planets and other bodies that orbit the Sun in predictable paths. As a basis for understanding this concept:		
ES5a. Students know the Sun, an average star, is the central and largest body in the solar system and is composed primarily of hydrogen and helium.	Solar Energy Science Stories (CA Edition) -"Living with a Star" pp. 40-41 -"The Sun" pp. 1-2, 3-5	
ES5b. Students know the solar system includes the planet Earth, the Moon, the Sun, eight other planets and their satellites, and smaller objects, such as asteroids and comets.	Solar Energy Science Stories (CA Edition) -"Living with a Star" pp. 40-44	Solar Energy Teacher Guide (CA Edition) -Science Stories, pp. 22-23
ES5c. Students know the path of a planet around the Sun is due to the gravitational attraction between the Sun and the planet.	Solar Energy Science Stories (CA Edition) -"Living with a Star" pp. 43-44	Solar Energy Teacher Guide (CA Edition) -Science Stories, pp. 22-23

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>IE6. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:</p>		
<p>IE6a. Classify objects (e.g. rocks, plants, leaves) in accordance with appropriate criteria.</p>	<p>Solar Energy Teacher Guide (CA Edition) -Teacher Guide Supplement pp. 10-11 (<i>found under the "California FOSS Introduction" tab</i>)</p>	<p>Food and Nutrition Teacher Guide (CA Edition) -Investigation 2, pp. 11-16</p>
<p>IE6b. Develop a testable question.</p>	<p>Variables Teacher Guide (CA Edition) -Investigation 1, pp. 13-22</p> <p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation 4, pp. 25-28 -Investigation Duplication Masters, nos. 17-19</p> <p>Solar Energy Teacher Guide (CA Edition) -Investigation 4, pp. 24-28 -Investigation Duplication Masters, nos. 24-25</p> <p>Water Teacher Guide (CA Edition) -Investigation 4, pp. 24-28 -Investigation Duplication Masters, nos. 19-21</p>	<p>Variables Science Stories (CA Edition) -"What Scientists Do" pp. 1-3</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>IE6c. Plan and conduct a simple investigation based on a student-developed question and write instructions others can follow to carry out the procedure.</p>	<p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation 4, pp. 25-28 -Investigation Duplication Masters, nos. 17-19</p> <p>Solar Energy Teacher Guide (CA Edition) -Investigation 4, pp. 30-33 -Investigation Duplication Masters, nos. 24-26</p> <p>Variables Teacher Guide (CA Edition) -Investigation 4, pp. 24-28 -Investigation Duplication Masters, nos. 21-23</p>	<p>Variables Teacher Guide (CA Edition) -Investigation 4, pp. 20-23 -Investigation Duplication Masters, nos. 18-20</p> <p>Solar Energy Teacher Guide (CA Edition) -Investigation 4, pp. 25-28</p> <p>Water Teacher Guide (CA Edition) -Investigation 4, pp. 24-28 -Investigation Duplication Masters, nos. 19-21</p> <p>Food and Nutrition Teacher Guide (CA Edition) -Investigation 4, pp. 16-20 -Investigation Duplication Masters, nos. 19-21</p> <p>Variables Science Stories (CA Edition) -"What Scientists Do" pp. 1-3</p>
<p>IE6d. Identify the dependent and controlled variables in an investigation.</p>	<p>Variables Teacher Guide (CA Edition) -Investigation 1, pp. 18-22, 25-27 -Investigation 2, pp. 11-13, 16-18, 21-23 -Investigation 3, pp. 16-19, 22-23, 26-27 -Investigation 4, pp. 10-11, 14-17, 20-23 -Investigation Duplication Masters, nos. 5, 7, 10, 13, 15-16, 20</p>	<p>Variables Science Stories (CA Edition) -"What Scientists Do" pp. 1-3</p>
<p>IE6e. Identify a single independent variable in a scientific investigation and explain how this variable can be used to collect information to answer a question about the results of the experiment.</p>	<p>Variables Teacher Guide (CA Edition) -Investigation 1, pp. 18-22, 25-27 -Investigation 2, pp. 11-13, 16-18, 21-23 -Investigation 3, pp. 16-19, 22-23, 26-27 -Investigation 4, pp. 10-11, 14-17, 20-23 -Investigation Duplication Masters, nos. 5, 7, 10, 13, 15-16, 20</p>	<p>Variables Science Stories (CA Edition) -"What Scientists Do" pp. 1-3 -"Prove It" pp. 34-37</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>IE6f. Select appropriate tools (e.g., thermometers, meter sticks, balances, and graduated cylinders) and make quantitative observations.</p>	<p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation 3, pp. 17-19 -Investigation 2, pp. 10-14</p> <p>Variables Teacher Guide (CA Edition) -Investigation 1, pp. 18-21</p> <p>Food and Nutrition Teacher Guide (CA Edition) -Investigation 1, p. 13</p> <p>Solar Energy Teacher Guide (CA Edition) -Investigation 2, pp. 11-13</p> <p>Water Teacher Guide (CA Edition) -Investigation 3, pp. 19-20</p>	
<p>IE6g. Record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make inferences based on those data.</p>	<p>Variables Teacher Guide (CA Edition) -Investigation 1, pp. 20-21, 25-26 -Investigation Duplication Masters, nos. 5, 7 -Investigation 2, pp. 21-22 -Investigation Duplication Masters, no. 10 -Investigation 3, p. 26 -Investigation Duplication Masters, no. 16 -Investigation 4, pp. 20-21 -Investigation Duplication Masters, no. 16</p> <p>Solar Energy Teacher Guide (CA Edition) -Investigation 2, pp. 22-24 -Investigation Duplication Masters, nos. 7-8, 11, 14-17</p> <p>Water Teacher Guide (CA Edition) -Investigation Duplication Masters nos. 2-3, 6-8, 10, 13-14, 17-18</p>	<p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation Duplication Masters, no. 11</p> <p>Food and Nutrition Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 5-6</p>

FOSS California Standards Matrix, K-5

GRADE LEVEL AND CA STATE SCIENCE STANDARDS	PRIMARY CITATIONS	SUPPORTING CITATIONS
<p>IE6h. Draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.</p>	<p>Variables Teacher Guide (CA Edition) -Investigation 1, pp. 20-21 -Investigation 2, pp. 13, 18, 21-23 -Investigation 4, pp. 20-21 -Investigation Duplication Masters, nos. 6, 19, 25-27</p> <p>Solar Energy Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 12, 18, 22</p> <p>Water Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 3-8, 10, 13-14</p> <p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 7, 9-12, 15-16</p>	<p>Food and Nutrition Teacher Guide (CA Edition) -Investigation 3, pp. 23-24 -Investigation Duplication Masters, no. 11</p>
<p>IE6i. Write a report of an investigation that includes conducting tests, collecting data or examining evidence, and drawing conclusions.</p>	<p>Water Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 13-16, 19-21</p> <p>Variables Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 21-23</p> <p>Solar Energy Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 24-26</p> <p>Food and Nutrition Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 19-21</p> <p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation Duplication Masters, nos. 17-19</p>	<p>Solar Energy Teacher Guide (CA Edition) -Investigation 4, pp. 26-28</p> <p>Food and Nutrition Teacher Guide (CA Edition) -Investigation 4, pp. 17-20</p> <p>Mixtures and Solutions Teacher Guide (CA Edition) -Investigation 4, pp. 25-28</p>