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Grade Span Expectations in Science  
Grade 4



# SCIENCE

A CLOSER LOOK

Grade 4  
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STANDARDS	PAGE REFERENCES
<b>Life Science</b>	
<b>LS1 - All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, &amp; species).</b>	
<b>LS1 (K-4) - INQ+POC –1</b> <i>Sort/classify different living things using similar and different characteristics. Describe why organisms belong to each group or cite evidence about how they are alike or not alike.</i>	
<b>LS1 (3-4) –1</b> <b>Students demonstrate an understanding of classification of organisms by ...</b>	
<b>1a</b> <u>citing evidence to distinguish</u> between living and non-living things.	<b>Student Edition:</b> 22-23 <i>Explore: Inquiry Activity 21</i> <i>Quick Check 23</i> <i>Read a Table 23</i> <b>Teacher Wraparound Edition:</b> ASP 20; DMI 22 <b>Leveled Readers:</b> <i>Grade 4 Approaching Level Reader: Scientists and Cells</i> <b>Teacher’s Resources:</b> <i>Presentation Toolkit CD-ROM</i> <i>PuzzleMaker Toolkit CD-ROM</i> <i>Reading and Writing 3-5</i> <i>Visual Literacy 1</i>

STANDARDS	PAGE REFERENCES
<p><b>1b</b> identifying, sorting and <u>comparing</u> based on similar and/or different external features.</p>	<p><b>Student Edition:</b>  34-39, 46-47  <i>Explore: Inquiry Activity</i> 33, 45  <i>Focus on Skills: Skill Builder</i> 86-87  <i>Quick Check</i> 39  <i>Read a Chart</i> 35</p> <p><b>Teacher Wraparound Edition:</b>  AE 45; APK 32; DIF 35, 39, 47; ELL 78; WU 32, 76</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>What on Earth is a Platypus?</i>  Grade 4 English Learner Level Reader: <i>What on Earth is a Platypus?</i>  Grade 4 On Level Reader: <i>What's New on Earth?</i>  Grade 4 English Learner Level Reader: <i>What's New on Earth?</i>  Grade 4 Approaching Level Reader: <i>Which is Which?</i></p> <p><b>Teacher's Resources:</b>  <i>Activity Flipchart</i> 4, 8, 9  <i>Activity Lab Book</i> 11-13, 14, 27-29, 31-33  <i>Instructional Navigator CD-ROM</i>  <i>Reading and Writing</i> 7-9, 13-15  <i>Science Activity DVD</i>  <i>Science Quest: Classification</i>  <i>Visual Literacy</i> 3</p>

STANDARDS	PAGE REFERENCES
<p><b>1c</b> recording and <u>analyzing</u> observations/data about external features (e.g., within a grouping, which characteristics are the same and which are different).</p>	<p><b>Student Edition:</b>  34-39, 46-47  <i>Explore: Inquiry Activity</i> 33, 45  <i>Focus on Skills: Skill Builder</i> 86-87  <i>Read a Chart</i> 35</p> <p><b>Teacher Wraparound Edition:</b>  AE 45; APK 32; DIF 39, 47; ELL 78; WU 32, 76</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>What on Earth is a Platypus?</i>  Grade 4 English Learner Level Reader: <i>What on Earth is a Platypus?</i>  Grade 4 Approaching Level Reader: <i>Which is Which?</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 4, 8, 9  <i>Activity Lab Book</i> 11-13, 14, 27-29, 31-33  <i>Instructional Navigator CD-ROM</i>  <i>Reading and Writing</i> 7-9, 13-15  <i>Science Activity DVD</i>  <i>Science Quest: Classification</i>  <i>Visual Literacy</i> 3</p>
<p><b>1d</b> <u>citing evidence</u> (e.g., prior knowledge, data) <u>to draw conclusions explaining why organisms are grouped/not grouped together</u> (e.g. mammal, bird, and fish).</p>	<p><b>Student Edition:</b>  36-37, 38-39, 46-47, 90-91  <i>Explore</i> 77  <i>Focus on Skills: Skill Builder</i> 86-87  <i>Quick Check</i> 39, 47, 91</p> <p><b>Teacher Wraparound Edition:</b>  APK 76, 88; DIF 47; DMI 38, 46; UV 37, 79, 91</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>What on Earth is a Platypus?</i>  Grade 4 English Learner Reader: <i>What on Earth is a Platypus?</i>  Grade 4 Approaching Level Reader: <i>Which is Which?</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Lab Book</i> v-vi  <i>Reading and Writing</i> 26-28, 30-32  <i>Science Quest: Classification</i>  <i>Visual Literacy</i> 9, 11</p>

STANDARDS	PAGE REFERENCES
<p><b>LS1 (K-4) SAE -2</b>  <i>Identify the basic needs of plants and animals in order to stay alive. (i.e., water, air, food, space).</i></p>	
<p><b>LS1 (3-4)-2</b>  <b>Students demonstrate understanding of structure and function-survival requirements by...</b></p>	
<p><b>2a</b> observing that plants need water, air, food, light and <u>space</u> to grow <u>and reproduce</u>; observing that animals need water, air, food, and shelter/space to grow <u>and reproduce</u>.</p>	<p><b>Student Edition:</b>  22-23, 48-51, 62-65, 131  <i>Explore</i> 59  <i>Quick Check</i> 51, 131  <i>Quick Lab</i> 131  <i>Read a Table</i> 23</p> <p><b>Teacher Wraparound Edition:</b>  DMI 48, 50</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>Hidden Food Webs</i>  Grade 4 English Learner Reader: <i>Hidden Food Webs2</i>  Grade 4 Beyond Level Reader: <i>How Can We Save Them?</i>  Grade 4 Approaching Level Reader: <i>Rain Forests, Coral Reefs, and Deserts</i></p> <p><b>Teacher’s Resources:</b>  <i>Presentation Toolkit CD-ROM</i>  <i>Reading and Writing</i> 3-5  <i>Visual Literacy</i> 1, 5</p>

STANDARDS	PAGE REFERENCES
<p><b>LS1 (K-4) POC –3</b>  <i>Predict, sequence or compare the life stages of organisms – plants and animals (e.g., put images of life stages of an organism in order, predict the next stage in sequence, compare two organisms).</i></p>	
<p><b>LS1 (3-4)–3</b>  <i>Students demonstrate an understanding of reproduction by ...</i></p>	
<p><b>3a</b> observing changes and recording data to scientifically <u>draw</u> and label the stages in the life cycle of a familiar plant and animal.</p>	<p><b>Student Edition:</b>  65, 110-115  <i>Explore: Inquiry Activity 109</i></p> <p><b>Teacher Wraparound Edition:</b>  DIF 65; FA 117; LW 108</p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart 13</i>  <i>Activity Lab Book 13, 26</i>  <i>Presentation Toolkit CD-ROM</i>  <i>Science Activity DVD</i></p>
<p><b>3b</b> sequencing the life cycle of a plant or animal when given a set of <u>data/pictures</u>.</p>	<p><b>Student Edition:</b>  65, 110-115</p> <p><b>Teacher Wraparound Edition:</b>  DIF 65; UV 113</p> <p><b>Teacher’s Resources:</b>  <i>Presentation Toolkit CD-ROM</i>  <i>Visual Literacy 15</i></p>
<p><b>3c</b> <u>comparing the life cycles of 2 plants or 2 animals when given a set of data/pictures.</u></p>	<p><b>Student Edition:</b>  110-115  <i>Reading in Science 118-119</i></p> <p><b>Teacher Wraparound Edition:</b>  AR 119; DIF 111</p> <p><b>Teacher’s Resources:</b>  <i>Reading and Writing 44-45</i></p>

STANDARDS	PAGE REFERENCES
<p><b>LS1 (K-4) FAF –4</b>  <i>Identify and explain how the physical structures of an organism (plants or animals) allow it to survive in its habitat/environment (e.g., roots for water; nose to smell fire).</i></p>	
<p><b>LS1 (3-4)–4</b>  <b>Students demonstrate understanding of structure and function-survival requirements by...</b></p>	
<p><b>4a</b> identifying and explaining <u>how</u> the physical structure/characteristic of an organism allows it to survive and <u>defend itself</u> (e.g. of a characteristic – the coloring of a fiddler crab allows it to camouflage itself in the sand and grasses of its environment so that it will be protected from predators).</p>	<p><b>Student Edition:</b>  166, 168-169, 178  <i>Explore: Inquiry Activity</i> 165  <i>Focus on Skills: Skill Builder</i> 172-173  <i>Quick Lab</i> 169  <i>Read the Photo</i> 168  <i>Writing Link</i> 171</p> <p><b>Teacher Wraparound Edition:</b>  AE 165; DIF 169; DMI 166, 168; ELL 168LW 164</p> <p><b>Leveled Readers:</b>  Grade 4 Beyond Level Reader: <i>Animal Senses</i>  Grade 4 On Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 English Learner Level: <i>Caves: A World of Their Own</i>  Grade 4 Approaching Level Reader: <i>Desert Animals and Plants</i>  Grade 4 Approaching Level Reader: <i>Rain Forests, Coral Reefs, and Deserts</i>  Grade 4 On Level Reader: <i>What's New on Earth?</i>  Grade 4 English Learner Level: <i>What's New on Earth?</i></p> <p><b>Teacher's Resources:</b>  <i>Activity Flipchart</i> 18  <i>Activity Lab Book</i> 65-67, 68  <i>Presentation Toolkit DVD</i>  <i>Science Activity DVD</i>  <i>Visual Literacy</i> 24</p>

STANDARDS	PAGE REFERENCES
<p><b>4b</b> analyzing the structures needed for survival of <u>populations</u> of plants and animals in a <u>particular</u> habitat/environment (e.g. populations of desert plants and animals require structures that enable them to obtain/conserves/ retain water).</p>	<p><b>Student Edition:</b>  142, 143, 166, 167, 168, 178  <i>Quick Check</i> 169  <i>Read the Photo</i> 167, 168, 178</p> <p><b>Teacher Wraparound Edition:</b>  DIF 167, 169; DMI 178; HA 178UV 167</p> <p><b>Leveled Readers:</b>  Grade 4 Beyond Level Reader: <i>Animal Senses</i>  Grade 4 On Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 English Learner Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 Approaching Level Reader: <i>Desert Animals and Plants</i>  Grade 4 Approaching Level Reader: <i>Rain Forests, Coral Reefs, and Deserts</i>  Grade 4 On Level Reader: <i>What's New on Earth?</i>  Grade 4 English Learner Level Reader: <i>What's New on Earth?</i></p> <p><b>Teacher's Resources:</b>  <i>Activity Lab Book</i> 68  <i>Presentation Toolkit CD-ROM</i>  <i>Reading and Writing</i> 69-71  <i>Science in Motion: Adaptations of Desert Plants</i>  <i>Visual Literacy</i> 23, 24</p>

STANDARDS	PAGE REFERENCES
<b>LS2 - Matter cycles and energy flows through an ecosystem.</b>	
<b>LS2 (K-4) SAE –5</b> <i>Recognize that energy is needed for all organisms to stay alive and grow or identify where a plant or animal gets its energy.</i>	
<b>LS2 (3-4) –5</b> <b>Students demonstrate an understanding of energy flow in an ecosystem by ...</b>	
<b>5a</b> <u>identifying sources of energy for survival of organisms (i.e. light or food).</u>	<b>Student Edition:</b> 50-51, 150-151 <i>Explore: Inquiry Activity 149</i> <i>Quick Check 51, 150</i> <i>Read a Diagram 50</i> <b>Teacher Wraparound Edition:</b> AE 148; DIF 52; DMI 50, 150; LW 148 <b>Leveled Readers:</b> <i>Grade 4 On Level Reader: Hidden Food Webs</i> <i>Grade 4 English Learner Level Reader: Hidden Food Webs</i> <i>Grade 4 Beyond Level Reader: Microorganisms</i> <i>Grade 4 Approaching Level Reader: Rain Forests, Coral Reefs, and Deserts</i> <b>Teacher’s Resources:</b> <i>Activity Lab Book 64</i> <i>Presentation Toolkit CD-ROM</i> <i>Reading and Writing 60-62</i> <i>Science in Motion: Photosynthesis and Respiration Cycles</i> <i>Visual Literacy 5</i>

STANDARDS	PAGE REFERENCES
<p><b>LS2 (K-4) SAE –6</b> Describe ways plants and animals depend on each other (e.g., shelter, nesting, food).</p>	
<p><b>LS2 (3-4)–6</b> <b>Students demonstrate an understanding of food webs in an ecosystem by ...</b></p>	
<p><b>6a</b> <u>demonstrating in a food web that all animals' food begins with the sun.</u></p>	<p><b>Student Edition:</b> 152-154 <i>Art Link</i> 157</p> <p><b>Teacher Wraparound Edition:</b> DIF 153, 154; UV 154</p> <p><b>Leveled Readers:</b> Grade 4 On Level Reader: <i>Hidden Food Webs</i> Grade 4 English Learner Level Reader: <i>Hidden Food Webs</i> Grade 4 Beyond Level Reader: <i>Microorganisms</i> Grade 4 Approaching Level Reader: <i>Rain Forests, Coral Reefs, and Deserts</i></p> <p><b>Teacher's Resources:</b> <i>Visual Literacy</i> 21, 22</p>
<p><b>6b</b> using information about organisms to <u>design a habitat and explain how the habitat provides for the needs of the organisms that live there</u></p>	<p><b>Student Edition:</b> 131 <i>Quick Lab</i> 131</p> <p><b>Teacher Wraparound Edition:</b> SB 130</p> <p><b>Teacher's Resources:</b> <i>Activity Lab Book</i> 53</p>

STANDARDS	PAGE REFERENCES
<p><b>6c</b> <u>explaining the way that plants and animals in that habitat depend on each other.</u></p>	<p><b>Student Edition:</b>  63, 65, 131, 151  <i>Quick Check</i> 63, 65, 151  <i>Quick Lab</i> 131  <i>Writing in Science</i> 158</p> <p><b>Teacher Wraparound Edition:</b>  DIF 63; IW 158; SB 130; SYL TR 45</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 English Learner Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 Approaching Level Reader: <i>Desert Animals and Plants</i>  Grade 4 On Level Reader: <i>Hidden Food Webs</i>  Grade 4 English Learner Level Reader: <i>Hidden Food Webs</i>  Grade 4 Beyond Level Reader: <i>How Can We Save Them?</i>  Grade 4 Beyond Level Reader: <i>Partners in Nature</i>  Grade 4 Approaching Level Reader: <i>Rain Forests, Coral Reefs, and Deserts</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Lab Book</i> 53  <i>Reading and Writing</i> 64-65</p>

STANDARDS	PAGE REFERENCES
<b>LS3 - Groups of organisms show evidence of change over time (structures, behaviors, and biochemistry).</b>	
<b>LS3 (K-4) SAE –7</b> <i>Using information (data or scenario), explain how changes in the environment can cause organisms to respond (e.g., survive there and reproduce, move away, die).</i>	
<b>LS3 (3-4) –7</b> <b>Students demonstrate an understanding of equilibrium in an ecosystem by ...</b>	
<b>7a</b> explaining what plants or animals might do if their environment changes (e.g., changing food supply or habitat due to fire, human impact, sudden weather-related changes).	<b>Student Edition:</b> 132, 184-189 <i>Chapter Review</i> 161 (#12) <i>Explore: Inquiry Activity</i> 183 <i>Literature</i> 125 <i>Math in Science</i> 159 <i>Quick Check</i> 132, 185 <i>Reading in Science</i> 146-147, 192-193 <b>Teacher Wraparound Edition:</b> AE 183; AR 125; DIF 125, 187; DMI 132, 184, 186, 188; DR 147; SYP TR47 <b>Leveled Readers:</b> Grade 4 Beyond Level Reader: <i>El Nino</i> Grade 4 Beyond Level Reader: <i>How Can We Save Them?</i> <b>Teacher’s Resources:</b> <i>Activity Flipchart</i> 21 <i>Activity Lab Book</i> 76-78, 79 <i>Reading and Writing</i> 48, 58-59, 79-81, 83-84 <i>Science Activity DVD</i> <i>Visual Literacy</i> 27, 28

STANDARDS	PAGE REFERENCES
<p><b>7b</b> <u>explaining how the balance of the ecosystem can be disturbed (e.g., how does overpopulation of a species affect the rest of the ecosystem).</u></p>	<p><b>Student Edition:</b>  132, 184-189  <i>Chapter Review</i> 161 (#12)  <i>Explore: Inquiry Activity</i> 183  <i>Literature</i> 125  <i>Math in Science</i> 159  <i>Quick Check</i> 132, 185  <i>Reading in Science</i> 146-147, 192-193</p> <p><b>Teacher Wraparound Edition:</b>  AE 183; AR 125; DIF 125, 187; DMI 132, 184, 186, 188; DR 147; SYP TR47</p> <p><b>Leveled Readers:</b>  Grade 4 Beyond Level Reader: <i>How Can We Save Them?</i></p> <p><b>Teacher's Resources:</b>  <i>Activity Flipchart</i> 21  <i>Activity Lab Book</i> 76-78, 79  <i>Reading and Writing</i> 48, 58-59, 79-81, 83-84  <i>Science Activity DVD</i>  <i>Visual Literacy</i> 27, 28</p>
<p><b>LS 4 - Humans are similar to other species in many ways, and yet are unique among Earth's life forms.</b></p>	
<p><b>LS4 (K-4) FAF -8</b>  <i>Identify what the physical structures of humans do (e.g., sense organs – eyes, ears, skin, etc.) or compare physical structures of humans to similar structures of animals.</i></p>	
<p><b>LS4 (3-4)-8</b>  <b>Students demonstrate an understanding of human body systems by ...</b></p>	
<p><b>8a</b> <u>showing connections between external and internal body structures (i.e., organs and systems) and how they help humans survive.</u></p>	<p><b>Student Edition:</b>  <i>Health Handbook: Human Body Systems</i> R14-R23</p> <p><b>Teacher Wraparound Edition:</b>  APK R16; DIF R14, R17; DMI R14, R16, R17, R18</p> <p><b>Leveled Readers:</b>  Grade 4 Beyond Level Reader: <i>Microorganisms</i></p>

STANDARDS	PAGE REFERENCES
<p><b>8b</b> <u>comparing and analyzing external features and characteristics</u> of humans and other animals.</p>	<p><b>Student Edition:</b> 100-104 <i>Be a Scientist: Inquiry Investigation</i> 107 <i>Health Handbook: Human Body Systems</i> R14-R23</p> <p><b>Teacher Wraparound Edition:</b> APK R16; DIF 103; R14, R17; DMI R14, R16, R17, R18; SB 102</p> <p><b>Teacher’s Resources:</b> <i>Activity Flipchart</i> 11 <i>Activity Lab Book</i> 38-40 <i>Science Activity DVD</i></p>
<p><b>LS4 (K-4) POC -9</b> <i>Distinguish between characteristics of humans that are inherited from parents (i.e., hair color, height, skin color, eye color) and others that are learned (e.g., riding a bike, singing a song, playing a game, reading)</i></p>	
<p><b>LS4 (3-4) –9</b> Students demonstrate an understanding of human heredity by ...</p>	
<p><b>9a</b> <u>identifying similarities that are inherited from a biological parent.</u></p>	<p><b>Student Edition:</b> 114-116 <i>Quick Check</i> 116 <i>Quick Lab</i> 116</p> <p><b>Teacher Wraparound Edition:</b> SYP TR 41, TR43</p> <p><b>Teacher’s Resources:</b> <i>Presentation Toolkit CD-ROM</i> <i>Visual Literacy</i> 16</p>
<p><b>9b</b> <u>identifying that some behaviors are learned and some behaviors are instinctive.</u></p>	<p><b>Student Edition:</b> 116 <i>Lesson Review</i> 117 (#4) <i>Quick Check</i> 116 <i>Quick Lab</i> 116</p> <p><b>Teacher Wraparound Edition:</b> DMI 116; DV 116; SYP TR46</p>

STANDARDS	PAGE REFERENCES
<b>Earth &amp; Space Science</b>	
<b>ESS1 - The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.</b>	
<b>ESS1 (K-4) INQ –1</b> <i>Given certain earth materials (soils, rocks or minerals) use physical properties to sort, classify, and describe them.</i>	
<b>ESS1 (3-4) –1</b> <b>Students demonstrate an understanding of earth materials by ...</b>	
<b>1a</b> describing, comparing, and sorting rocks, soils, and minerals by similar or different physical properties (e.g., size, shape, color, texture, smell, weight, <u>temperature</u> , <u>hardness</u> , <u>composition</u> ).	<b>Student Edition:</b> 252-253, 266, 268 <i>Be A Scientist: Inquiry Investigation</i> 270-271 <i>Explore: Inquiry Activity</i> 251 <i>Lesson Review</i> 269 (#1) <i>Read a Table</i> 253 <b>Teacher Wraparound Edition:</b> DIF 253; HA 268; SYP TR50; UV 253, 266 <b>Leveled Readers:</b> Grade 4 Approaching Level Reader: <i>Diamonds</i> Grade 4 Beyond Level Reader: <i>Gold</i> Grade 4 On Level Reader: <i>Rocks</i> Grade 4 English Learner Level Reader: <i>Rocks</i> <b>Teacher’s Resources:</b> <i>Activity Lab Book</i> 113 <i>Reading and Writing</i> 112-114 <i>Presentation Toolkit CD-ROM</i> <i>Science Quest: Rocks and Minerals</i> 252 <i>Visual Literacy</i> 37, 40

STANDARDS	PAGE REFERENCES
<p><b>1b</b> recording and <u>analyzing</u> observations/data about physical properties (e.g., <u>within a grouping</u>, which characteristics are the same and which are different).</p>	<p><b>Student Edition:</b>  252-253, 266, 268  <i>Be A Scientist: Inquiry Investigation</i> 270-271  <i>Explore: Inquiry Activity</i> 251  <i>Lesson Review</i> 269 (#1)  <i>Read a Table</i> 253</p> <p><b>Teacher Wraparound Edition:</b>  DIF 253; HA 268; SYP TR50; UV 253, 266</p> <p><b>Leveled Readers:</b>  Grade 4 Approaching Level Reader: <i>Diamonds</i>  Grade 4 Beyond Level Reader: <i>Gold</i>  Grade 4 On Level Reader: <i>Rocks</i>  Grade 4 English Learner Level Reader: <i>Rocks</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Lab Book</i> 113  <i>Reading and Writing</i> 112-114  <i>Presentation Toolkit CD-ROM</i>  <i>Science Quest: Rocks and Minerals</i>  <i>Visual Literacy</i> 40</p>
<p><b>1c</b> <u>citing evidence</u> (e.g., <u>prior knowledge, data</u>) to <u>support</u> why rocks, soils, <u>or minerals</u> are <u>classified/not classified</u> together.</p>	<p><b>Student Edition:</b>  252-253, 266, 268  <i>Be A Scientist: Inquiry Investigation</i> 270-271  <i>Explore: Inquiry Activity</i> 251  <i>Lesson Review</i> 269 (#1)  <i>Read a Table</i> 253</p> <p><b>Teacher Wraparound Edition:</b>  DIF 253; HA 268; SYP TR50; UV 253, 266</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>Rocks</i>  Grade 4 English Learner Level Reader: <i>Rocks</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Lab Book</i> 113  <i>Reading and Writing</i> 112-114  <i>Presentation Toolkit CD-ROM</i>  <i>Science Quest: Rocks and Minerals</i>  <i>Visual Literacy</i> 40</p>

STANDARDS	PAGE REFERENCES
<p><b>1d</b> <u>identifying the four basic materials of the earth (water, soil, rocks, air).</u></p>	<p><b>Student Edition:</b>            254-257, 314-315, 324-327  <i>Explore: Inquiry Activity</i> 322  <i>Focus on Skills: Skill Builder</i> 332-333  <i>Quick Check</i> 257  <i>Read a Diagram</i> 257, 326</p> <p><b>Teacher Wraparound Edition:</b>            DMI 314, 326; ELL 254; SYB TR48; UV 315</p> <p><b>Leveled Readers:</b>            Grade 4 On Level Reader: <i>Rocks</i>            Grade 4 English Learner Level Reader: <i>Rocks</i>            Grade 4 Approaching Level Reader: <i>Why Does It Rain</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 37  <i>Activity Lab Book</i> 106, 138-140  <i>Presentation Toolkit CD-ROM</i>  <i>Reading and Writing</i> 140-142  <i>Visual Literacy</i> 47, 49</p>

STANDARDS	PAGE REFERENCES
<p><b>ESS1 (K-4) INQ –2</b>  <i>Use results from an experiment to draw conclusions about how water interacts with earth materials (e.g., percolation, erosion, frost heaves).</i></p>	
<p><b>ESS1 (3-4)–2</b>  <b>Students demonstrate an understanding of processes and change over time within earth systems by ...</b></p>	
<p><b>2a</b> <u>conducting investigations and using observational data to describe how water moves rocks and soils.</u></p>	<p><b>Student Edition:</b>  227, 228-231, 238  <i>Be a Scientist: Inquiry Investigation</i> 244-245  <i>Explore: Inquiry Activity</i> 255, 285  <i>Quick Lab</i> 267  <i>Read a Diagram</i> 231  <i>Read a Photo</i> 229</p> <p><b>Teacher Wraparound Edition:</b>  AE 225, 285; DIF 229</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>Barrier Islands</i>  Grade 4 English Learner Level Reader: <i>Barrier Islands</i>  Grade 4 On Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 English Learner Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 Approaching Level Reader: <i>Glaciers</i>  Grade 4 Beyond Level Reader: <i>The Grand Canyon</i>  Grade 4 On Level Reader: <i>Rocks</i>  Grade 4 English Learner Level Reader: <i>Rocks</i>  Grade 4 On Level Reader: <i>What Is Happening to the Beach?</i>  Grade 4 English Learner Level Reader: <i>What Is Happening to the Beach?</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 25, 27, 34  <i>Activity Lab Book</i> 91-93, 99-102, 113, 126-128  <i>Instructional Navigator CD-ROM</i>  <i>Science Activity DVD</i></p>

STANDARDS	PAGE REFERENCES
<p><b>ESS 1 (K-4) NOS –3</b>  <b>Explain how the use of scientific tools helps to extend senses and gather data about weather. (i.e., weather/wind vane: direction; wind sock: wind intensity; anemometer: speed; thermometer: temperature; meter sticks/rulers: snow depth; rain gauges: rain amount in inches).</b></p>	
<p><b>ESS 1(3-4) –3</b>  <b>Students demonstrate an understanding of how the use of scientific tools helps to extend senses and gather data by...</b></p>	
<p><b>3a</b> <u>explaining</u> how the use of scientific tools helps to extend senses and gather data about weather (i.e., weather/wind vane: direction; wind sock: wind intensity; anemometer: speed; thermometer: temperature; meter sticks/rulers: snow depth; rain gauges: rain amount in inches).</p>	<p><b>Student Edition:</b>  6, 218-219, 318  <i>Quick Check</i> 318  <i>Reading in Science</i> 342-343  <b>Teacher Wraparound Edition:</b>  DMI 318; ELL 342; FA 319; HA 318  <b>Teacher’s Resources:</b>  <i>Key Concept Cards</i> 47-48</p>
<p><b>3b</b> <u>selecting</u> appropriate tools for a given task and <u>describing</u> the information they will provide</p>	<p>The following references can be used to meet this objective.  <b>Student Edition:</b>  7, 318  <i>Explore: Inquiry Activity</i> 313  <i>Focus on Skills: Skill Builder</i> 210-211  <i>Science Handbook</i> R4-R7  <i>Writing in Science</i> 320  <b>Teacher Wraparound Edition:</b>  FA 319; HA 318; IM 13; IW 14  <b>Leveled Readers:</b>  Grade 4 Approaching Level Reader: <i>The Galileo Mission to Jupiter</i>  <b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 23  <i>Activity Lab Book</i> 84-86  <i>Reading and Writing</i> 144-145</p>

STANDARDS	PAGE REFERENCES
<p><b>ESS1 (K-4) INQ+SAE –4</b>  <b>Explain how wind, water, or ice shape and reshape the earth.</b></p>	
<p><b>ESS1 (3-4) –4</b>  <b>Students demonstrate an understanding of processes and change over time within earth systems by ...</b></p>	
<p><b>4a</b> <u>investigating local landforms and how wind, water, or ice have shaped and reshaped them (e.g. severe weather).</u></p>	<p><b>Student Edition:</b>  204-205, 228-231  <i>Explore: Inquiry Lab</i> 225  <i>Quick Lab</i> 231  <i>Read a Map</i> 205  <i>Read a Photo</i> 229  <i>Writing Link</i> 209</p> <p><b>Teacher Wraparound Edition:</b>  DIF 205; DMI 204</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>Barrier Islands</i>  Grade 4 English Learner Level Reader: <i>Barrier Islands</i>  Grade 4 On Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 English Learner Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 Approaching Level Reader: <i>Glaciers</i>  Grade 4 Beyond Level Reader: <i>The Grand Canyon</i>  Grade 4 On Level Reader: <i>Rocks</i>  Grade 4 English Learner Level Reader: <i>Rocks</i>  Grade 4 On Level Reader: <i>What Is Happening to the Beach?</i>  Grade 4 English Learner Level Reader: <i>What Is Happening to the Beach?</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 25  <i>Activity Lab Book</i> 91-93, 94  <i>Reading and Writing</i> 89-91  <i>Science Quest: Changing Landforms</i>  <i>Visual Literacy</i> 29, 33, 34</p>

STANDARDS	PAGE REFERENCES
<p><b>4b</b> <u>using or building models to simulate the effects of how wind and water shape and reshape the land (e.g., erosion, sedimentation, deposition, glaciation).</u></p>	<p><b>Student Edition:</b>  <i>Be a Scientist: Inquiry Investigation</i> 244-245  <i>Explore: Inquiry Activity</i> 225, 237  <i>Quick Lab</i> 207, 231, 241</p> <p><b>Teacher Wraparound Edition:</b>  IM 210</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>Barrier Islands</i>  Grade 4 English Learner Level Reader: <i>Barrier Islands</i>  Grade 4 On Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 English Learner Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 Approaching Level Reader: <i>Glaciers</i>  Grade 4 Beyond Level Reader: <i>The Grand Canyon</i>  Grade 4 On Level Reader: <i>Rocks</i>  Grade 4 English Learner Level Reader: <i>Rocks</i>  Grade 4 On Level Reader: <i>What Is Happening to the Beach?</i>  Grade 4 English Learner Level Reader: <i>What Is Happening to the Beach?</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Lab Book</i> 83, 94, 95-97, 98, 99-102</p>

STANDARDS	PAGE REFERENCES
<p><b>4c</b> <u>identifying sudden and gradual changes that affect the Earth (e.g. sudden change = flood; gradual change = erosion caused by oceans).</u></p>	<p><b>Student Edition:</b>  205-207, 214-215, 220, 226-231  <i>Explore: Inquiry Activity</i> 213  <i>Focus on Skills: Skill Builder</i> 210-211  <i>Math in Science</i> 235  <i>Quick Check</i> 220  <i>Read a Diagram</i> 231  <i>Writing in Science</i> 234</p> <p><b>Teacher Wraparound Edition:</b>  DIF 215; SB 205</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>Barrier Islands</i>  Grade 4 English Learner Level Reader: <i>Barrier Islands</i>  Grade 4 On Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 English Learner Level Reader: <i>Caves: A World of Their Own</i>  Grade 4 Approaching Level Reader: <i>Glaciers</i>  Grade 4 Beyond Level Reader: <i>The Grand Canyon</i>  Grade 4 On Level Reader: <i>Rocks</i>  Grade 4 English Learner Level Reader: <i>Rocks</i>  Grade 4 On Level Reader: <i>What Is Happening to the Beach?</i>  Grade 4 English Learner Level Reader: <i>What Is Happening to the Beach?</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 23, 24  <i>Activity Lab Book</i> 84-86, 87-89  <i>Math</i> 9-10  <i>Reading and Writing</i> 103-104</p>

STANDARDS	PAGE REFERENCES
<p><b>ESS1 (K-4) POC –5</b>  <i>Based on data collected from daily weather observations, describe weather changes or weather patterns.</i></p>	
<p><b>ESS1 (3-4) –5</b>            Students demonstrate an understanding of processes and change over time within earth systems by ...</p>	
<p><b>5a</b> <u>observing, recording, comparing, and analyzing weather data to describe weather changes or weather patterns.</u></p>	<p><b>Student Edition:</b>            336-339  <i>Be a Scientist: Inquiry Investigation</i> 352-353  <i>Explore: Inquiry Activity</i> 345  <i>Math in Science</i> 321  <i>Quick Check</i> 337, 339  <i>Quick Lab</i> 339  <i>Writing in Science</i> 321</p> <p><b>Teacher Wraparound Edition:</b>            DIF 338; HA 330; IM 321</p> <p><b>Leveled Readers:</b>            Grade 4 Beyond Level Reader: <i>El Nino</i>            Grade 4 Approaching Level Reader: <i>Glaciers</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 40, 41  <i>Activity Lab Book</i> 149-151, 153-156  <i>Instructional Navigator CD-ROM</i></p>
<p><b>5b</b> <u>describing water as it changes into vapor in the air and reappears as a liquid when it’s cooled.</u></p>	<p><b>Student Edition:</b>            324-327  <i>Explore: Inquiry Activity</i> 323, 335  <i>Focus on Skills: Skill Builder</i> 332-333  <i>Quick Check</i> 325  <i>Quick Lab</i> 317, 328</p> <p><b>Teacher Wraparound Edition:</b>            AE 335; DIF 325; DMI 324, 326</p> <p><b>Leveled Readers:</b>            Grade 4 Approaching Level Reader: <i>Why Does It Rain</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 37, 39  <i>Activity Lab Book</i> 138-140, 145-147  <i>Reading and Writing</i> 146-148  <i>Science Activity DVD</i></p>

STANDARDS	PAGE REFERENCES
<p><b>5c</b> <u>explaining how this cycle of water relates to weather and the formation of clouds.</u></p>	<p><b>Student Edition:</b> 326, 328-330 <i>Quick Lab</i> 328 <i>Lesson Review</i> 331 (#3)</p> <p><b>Teacher Wraparound Edition:</b> DIF 326; DMI 330</p> <p><b>Leveled Readers:</b> Grade 4 Approaching Level Reader: <i>Why Does It Rain?</i></p> <p><b>Teacher’s Resources:</b> <i>Activity Lab Book</i> 141 <i>Presentation Toolkit CD-ROM</i></p>
<p><b>ESS1 (K-4) FAF -6</b> <i>Given information about earth materials explain how their characteristics lend themselves to specific uses</i></p>	
<p><b>ESS1 (3-4)-6</b> <b>Students demonstrate an understanding of properties of earth materials by...</b></p>	
<p><b>6a</b> <u>determining and supporting explanations of their uses (e.g., <u>best</u> soils to grow plants, <u>best</u> building material for a specific purpose, <u>determining</u> which rock size will best prevent erosion).</u></p>	<p><b>Student Edition:</b> 258, 266-268 <i>Be a Scientist: Inquiry Investigation</i> 270-271 <i>Focus on Skills: Skill Builder</i> 211 <i>Quick Check</i> 267, 268</p> <p><b>Teacher Wraparound Edition:</b> HA 259; UV 258, 268</p> <p><b>Leveled Readers:</b> Grade 4 On Level Reader: <i>Barrier Islands</i> Grade 4 English Learner Level Reader: <i>Barrier Islands</i> Grade 4 On Level Reader: <i>The Story of Alloys</i> Grade 4 English Learner Level Reader: <i>The Story of Alloys</i> Grade 4 On Level Reader: <i>What Is Happening to the Beach?</i> Grade 4 English Learner Level Reader: <i>What Is Happening to the Beach?</i></p> <p><b>Teacher’s Resources:</b> <i>Activity Flipchart</i> 23, 31 <i>Activity Lab Book</i> 84-86, 114-117</p>

STANDARDS	PAGE REFERENCES
<p><b>ESS2 - The earth is part of a solar system, made up of distinct parts that have temporal and spatial interrelationships.</b></p>	
<p><b>ESS2 (3-4)-7</b>  <b>Students demonstrate an understanding of temporal or positional relationships between or among the Earth, sun, and moon by ...</b></p>	
<p><b>7a</b> observing that the sun, moon, <u>and stars</u> appear to move slowly across the sky.</p>	<p><b>Student Edition:</b>  361, 364, 373, 396  <i>Be a Scientist: Inquiry Investigation</i> 400-401  <i>Quick Check</i> 365  <b>Teacher Wraparound Edition:</b>  SYP TR54  <b>Leveled Readers:</b>  Grade 4 Beyond Level Reader: <i>Constellations</i></p>
<p><b>7b</b> observing that the moon looks slightly different from day to day, <u>but looks the same again in about 4 weeks.</u></p>	<p><b>Student Edition:</b>  372-373  <i>Focus on Skills: Skill Builder</i> 376-377  <i>Quick Check</i> 373  <b>Teacher Wraparound Edition:</b>  DIF 372; IW 376  <b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 44  <i>Activity Lab Book</i> 165-167  <i>Instructional Navigator CD-ROM</i>  <i>Presentation Toolkit CD-ROM</i>  <i>Visual Literacy</i> 57</p>
<p><b>7c</b> <u>recognizing that the rotation of the Earth on its axis every 24 hours produces the day/night cycle.</u></p>	<p><b>Student Edition:</b>  360-361  <i>Explore: Inquiry Activity</i> 359  <i>Quick Check</i> 361  <b>Teacher Wraparound Edition:</b>  DMI 360  <b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>Lights and White Nights</i>  Grade 4 English Learner Level Reader: <i>Lights and White Nights</i>  <b>Teacher’s Resources:</b>  <i>Presentation Toolkit CD-ROM</i>  <i>Reading and Writing</i> 163-165  <i>Visual Literacy</i> 55</p>

STANDARDS	PAGE REFERENCES
<p><b>ESS2 (3-4)-8</b>  <b>Students demonstrate an understanding of characteristics of the solar system by ...</b></p>	
<p><b>8a</b> <u>recognizing that: the sun is the center of our solar system; the Earth is one of several planets that orbits the sun; and the moon orbits the Earth.</u></p>	<p><b>Student Edition:</b>  372-373, 380-381, 384-387  <i>Quick Lab</i> 373, 384</p> <p><b>Teacher Wraparound Edition:</b>  DMI 372, 380; SYP TR54-TR55; WU 358, 378</p> <p><b>Leveled Readers:</b>  Grade 4 Beyond Level Reader: <i>Constellations</i>  Grade 4 Approaching Level Reader: <i>The Galileo Mission to Jupiter</i>  Grade 4 On Level Reader: <i>Lights and White Nights</i>  Grade 4 English Learner Level Reader: <i>Lights and White Nights</i></p> <p><b>Teacher's Resources:</b>  <i>Activity Flipchart</i> 45  <i>Activity Lab Book</i> 164, 168-170, 171  <i>Presentation Toolkit CD-ROM</i>  <i>Reading and Writing</i> 173-175  <i>Visual Literacy</i> 57, 59</p>

STANDARDS	PAGE REFERENCES
<p><b>8b</b> <u>recognizing that it takes approximately 365 days for the Earth to orbit the sun.</u></p>	<p><b>Student Edition:</b> 362-363</p> <p><b>Leveled Readers:</b> Grade 4 On Level Reader: <i>Lights and White Nights</i> Grade 4 English Learner Level Reader: <i>Lights and White Nights</i></p> <p><b>Teacher’s Resources:</b> <i>Activity Lab Book</i> 160 <i>Presentation Toolkit CD-ROM</i> <i>Visual Literacy</i> 56</p>
<p><b>ESS3 - The origin and evolution of galaxies and the universe demonstrate fundamental principles of physical science across vast distances and time</b></p>	
<p><b>ESS3 (3-4)-9</b> <b>Students demonstrate understanding of processes and change over time within the system of the universe (Scale, Distances, Star Formation, Theories, Instrumentation) by...</b></p>	
<p><b>9a</b> <u>recognizing that throughout history people have identified patterns of stars that we call constellations.</u></p>	<p><b>Student Edition:</b> 396-397 <i>Chapter Review</i> 403 (#1-#4) <i>Lesson Review</i> 399 (#2) <i>Quick Lab</i> 397 <i>Read a Diagram</i> 396</p> <p><b>Teacher Wraparound Edition:</b> APK 392; DIF 396; DMI 396; ELL 397; FA 399; IW 400; WU 329</p> <p><b>Leveled Readers:</b> Grade 4 Beyond Level Reader: <i>Constellations</i></p> <p><b>Teacher’s Resources:</b> <i>Activity Lab Book</i> 175 <i>Visual Literacy</i> 62 <i>Presentation Toolkit CD-ROM</i></p>

STANDARDS	PAGE REFERENCES
<b>Physical Science</b>	
<b>PS1 - All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).</b>	
<b>PS1 (K-4) INQ –1</b> <i>Collect and organize data about physical properties in order to classify objects or draw conclusions about objects and their characteristic properties (e.g., temperature, color, size, shape, weight, texture, flexibility).</i>	
<b>PS1 (3-4)–1</b> <b>Students demonstrate an understanding of characteristic properties of matter by ...</b>	
<b>1a</b> identifying, comparing, and sorting objects by similar or different physical properties (e.g., size, shape, color, texture, smell, weight, <u>temperature</u> , <u>flexibility</u> ).	<b>Student Edition:</b> 412, 433 <i>Explore: Inquiry Activity</i> 411, 421, 431 <i>Focus on Skills: Skill Builder</i> 428 <i>Quick Lab</i> 424, 435 <i>Writing Link</i> 427 <b>Teacher Wraparound Edition:</b> AE 411, 421; APK 410, 430; DIF 413; WU 430 <b>Leveled Readers:</b> Grade 4 Approaching Level Reader: <i>All About Elements</i> Grade 4 On Level Reader: <i>The Story of Alloys</i> Grade 4 English Learner Level Reader: <i>The Story of Alloys -14</i> Grade 4 On Level Reader: <i>What's the Matter?</i> Grade 4 English Learner Level Reader: <i>What's the Matter?</i> <b>Teacher's Resources:</b> <i>Activity Flipchart</i> 48, 50, 51 <i>Activity Lab Book</i> 180-182, 188-190, 191-193 <i>Science Activity DVD</i>

STANDARDS	PAGE REFERENCES
<p><b>1b</b> <u>citing evidence (e.g., prior knowledge, data) to support conclusions about why objects are grouped/not grouped together</u></p>	<p><b>Student Edition:</b>            433, 533  <i>Art Link</i> 471  <i>Explore: Inquiry Activity</i> 431  <i>Quick Lab</i> 470</p> <p><b>Teacher Wraparound Edition:</b>            AE 411; APK 430; OI 431; SB 432</p> <p><b>Leveled Readers:</b>  <i>Grade 4 Approaching Level Reader: All About Elements</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 51  <i>Activity Lab Book</i> 191-193  <i>Science Activity DVD</i></p>
<p><b>Students demonstrate an understanding of physical changes by ...</b></p>	
<p><b>1c</b> <u>observing and describing physical changes (e.g. freezing, thawing, torn piece of paper).</u></p>	<p><b>Student Edition:</b>            446-449  <i>Explore: Inquiry Activity</i> 445  <i>Quick Check</i> 447</p> <p><b>Teacher Wraparound Edition:</b>            AE 445; APK 445; DIF 447; DMI 446; EMI 447; WU 445</p> <p><b>Leveled Readers:</b>  <i>Grade 4 Beyond Level Reader: Gold</i>  <i>Grade 4 On Level Reader: Rocks</i>  <i>Grade 4 English Learner Level Reader: Rocks</i>  <i>Grade 4 On Level Reader: What's the Matter?</i>  <i>Grade 4 English Learner Level Reader: What's the Matter?</i>  <i>Grade 4 Approaching Level Reader: Why Does It Rain</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 52  <i>Activity Lab Book</i> 195-197  <i>Reading and Writing</i> 206-208  <i>Science Activity DVD</i></p>

STANDARDS	PAGE REFERENCES
<p><b>PS1 (K-4) POC –2</b>  <i>Make a prediction about what might happen to the state of common materials when heated or cooled or categorize materials as solid, liquid, or gas.</i></p>	
<p><b>PS1 (3-4) –2</b>  <b>Students demonstrate an understanding of states of matter by ...</b></p>	
<p><b>2a</b> describing properties of solids, liquids, <u>and</u> <u>gases</u>.</p>	<p><b>Student Edition:</b>  414-415  <i>Lesson Review 417 (#3)</i>  <i>Quick Check 415</i>  <i>Quick Lab 415</i></p> <p><b>Teacher Wraparound Edition:</b>  DMI 414; ELL 415; FA 417; FCT 415</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>What's the Matter?</i>  Grade 4 English Learner Level Reader: <i>What's the Matter?</i></p> <p><b>Teacher's Resources:</b>  <i>Activity Lab Book 183</i>  <i>Presentation Toolkit CD-ROM</i></p>
<p><b>2b</b> identifying and comparing solids, liquids, <u>and</u> <u>gases</u>.</p>	<p><b>Student Edition:</b>  414-415  <i>Lesson Review 417 (#3)</i>  <i>Quick Check 415</i>  <i>Quick Lab 415</i></p> <p><b>Teacher Wraparound Edition:</b>  DMI 414; ELL 415; FA 417; FCT 415</p> <p><b>Leveled Readers:</b>  Grade 4 Approaching Level Reader: <i>All About Elements</i>  Grade 4 On Level Reader: <i>What's the Matter?</i>  Grade 4 English Learner Level Reader: <i>What's the Matter?</i></p> <p><b>Teacher's Resources:</b>  <i>Activity Lab Book 183</i>  <i>Presentation Toolkit CD-ROM</i></p>

STANDARDS	PAGE REFERENCES
<p><b>2c</b> making logical predictions about the changes in the state of matter when adding or taking away heat (e.g., ice melting, <u>water boiling</u> or freezing, <u>condensation/evaporation</u>).</p>	<p><b>Student Edition:</b> 448-449 <i>Focus on Skills: Skill Builder</i> 464-465 <i>Quick Check</i> 449 <i>Quick Lab</i> 449 <i>Read a Diagram</i> 449</p> <p><b>Teacher Wraparound Edition:</b> DIF 449; DMI 448</p> <p><b>Leveled Readers:</b> Grade 4 Approaching Level Reader: <i>Why Does It Rain</i></p> <p><b>Teacher’s Resources:</b> <i>Activity Flipchart</i> 54 <i>Activity Lab Book</i> 198, 203-205 <i>Instructional Navigator CD-ROM</i> <i>Presentation Toolkit CD-ROM</i> <i>Visual Literacy</i> 69</p>
<p><b>PS1 (K-4) SAE –3</b> <i>Use measures of weight (data) to demonstrate that the whole equals the sum of its parts.</i></p>	
<p><b>PS1 (3-4)–3</b> <b>Students demonstrate an understanding of conservation of matter by ...</b></p>	
<p><b>3a</b> <u>measuring the weight of objects to prove that all matter has weight.</u></p>	<p>The following references can be used to meet this standard.</p> <p><b>Student Edition:</b> 412-413, 426 <i>Focus on Skills: Skill Builder</i> 428-429 <i>Quick Check</i> 413 <i>Science Handbook</i> R6</p> <p><b>Teacher Wraparound Edition:</b> DMI 426</p> <p><b>Teacher’s Resources:</b> <i>Activity Flipchart</i> 50 <i>Activity Lab Book</i> 188-190 <i>Instructional Navigator CD-ROM</i></p>

STANDARDS	PAGE REFERENCES
<p><b>3b</b> <u>using measures of weight to prove that the whole equals the sum of its parts.</u></p>	<p>The following references can be used to meet this standard.</p> <p><b>Student Edition:</b>  412-413, 426  <i>Explore: Inquiry Activity</i> 445  <i>Focus on Skills: Skill Builder</i> 428-429  <i>Quick Check</i> 413  <i>Science Handbook</i> R6</p> <p><b>Teacher Wraparound Edition:</b>  DMI 426</p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 50  <i>Activity Lab Book</i> 188-190  <i>Instructional Navigator CD-ROM</i></p>
<p><b>3c</b> <u>showing that the weight of an object remains the same despite a change in its shape.</u></p>	<p>The following references can be used to meet this standard.</p> <p><b>Student Edition:</b>  412-413, 426  <i>Focus on Skills: Skill Builder</i> 428-429  <i>Quick Check</i> 413  <i>Science Handbook</i> R6</p> <p><b>Teacher Wraparound Edition:</b>  DMI 426</p> <p><b>Leveled Readers:</b>  Grade 4 On Level Reader: <i>What’s the Matter?</i>  Grade 4 English Learner Level Reader: <i>What’s the Matter?</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 50  <i>Activity Lab Book</i> 188-190  <i>Instructional Navigator CD-ROM</i></p>

STANDARDS	PAGE REFERENCES
<p><b>PS 2 - Energy is necessary for change to occur in matter. Energy can be stored, transferred, and transformed, but cannot be destroyed.</b></p>	
<p><b>PS2 (K-4) SAE -4</b>  <i>Given a specific example or illustration (e.g., simple closed circuit, rubbing hands together), predict the observable effects of energy (i.e., light bulb lights, a bell rings, hands warm up (e.g., a test item might ask, “what will happen when...?”).</i></p>	
<p><b>PS2 (3-4)-4</b>  <b>Students demonstrate an understanding of energy by...</b></p>	
<p><b>4a</b> <u>experimenting to identify and classify different pitches and volumes of sounds produced by different objects.</u></p>	<p><b>Student Edition:</b>            544-545  <i>Explore: Inquiry Activity 539</i>  <i>Look and Wonder 539</i>  <i>Quick Check 545</i>  <i>Quick Lab 544</i>  <b>Teacher Wraparound Edition:</b>            AE 539; GI 539; OI 539  <b>Teacher’s Resources:</b>  <i>Activity Flipchart 65</i>  <i>Activity Lab Book 244-246, 247</i>  <i>Science Activity DVD</i></p>
<p><b>4b</b> <u>using data to explain what causes sound to have different pitch or volume</u></p>	<p><b>Student Edition:</b>  <i>Explore: Inquiry Activity 539</i>  <i>Look and Wonder 538</i>  <i>Quick Check 545</i>  <i>Quick Lab 544</i>  <b>Teacher Wraparound Edition:</b>            AE 539; GI 539; OI 539  <b>Teacher’s Resources:</b>  <i>Activity Flipchart 65</i>  <i>Activity Lab Book 244-246, 247</i>  <i>Science Activity DVD</i></p>

STANDARDS	PAGE REFERENCES
<p><b>4c</b> <u>describing or showing that heat can be produced in many ways (e.g. electricity, friction, burning).</u></p>	<p><b>Student Edition:</b> 451, 534 <i>Read a Diagram</i> 451</p> <p><b>Teacher Wraparound Edition:</b> APK 528; UV 531</p> <p><b>Leveled Readers:</b> Grade 4 On Level Reader: <i>It's Electric</i> Grade 4 English Learner Level Reader: <i>It's Electric</i> Grade 4 Approaching Level Reader: <i>Sources of Energy</i></p>
<p><b>4d</b> <u>drawing, diagramming, building, and explaining a complete electrical circuit.</u></p>	<p><b>Student Edition:</b> 566-569 <i>Art Link</i> 571 <i>Quick Lab</i> 569 <i>Read a Diagram</i> 567, 569</p> <p><b>Teacher Wraparound Edition:</b> DIF 567, 568; EMI 567</p> <p><b>Leveled Readers:</b> Grade 4 On Level Reader: <i>It's Electric</i> Grade 4 English Learner Level Reader: <i>It's Electric</i></p> <p><b>Teacher's Resources:</b> <i>Activity Lab Book</i> 259 <i>Science Quest: Electricity</i> <i>Visual Literacy</i> 89, 90</p>
<p><b>4e</b> <u>using experimental data to classify a variety of materials as conductors or insulators</u></p>	<p><b>Student Edition:</b> 533 <i>Explore: Inquiry Activity</i> 529 <i>Focus on Skills: Skill Builder</i> 536-537 <i>Lesson Review</i> 535 (#5)</p> <p><b>Teacher Wraparound Edition:</b> AE 529</p> <p><b>Teacher's Resources:</b> <i>Activity Flipchart</i> 64 <i>Activity Lab Book</i> 241-243 <i>Instructional Navigator CD-ROM</i> <i>Presentation Toolkit CD-ROM</i></p>

STANDARDS	PAGE REFERENCES
<p><b>PS2 (K-4) SAE – 5</b>  <i>Use observations of light in relation to other objects/substances to describe the properties of light (can be reflected, refracted, or absorbed).</i></p>	
<p><b>PS2 (3-4)-5</b>  <b>Students demonstrate an understanding of energy by...</b></p>	
<p><b>5a</b> investigating <u>observable effects of light</u> using a variety of light sources (e.g., light travels in a straight line until it interacts with an object, blocked light rays produce shadows).</p>	<p><b>Student Edition:</b>  552-554, 556-558  <i>Be a Scientist: Inquiry Investigation</i> 560-561  <i>Explore: Inquiry Activity</i> 551  <i>Quick Check</i> 555, 558  <i>Quick Lab</i> 557</p> <p><b>Teacher Wraparound Edition:</b>  AE 551; DIF 554; DMI 554, 556; GI 551; HA 558I  OI 551</p> <p><b>Leveled Readers:</b>  Grade 4 Approaching Level Reader: <i>Diamonds</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 66, 67  <i>Activity Lab Book</i> 248-250, 251, 252-255  <i>Instructional Navigator CD-ROM</i>  <i>Presentation Toolkit CD-ROM</i>  <i>Science Activity DVD</i></p>
<p><b>5b</b> <u>predicting, describing, and investigating how light rays are reflected, refracted, or absorbed</u></p>	<p><b>Student Edition:</b>  552, 554, 556-558  <i>Be a Scientist: Inquiry Investigation</i> 560-561  <i>Explore: Inquiry Activity</i> 551  <i>Quick Lab</i> 557</p> <p><b>Teacher Wraparound Edition:</b>  AE 550; DIF 551, 557; DMI 556, 558; IM 561;  WU 550</p> <p><b>Leveled Readers:</b>  Grade 4 Approaching Level Reader: <i>Diamonds</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart</i> 66, 67  <i>Activity Lab Book</i> 248-250, 251, 252-255  <i>Instructional Navigator CD-ROM</i>  <i>Presentation Toolkit CD-ROM</i>  <i>Science Activity DVD</i></p>

STANDARDS	PAGE REFERENCES
<p><b>PS2 (K-4) SAE+INQ – 6</b>  <i>Experiment, observe, or predict how heat might move from one object to another.</i></p>	
<p><b>PS2 (3-4)–6</b>  <b>Students demonstrate an understanding of energy by...</b></p>	
<p><b>6a</b> describing <u>how heat moves from warm objects to cold objects until both objects are the same temperature.</u></p>	<p><b>Student Edition:</b>            530-531  <i>Lesson Review 535 (#4)</i>  <i>Quick Check 531</i></p> <p><b>Teacher Wraparound Edition:</b>            DMI 530; FA 535; FCT 532; SYP TR62</p> <p><b>Teacher’s Resources:</b>  <i>Presentation Toolkit CD-ROM</i>  <i>Reading and Writing 247-249</i>  <i>Visual Literacy 83</i></p>
<p><b>6b</b> showing that heat moves from one object to another causing temperature change (e.g., when land heats up it warms the air).</p>	<p><b>Student Edition:</b>            530-533  <i>Quick Check 531</i></p> <p><b>Teacher Wraparound Edition:</b>            DIF 532; FA 535</p>
<p><b>PS 3 - The motion of an object is affected by forces.</b></p>	
<p><b>PS3 (K-4)-INQ+SAE –7</b>  <i>Use data to predict how a change in force (greater/less) might affect the position, direction of motion, or speed of an object (e.g., ramps and balls).</i></p>	
<p><b>PS3 (3-4)–7</b>  <b>Students demonstrate an understanding of motion by...</b></p>	
<p><b>7a</b> predicting the direction <u>and describing the motion</u> of objects (<u>of different weights, shapes, sizes, etc.</u>) if a force is applied to it.</p>	<p><b>Student Edition:</b>            484-487, 494-495, 498  <i>Explore: Inquiry Activity 483, 493, 503</i>  <i>Focus on Skills: Skill Builder 490-491</i>  <i>Quick Check 485, 495</i>  <i>Quick Lab 498</i></p> <p><b>Teacher Wraparound Edition:</b>            AE 483, 493; APK 482; DMI 484, 486, 494; GI 503</p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart 58, 59, 60</i>  <i>Activity Lab Book 214-216, 218-220, 221-223, 225-227</i>  <i>Instructional Navigator DVD</i>  <i>Science Activity DVD</i></p>

STANDARDS	PAGE REFERENCES
<p><b>7b</b> <u>describing change in position relative to other objects or background.</u></p>	<p><b>Student Edition:</b> 484 <i>Explore: Inquiry Activity</i> 483 <i>Lesson Review</i> 489 (#1) <i>Quick Check</i> 484</p> <p><b>Teacher Wraparound Edition:</b> DMI 485</p> <p><b>Teacher’s Resources:</b> <i>Presentation Toolkit CD-ROM</i></p>
<p><b>Students demonstrate an understanding of force (e.g., push-pull, gravitational) by...</b></p>	
<p><b>7c</b> <u>investigating and describing that different amounts of force can change direction/speed of an object in motion.</u></p>	<p><b>Student Edition:</b> 486-488, 494-495, 498 <i>Explore: Inquiry Activity</i> 493, 503 <i>Focus on Skills: Skill Builder</i> 490-491 <i>Lesson Review</i> 489 (#4) <i>Math in Science</i> 501 <i>Quick Check</i> 487 <i>Quick Lab</i> 487, 498</p> <p><b>Teacher Wraparound Edition:</b> AE 493; DIF 487; DMI 486; EMI 495; FA 489; WU 492</p> <p><b>Teacher’s Resources:</b> <i>Activity Flipchart</i> 58, 59 <i>Activity Lab Book</i> 217, 218-220, 221-223 <i>Math</i> 19-20 <i>Presentation Toolkit CD-ROM</i></p>
<p><b>7d</b> <u>conducting experiments to demonstrate that different objects fall to earth unless something is holding them up</u></p>	<p><b>Student Edition:</b> 488 <i>Focus on Skills : Skill Builder</i> 490-491 <i>Read a Diagram</i> 488</p> <p><b>Teacher Wraparound Edition:</b> HA 488; WU 492</p> <p><b>Teacher’s Resources:</b> <i>Activity Flipchart</i> 58 <i>Activity Lab Book</i> 218-220 <i>Instructional Navigator CD-ROM</i></p>

STANDARDS	PAGE REFERENCES
<p><b>PS3 (K-4) INQ+ SAE –8</b>  <i>Use observations of magnets in relation to other objects to describe the properties of magnetism (i.e., attract or repel certain objects or has no effect)</i></p>	
<p><b>PS3 (3-4)–8</b>  <b>Students demonstrate an understanding of (magnetic) force by ...</b></p>	
<p><b>8a</b> <u>using prior knowledge and investigating to predict whether or not an object will be attracted to a magnet.</u></p>	<p><b>Student Edition:</b>  461, 576-577, 579  <i>Chapter Review 289 (#10)</i>  <i>Quick Lab 461</i></p> <p><b>Teacher Wraparound Edition:</b>  APK 574; GI 493</p> <p><b>Teacher’s Resources:</b>  <i>Activity Lab Book 202</i></p>
<p><b>8b</b> <u>describing what happens when like and opposite poles of a magnet are placed near each other.</u></p>	<p><b>Student Edition:</b>  576-577  <i>Explore: Inquiry Activity 575</i>  <i>Quick Check 577</i></p> <p><b>Teacher Wraparound Edition:</b>  DIF 577; WU 574</p> <p><b>Teacher’s Resources:</b>  <i>Activity Flipchart 70</i>  <i>Activity Lab Book 264-266</i>  <i>Science Activity DVD</i>  <i>Science Quest: Magnetism and Electricity</i></p>
<p><b>8c</b> <u>exploring relative strength of magnets (e.g., size of magnets, number of magnets, properties of materials).</u></p>	<p><b>Student Edition:</b>  576-581  <i>Explore: Inquiry Activity 493, 575</i>  <i>Quick Check 581</i>  <i>Quick Lab 580</i></p> <p><b>Teacher Wraparound Edition:</b>  EMI 576; GI 493; OI 575</p> <p><b>Leveled Readers:</b>  <i>Grade 4 Beyond Level Reader: Maglev Trains</i></p> <p><b>Teacher’s Resources:</b>  <i>Activity Lab Book 267</i>  <i>Science Quest: Magnetism and Electricity</i></p>