



Macmillan/McGraw-Hill

Grade Span Expectations in Science
Grade 2

Vermont



SCIENCE

A CLOSER LOOK

Grade 2

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STANDARDS

PAGE REFERENCES

Life Science

LS1 - All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, & species).

LS1 (K-4) - INQ+POC –1

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.

LS1 (K-2) –1

Students demonstrate an understanding of classification of organisms by ...

1a distinguishing between living and non-living things

Student Edition:

24-25

Look and Wonder 22

Teacher Wraparound Edition:

APK 22; DI 25; DMI 24; ELLS 24; LW 22; SB 24; WU 22

The following leveled reader can be used in classroom discussion to meet this objective.

Leveled Readers:

Grade 2 Approaching Level Reader *Soil*

Teacher’s Resources:

Assessment *Lesson Test 5*

Literature Big Book Earth Science Unit C

STANDARDS	PAGE REFERENCES
<p>1b identifying and sorting based on a similar or different external features.</p>	<p>Student Edition: 24-25, 40-41, 56-57 <i>Art Link</i> 43 <i>Chapter 1 Review</i> 51 #6 <i>Explore</i> 55 <i>Look and Wonder</i> 54, 60 <i>Read a Photo</i> 41</p> <p>Teacher Wraparound Edition: AE 55, 61; AL 43; APK 54; DI 41, 57; DMI 40, 56; E 55; ELLS 40, 56; FA 43, 59; IW 59A; LI 59A; LW 54, 60; RP 41; SB 56; TI 59B; URS 43; UV 25, 57</p> <p>Teacher’s Resources: <i>Activity Lab Book Alternative Explore</i> 23, 29 <i>Activity Lab Book Explore</i> 21-22 <i>Activity Lab Book Focus on Skills</i> 25 <i>Assessment Performance Assessment</i> 12-13 <i>Photo Sorting Cards</i> 11, 12, 16, 19, 23 <i>Reading and Writing Outline</i> 13-14, 22-23 <i>Reading and Writing Vocabulary</i> 15, 24 <i>Visual Literacy Read a Photo</i> 3</p>

STANDARDS	PAGE REFERENCES
<p>1c observing and recording the external features that make up living things (e.g. roots, stems, leaves, flowers, legs, antennae, tail, shell).</p>	<p>Student Edition: 26, 58-59 <i>Art Link</i> 43 <i>Explore</i> 29, 55 <i>Look and Wonder</i> 54 <i>Quick Lab</i> 73 <i>Writing in Science</i> 74</p> <p>Teacher Wraparound Edition: AL 43; DI 25, 31; E 29, 55; FA 27; LAI 74; LW 54; RD 26; QL 72</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Big Orange Pumpkins</i> Grade 2 On Level Reader <i>From Seed to Tree</i> Grade 2 English Learner Level Reader <i>From Seed to Tree</i> Grade 2 Beyond Reader Level <i>From Tadpole to Frog</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Alternative Explore</i> 23 Activity Lab Book <i>Explore</i> 17-18 Activity Lab Book <i>Quick Lab</i> 10 Visual Literacy <i>Read a Diagram</i> 1, 4</p>

STANDARDS	PAGE REFERENCES
<p>LS1 (K-4) SAE -2 <i>Identify the basic needs of plants and animals in order to stay alive. (i.e., water, air, food, space).</i></p>	
<p>LS1 (K-2)-2 Students demonstrate understanding of structure and function-survival requirements by...</p>	
<p>2a observing that plants need water, air, food, and light to grow; observing that animals need water, air, food and shelter to grow.</p>	<p>Student Edition: 24-27, 47 <i>Explore</i> 23 <i>Quick Lab</i> 42 <i>Think, Talk, and Write</i> 59 #2</p> <p>Teacher Wraparound Edition: APK 20, 22; DI 20, 25; DMI 24; E 23; ELLS 24; FA 27; QL 42</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Apple Trees</i> Grade 2 On Level Reader <i>From Seed to Tree</i> Grade 2 English Learner Level Reader <i>From Seed to Tree</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Explore</i> 7-8 Activity Lab Book <i>Quick Lab</i> 20 Reading and Writing <i>Outline</i> 3-4 Reading and Writing <i>Vocabulary</i> 5 Science Song <i>The Fruit and the Flower</i> TR24</p>

STANDARDS	PAGE REFERENCES
<p>LS1 (K-4) POC –3 <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>LS1 (K-2)–3 Students demonstrate an understanding of reproduction by ...</p>	
<p>3a observing and scientifically drawing (e.g. recording shapes, prominent features, relative proportions, organizes and differentiates significant parts observed) and labeling the stages in the life cycle of a familiar plant and animal.</p>	<p>Student Edition: 34-35 <i>Art Link</i> 27 <i>Chapter 1 Review</i> 51 #9 <i>Think, Talk, and Write</i> 35, 65</p> <p>Teacher Wraparound Edition: AE 29; AL 27; FA 35; PA 48-49; RD 34</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Big Orange Pumpkins</i> Grade 2 On Level Reader <i>From Seed to Tree</i> Grade 2 English Learner Level Reader <i>From Seed to Tree</i> Grade 2 Beyond Level Reader <i>From Tadpole to Frog</i> Grade 2 On Level Reader <i>Wait and See</i> Grade 2 English Language Learner Reader <i>Wait and See</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Alternative Explore</i> 15 Activity Lab Book <i>Quick Lab</i> 30</p>
<p>3b sequencing the life cycle of a plant or animal when given a set of pictures.</p>	<p>Student Edition: <i>Chapter 2 Review</i> 81 #8</p> <p>Teacher Wraparound Edition: DI 85; ELLS 30</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>From Tadpole to Frog</i> Grade 2 On Level Reader <i>Wait and See</i> Grade 2 English Language Learner Reader <i>Wait and See</i></p> <p>Teacher’s Resources: Visual Literacy <i>Read a Diagram</i> 2</p>

STANDARDS	PAGE REFERENCES
<p>LS1 (K-4) FAF –4 <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>LS1 (K-2)–4 Students demonstrate understanding of structure and function-survival requirements by...</p>	
<p>4a identifying the specific functions of the physical structures of a plant or an animal (e.g. roots for water; webbed feet for swimming).</p>	<p>Student Edition: 26, 30-31, 42-43, 46-48 <i>Quick Lab</i> 26, 59 <i>Read a Diagram</i> 58 <i>Think, Talk, and Write</i> 27 #2, 59 #3</p> <p>Teacher Wraparound Edition: AE 23; DI 31; DMI 58; QL 26, 58; RD 58; SB 30; UV 31</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Big Orange Pumpkins</i> Grade 2 On Level Reader <i>From Seed to Tree</i> Grade 2 English Language Learner <i>From Seed to Tree</i> Grade 2 Beyond Level Reader <i>From Tadpole to Frog</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Focus on Skills</i> 8 Activity Lab Book <i>Quick Lab</i> 10, 24 Visual Literacy <i>Read a Diagram</i> 1, 4</p>
<p>LS2 - Matter cycles and energy flows through an ecosystem.</p>	
<p>LS2 (K-4) SAE –5 <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></p>	
<p>LS2 (K-2)–5 Students demonstrate an understanding of energy flow in an ecosystem by ...</p>	
<p>5a caring for plants and/or animals by identifying and providing for their needs; experimenting with a plant’s growth under different conditions, including light and no light.</p>	<p>Student Edition: <i>Explore</i> 23 <i>Quick Lab</i> 26, 42</p> <p>Teacher Wraparound Edition: E 23; QL 26, 42</p> <p>Teacher’s Resources: Activity Lab Book <i>Explore</i> 7-8, 17-18 Activity Lab Book <i>Quick Lab</i> 20</p>

STANDARDS	PAGE REFERENCES
<p>LS2 (K-4) SAE –6 Describe ways plants and animals depend on each other (e.g., shelter, nesting, food).</p>	
<p>LS2 (K-2)–6 Students demonstrate an understanding of food webs in an ecosystem by ...</p>	
<p>6a acting out or constructing simple diagrams (pictures or words) that shows a simple food web.</p>	<p>Student Edition: <i>Explore</i> 95 <i>Quick Lab</i> 97 <i>Writing in Science</i> 100</p> <p>Teacher Wraparound Edition: AE 95; DI 98; E 95; FA 99; IW 100; QL 97; TAI 100</p> <p>Teacher’s Resources: <i>Activity Lab Book Alternative Explore</i> 45 <i>Activity Lab Book Explore</i> 43-44 <i>Activity Lab Book Quick Lab</i> 46 <i>Reading and Writing Writing in Science</i> 50</p>
<p>6b using information about a simple food web to determine how basic needs (e.g. shelter and water) are met by the habitat/environment.</p>	<p>Student Edition: 96-97, 106-107</p> <p>Teacher Wraparound Edition: DMI 106; PA 114-115; UV 97</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Animals in Danger</i></p> <p>Teacher’s Resources: <i>Visual Literacy Read a Diagram</i> 8</p>

STANDARDS	PAGE REFERENCES
<p>LS 4 - Humans are similar to other species in many ways, and yet are unique among Earth's life forms.</p>	
<p>LS4 (K-4) FAF -8 <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>LS4 (K-2)-8 Students demonstrate an understanding of human body systems by ...</p>	
<p>8a identifying the five senses and using senses to identify objects in the environment,</p>	<p>Student Edition: 356-357, 406-407 <i>Writing in Science</i> 412</p> <p>Teacher Wraparound Edition: AR 357; ELLS 406; LAI 412; TAI 412</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>The Camera's Eye</i></p> <p>Teacher's Resources: Reading and Writing <i>Unit Literature</i> 200 Reading and Writing <i>Vocabulary</i> 231 Reading and Writing <i>Writing in Science</i> 233 Visual Literacy <i>Read a Diagram</i> 37</p>
<p>8b observing, identifying, and recording external features of humans and other animals.</p>	<p>Student Edition: 58-59 <i>Chapter 2 Review</i> 81 #6 <i>Explore</i> 55 <i>Look and Wonder</i> 54 <i>Quick Lab</i> 73 <i>Writing in Science</i> 74</p> <p>Teacher Wraparound Edition: E 55; IM 75; LW 54; QL 72; TAI 74</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>From Tadpole to Frog</i></p> <p>Teacher's Resources: Activity Lab Book <i>Alternative Explore</i> 23 Assessment <i>Performance Assessment</i> 26 Reading and Writing <i>Writing in Science</i> 36</p>

STANDARDS	PAGE REFERENCES
<p>8c identifying the senses needed to meet survival needs for a given situation.</p>	<p>Student Edition: 72-73, 113, 356-357 <i>Look and Wonder</i> 68</p> <p>Teacher Wraparound Edition: AR 357; DI 357; DMI 70, 72; ELLS 70; LW 68; URS 73</p> <p>Teacher’s Resources: Visual Literacy <i>Read a Photo</i> 6</p>
<p>LS4 (K-4) POC -9 <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>LS4 (K-2) –9 Students demonstrate an understanding of human heredity by ...</p>	
<p>9a observing and comparing their physical features with those of parents, classmates and other organisms.</p>	<p>The following reference can be used to introduce physical features of humans through classroom discussion.</p> <p>Student Edition: 60-63</p>
<p>9b identifying that some behaviors are learned.</p>	<p>Student Edition: 72-72</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Animal Parents</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Explore</i> 27-28</p>

STANDARDS	PAGE REFERENCES
Earth & Space Science	
ESS1 - The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.	
ESS1 (K-4) INQ –1 <i>Given certain earth materials (soils, rocks or minerals) use physical properties to sort, classify, and describe them.</i>	
ESS1 (K-2)–1 Students demonstrate an understanding of earth materials by ...	
<p>1a describing, comparing, and sorting rocks and soils by similar or different physical properties (e.g., size, shape, color, texture, smell, weight).</p>	<p>Student Edition: <i>Explore</i> 187 <i>Math in Science</i> 193 <i>Math Link</i> 191 <i>Quick Lab</i> 191 <i>Think, Talk, and Write</i> 191 #1 <i>Writing in Science</i> 192</p> <p>Teacher Wraparound Edition: DI 184, 189; E 187; ELLS 188; FA 191; IM 191A; LAI 193; ML 191; QL 190; SB 188; TAI 192, 193; TI 191B</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Minerals</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Focus on Skills</i> 26 Activity Lab Book <i>Alternative Explore</i> 83 Activity Lab Book <i>Explore</i> 81-82 Activity Lab Book <i>Quick Lab</i> 84 Math <i>Math in Science</i> 11 Reading and Writing <i>Writing in Science</i> 104</p>
<p>1b recording observations/data about physical properties.</p>	<p>Student Edition: <i>Math in Science</i> 193 <i>Quick Lab</i> 191 <i>Writing in Science</i> 192</p> <p>Teacher Wraparound Edition: IM 191A; QL 190; TAI 192, 193; TI 191B</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Minerals</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Focus on Skills</i> 26 Activity Lab Book <i>Quick Lab</i> 84 Math <i>Math in Science</i> 11 Reading and Writing <i>Writing in Science</i> 104</p>

STANDARDS	PAGE REFERENCES
<p>1c using attributes of properties to state why objects are grouped together (e.g., rocks that are shiny or not shiny).</p>	<p>Student Edition: <i>Explore</i> 187 <i>Quick Lab</i> 191</p> <p>Teacher Wraparound Edition: AE 187; AI 191B; DI 189; E 187; ELLS 188; FS 191A-191B; IM 191A; QL 190</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Minerals</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Focus on Skills</i> 26 Activity Lab Book <i>Alternative Explore</i> 83 Activity Lab Book <i>Explore</i> 81-82 Activity Lab Book <i>Focus on Skills</i> 85 Activity Lab Book <i>Quick Lab</i> 84</p>
<p>ESS1 (K-4) INQ –2 <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>ESS1 (K-2) –2 Students demonstrate an understanding of processes and change over time within earth systems by ...</p>	
<p>2a conducting tests on how different soils retain water (e.g., how fast does the water drain through?).</p>	<p>Teacher Wraparound Edition: BS 199A-199B</p> <p>Teacher’s Resources: Activity Flipchart <i>Be a Scientist</i> 28 Activity Lab Book <i>Be a Scientist</i> 91</p>

STANDARDS	PAGE REFERENCES
<p>ESS 1 (K-4) NOS –3 <i>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).</i></p>	
<p>ESS 1(K-2)–3 Students demonstrate an understanding of how the use of scientific tools helps to extend senses and gather data by...</p>	
<p>3a using scientific tools to extend senses and gather data about weather (e.g., 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>Student Edition: <i>Explore 223</i> <i>Quick Lab 226</i></p> <p>Teacher Wraparound Edition: AE 223; DI 225; E 223; FA 227; QL 226</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Tracking Weather</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Alternative Explore 99</i> Activity Lab Book <i>Explore 97-98</i> Activity Lab Book <i>Quick Lab 100</i></p>
<p>ESS1 (K-4) INQ+SAE –4 <i>Explain how wind, water, or ice shape and reshape the earth.</i></p>	
<p>ESS1 (K-2) –4 Students demonstrate an understanding of processes and change over time within earth systems by ...</p>	
<p>4a observing and recording seasonal and weather changes throughout the school year.</p>	<p>Student Edition: <i>Explore 223</i></p> <p>Teacher Wraparound Edition: E 223; FA 226</p> <p>Teacher’s Resources: Activity Lab Book <i>Explore 97-98</i></p>

STANDARDS	PAGE REFERENCES
<p>ESS1 (K-4) POC –5 <i>Based on data collected from daily weather observations, describe weather changes or weather patterns.</i></p>	
<p>ESS1 (K-2) –5 Students demonstrate an understanding of processes and change over time within earth systems by ...</p>	
<p>5a observing, recording, and summarizing local weather data.</p>	<p>Student Edition: <i>Explore 223, 237</i></p> <p>Teacher Wraparound Edition: AE 223, 237; DI 225; E 223, 237; FA 227</p> <p>Leveled Readers: <i>Grade 2 Beyond Level Reader Tracking Weather</i></p> <p>Teacher’s Resources: <i>Activity Lab Book Alternative Explore 99, 109</i> <i>Activity Lab Book Explore 97-98, 107-108</i> <i>Assessment Performance Assessment 90-91</i></p>
<p>5b observe how clouds are related to forms of precipitation (e.g., rain, sleet, snow).</p>	<p>Student Edition: 238-239 <i>Chapter 7 Review 249 #9</i> <i>Explore 237</i> <i>Look and Wonder 236</i> <i>Think, Talk, and Write 241</i></p> <p>Teacher Wraparound Edition: DMI 238; E 237; FA 241; LW 236</p> <p>Leveled Readers: <i>Grade 2 On Level Reader What Do Clouds Tell Us?</i> <i>Grade 2 English Learner Level Reader What Do Clouds Tell Us?</i></p> <p>Teacher’s Resources: <i>Activity Lab Book Explore 107-108</i> <i>Photo Sorting Cards 61-63</i> <i>Reading and Writing Vocabulary 132</i></p>

STANDARDS	PAGE REFERENCES
<p>ESS1 (K-4) FAF -6 <i>Given information about earth materials explain how their characteristics lend themselves to specific uses</i></p>	
<p>ESS1 (K-2) –6 Students demonstrate an understanding of properties of earth materials by...</p>	
<p>6a identifying which materials are best for different uses (e.g., soils for growing plants, sand for the sand box).</p>	<p>Student Edition: 196-197 <i>Explore</i> 195</p> <p>Teacher Wraparound Edition: AE 195; BS 199A-199B; DI 197; DMI 196; E 195; RP 197</p> <p>Teacher’s Resources: Activity Flipchart <i>Be a Scientist</i> 28 Activity Lab Book <i>Alternative Explore</i> 89 Activity Lab Book <i>Be a Scientist</i> 91 Visual Literacy <i>Read a Photo</i> 17</p>
<p>ESS2 - The earth is part of a solar system, made up of distinct parts that have temporal and spatial interrelationships.</p>	
<p>ESS2 (K-2) –7 Students demonstrate an understanding of temporal or positional relationships between or among the Earth, sun, and moon by ...</p>	
<p>7a observing that the sun can only be seen in the daytime, but the moon can be seen sometimes at night and sometimes during the day.</p>	<p>Student Edition: 254-255, 268-269 <i>Explore</i> 253, 267</p> <p>Teacher Wraparound Edition: BS 273A-273B; DI 255; DMI 254, 268; E 253, 267; EMI 269; RS 269</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Day and Night</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Be a Scientist</i> 38 Activity Lab Book <i>Explore</i> 111-112, 121-122 Visual Literacy <i>Read a Diagram</i> 24</p>

STANDARDS	PAGE REFERENCES
<p>7b observing that the sun and moon appear to move slowly across the sky.</p>	<p>Student Edition: 256-257 <i>Quick Lab</i> 256 <i>Think, Talk, and Write</i> 257 #3</p> <p>Teacher Wraparound Edition: DMI 256; QL 256; URS 257; UV 256</p> <p>Leveled Readers: Grade 2 On Level Reader <i>Beyond the Sky</i> Grade 2 English Learner Level Reader <i>Beyond the Sky</i></p> <p>Teacher’s Resources: <i>Activity Lab Book Quick Lab</i> 114</p>
<p>7c observing that the moon looks slightly different from day to day.</p>	<p>Student Edition: 270-271</p> <p>Teacher Wraparound Edition: BS 273A-273B; DMI 270; FA 273; IW 273A; UV 270</p> <p>Leveled Readers: Grade 2 On Level <i>Beyond the Sky</i> Grade 2 English Learner Level Reader <i>Beyond the Sky</i></p> <p>Teacher’s Resources: <i>Activity Flipchart Be a Scientist</i> 38 <i>Activity Lab Book Be a Scientist</i> 125 Photo Sorting Cards 71-74</p>

STANDARDS	PAGE REFERENCES
<p>ESS3 - The origin and evolution of galaxies and the universe demonstrate fundamental principles of physical science across vast distances and time</p>	
<p>ESS3 (K-2) –9 Students demonstrate understanding of processes and change over time within the system of the universe (Scale, Distances, Star Formation, Theories, Instrumentation) by...</p>	
<p>9a observing that there are more stars in the sky than can easily be counted, but they are not scattered evenly and not all the same in brightness.</p>	<p>Student Edition: 272-273 <i>Quick Lab</i> 272 <i>Reading in Science</i> 280-281</p> <p>Teacher Wraparound Edition: AR 281; DMI 272; DR 280; QL 272; TAI 281; UV 272</p> <p>Leveled Readers: Grade 2 On Level Reader <i>Beyond the Sky</i> Grade 2 English Learner Level Reader <i>Beyond the Sky</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Quick Lab</i> 124 Reading and Writing <i>Reading in Science</i> 157</p>

STANDARDS	PAGE REFERENCES
Physical Science	
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).	
PS1 (K-4) INQ –1 <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>	
PS1 (K-2)–1 Students demonstrate an understanding of characteristic properties of matter by ...	
1a identifying, comparing, and sorting objects by similar or different physical properties (e.g., size, shape, color, texture, smell, weight).	Student Edition: 302-303 <i>Explore</i> 295, 301 <i>Quick Lab</i> 298 <i>Think, Talk, and Write</i> 299 #1, 305 #1 Teacher Wraparound Edition: AE 295; APK 292; DI 297; DMI 302; E 295, 301; ELLS 296, 302; FA 299, 305; FS 191A-191B, 299A-299B; QL 298; URS 299; UV 303; WU 294 Leveled Readers: Grade 2 On Level Reader <i>Gases Matter</i> Grade 2 English Learner Level Reader <i>Gases Matter</i> Teacher’s Resources: <i>Activity Flipchart Focus on Skills</i> 26, 41 <i>Activity Lab Book Alternative Explore</i> 133 <i>Activity Lab Book Explore</i> 131-132, 137-138 <i>Activity Lab Book Focus on Skills</i> 85, 135 <i>Activity Lab Book Quick Lab</i> 134 <i>Visual Literacy Read a Photo</i> 26

STANDARDS	PAGE REFERENCES
<p>1b recording observations/data about physical properties.</p>	<p>Student Edition: 304-305 <i>Explore</i> 295, 301 <i>Quick Lab</i> 298 <i>Think, Talk, and Write</i> 299 #1</p> <p>Teacher Wraparound Edition: AE 295; DI 297; E 295, 301; ELLS 296; FA 299, 305; FS 191A-191B, 299A-299B; IM 191A; QL 298; URS 299</p> <p>Leveled Readers: Grade 2 On Level Reader <i>Gases Matter</i> Grade 2 English Learner Level Reader <i>Gases Matter</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Focus on Skills</i> 26, 41 Activity Lab Book <i>Alternative Explore</i> 133 Activity Lab Book <i>Explore</i> 131-132, 137-138 Activity Lab Book <i>Focus on Skills</i> 85, 135 Activity Lab Book <i>Quick Lab</i> 134</p>
<p>1c using attributes of properties to state why objects are grouped together (e.g., things that roll, things that are rough).</p>	<p>Student Edition: <i>Explore</i> 187 <i>Quick Lab</i> 191</p> <p>Teacher Wraparound Edition: AE 301; DI 189; E 187; FA 191; FS 191A-191B; QL 190</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Minerals</i> Grade 2 English Learner Level Reader <i>Rocks & Minerals</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Focus on Skills</i> 26 Activity Lab Book <i>Alternative Explore</i> 83, 139 Activity Lab Book <i>Explore</i> 81-82 Activity Lab Book <i>Focus on Skills</i> 85 Activity Lab Book <i>Quick Lab</i> 84</p>

STANDARDS	PAGE REFERENCES
<p>PS1 (K-4) POC –2 <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>PS1 (K-2) POC –2 Students demonstrate an understanding of states of matter by ...</p>	
<p>2a describing properties of solids and liquids.</p>	<p>Student Edition: 302-303, 310-311, 317-318 <i>Explore 301</i></p> <p>Teacher Wraparound Edition: AE 301; DI 303; DMI 302, 310; E 301; ELLS 302; SB 302</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Bicycle Metals</i> Grade 2 Approaching Level Reader <i>Matter and Change</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Alternative Explore 139</i> Activity Lab Book <i>Explore 137-138</i> Reading and Writing <i>Outline 167-168, 173-174</i> Visual Literacy <i>Read a Photo 28</i></p>
<p>2b identifying and comparing solids and liquids.</p>	<p>Student Edition: <i>Quick Lab 313</i></p> <p>Teacher Wraparound Edition: ELLS 310; QL 312</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Matter and Change</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Quick Lab 144</i> Reading and Writing <i>Vocabulary 175</i></p>

STANDARDS	PAGE REFERENCES
<p>2c making logical predictions about the changes in the state of matter when adding or taking away heat (e.g., ice melting, water freezing).</p>	<p>Student Edition: 332-335, 402 <i>Explore</i> 331 <i>Reading in Science</i> 336-337 <i>Think, Talk, and Write</i> 335 #3</p> <p>Teacher Wraparound Edition: AE 331; DI 333; DMI 332, 402; E 331; ELLS 332, 336; FA 335; RD 333; RS 336-337</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>Bicycle Metals</i> Grade 2 On Level Reader <i>Make a Pizza</i> Grade 2 English Learner Level Reader <i>Make a Pizza</i> Grade 2 Approaching Level Reader <i>Matter and Change</i> Grade 2 Approaching Level Reader <i>Water for Life</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Alternative Explore</i> 155 Activity Lab Book <i>Explore</i> 153-154 Reading and Writing <i>Reading in Science</i> 190 Visual Literacy <i>Read a Diagram</i> 30</p>
<p>PS1 (K-4) SAE –3 <i>Use measures of weight (data) to demonstrate that the whole equals the sum of its parts.</i></p>	
<p>PS1 (K-2)–3 Students demonstrate an understanding of conservation of matter by ...</p>	
<p>3a using simple tools (e.g. balance scale, see-saw) to explore the property of weight.</p>	<p>Student Edition: 304 <i>Explore</i> 325 <i>Quick Lab</i> 304</p> <p>Teacher Wraparound Edition: AE 325; DI 297; E 325; ELLS R4; FA 299; IM 191A, 193; M R4; QL 304</p> <p>Teacher’s Resources: Activity Lab Book <i>Alternative Explore</i> 147 Activity Lab Book <i>Explore</i> 145-146 Activity Lab Book <i>Quick Lab</i> 140 Math <i>Math in Science</i> 11 Visual Literacy <i>Read a Photo</i> 27</p>

STANDARDS	PAGE REFERENCES
<p>PS 2 - Energy is necessary for change to occur in matter. Energy can be stored, transferred, and transformed, but cannot be destroyed.</p>	
<p>PS2 (K-4) SAE -4 <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>PS2 (K-2)-4 Students demonstrate an understanding of energy by...</p>	
<p>4a describing observable effects of light using a variety of light sources.</p>	<p>Student Edition: 416-417 <i>Explore</i> 415 <i>Look and Wonder</i> 414 <i>Quick Lab</i> 418</p> <p>Teacher Wraparound Edition: AE 415; APK 414; DI 417; FA 419; LW 414; QL 418; RP 417; UV 418</p> <p>Teacher’s Resources: <i>Activity Lab Book Alternative Explore</i> 193 <i>Activity Lab Book Explore</i> 191-192 <i>Activity Lab Book Quick Lab</i> 194 <i>Visual Literacy Read a Photo</i> 38</p>
<p>4b experimenting and describe how vibrating objects make sound (e.g., guitar strings, seeing salt bounce on a drum skin).</p>	<p>Student Edition: <i>Explore</i> 405 <i>Music Link</i> 411 <i>Quick Lab</i> 407</p> <p>Teacher Wraparound Edition: AE 405; DI 408; E 405; ML 411; QL 407; SB 406</p> <p>Teacher’s Resources: <i>Activity Lab Book Alternative Explore</i> 189 <i>Activity Lab Book Explore</i> 187-188 <i>Activity Lab Book Quick Lab</i> 190</p>

STANDARDS	PAGE REFERENCES
<p>4c identifying the sun as a source of heat energy.</p>	<p>Student Edition: 400, 402 <i>Explore</i> 399 <i>Look and Wonder</i> 398 <i>Think, Talk, and Write</i> 403 #1</p> <p>Teacher Wraparound Edition: APK 398; BS 419A-419B; DI 401; DMI 400, 402; E 399; LW 398; SB 400; WU 398</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Matter and Change</i> Grade 2 Approaching Level Reader <i>Water for Life</i> Grade 2 On Level Reader <i>What Do Clouds Tell Us?</i> Grade 2 English Learner Level Reader <i>What Do Clouds Tell Us?</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Be a Scientist</i> 59 Activity Lab Book <i>Be a Scientist</i> 195 Activity Lab Book <i>Explore</i> 181-182 Visual Literacy <i>Read a Diagram</i> 36</p>
<p>PS2 (K-4) SAE – 5 <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>PS2 (K-2)-5 Students demonstrate an understanding of energy by...</p>	
<p>5a demonstrating when a shadow will be created using sunny versus cloudy days.</p>	<p>The following reference can be used in classroom discussion to meet this objective.</p> <p>Student Edition: <i>Read a Photo</i> 417</p>

STANDARDS	PAGE REFERENCES
<p>PS2 (K-4) SAE+INQ – 6 <i>Experiment, observe, or predict how heat might move from one object to another.</i></p>	
<p>PS2 (K-2)–6 Students demonstrate an understanding of energy by...</p>	
<p>6a describing that the sun warms land and water.</p>	<p>Student Edition: 262-263, 400, 402 <i>Explore</i> 330 <i>Think, Talk, and Write</i> 403 #1</p> <p>Teacher Wraparound Edition: DMI 402; E 331; FA 335; RP 402; SB 400</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Water for Life</i> Grade 2 On Level Reader <i>What Do Clouds Tell Us?</i> Grade 2 English Learner Level Reader <i>What Do Clouds Tell Us?</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Explore</i> 153-154</p>
<p>6b describing that objects change in temperature By adding or subtracting heat.</p>	<p>Student Edition: 263, 332-333, 402</p> <p>Teacher Wraparound Edition: DI 401; DMI 402; FA 335; FS 403A-403B; RP 402</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Matter and Change</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Focus on the Skills</i> 56 Activity Lab Book <i>Focus on the Skills</i> 185 Visual Literacy <i>Read a Diagram</i> 30</p>

STANDARDS	PAGE REFERENCES
PS 3 - The motion of an object is affected by forces.	
<p>PS3 (K-4)-INQ+SAE –7 <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>PS3 (K-2)-7 Students demonstrate an understanding of motion by...</p>	
<p>7a showing how pushing/pulling moves or does not move an object.</p>	<p>Student Edition: <i>Explore</i> 367 <i>Think, Talk, and Write</i> 373 #1</p> <p>Teacher Wraparound Edition: DI 372; E 367; ELLS 368; FA 373</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Get Moving!</i> Grade 2 On Level Reader <i>Push or Pull?</i> Grade 2 English Learner Level Reader <i>Push or Pull?</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Explore</i> 167-168</p>
<p>7b predicting the direction an object will or will not move if a force is applied to it.</p>	<p>Student Edition: 372-373 <i>Explore</i> 367 <i>Think, Talk, and Write</i> 373 #1</p> <p>Teacher Wraparound Edition: DI 369, 372; E 367; FA 373; QL 370; RD 372</p> <p>Leveled Readers: Grade 2 Approaching Level Reader <i>Get Moving!</i> Grade 2 On Level Reader <i>Push or Pull?</i> Grade 2 English Language Learner Reader <i>Push or Pull?</i></p> <p>Teacher’s Resources: Activity Lab Book <i>Explore</i> 167-168 Visual Literacy <i>Read a Diagram</i> 33</p>
<p>Students demonstrate an understanding of force by</p>	
<p>7c showing that different objects fall to earth unless something is holding them up.</p>	<p>The following references discuss gravity and can be used to meet this objective.</p> <p>Student Edition: 370</p> <p>Teacher Wraparound Edition: DMI 370; DV 371; UV 370</p>

STANDARDS	PAGE REFERENCES
<p>PS3 (K-4) INQ+ SAE –8 <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>PS3 (K-2)–8 Students demonstrate an understanding of (magnetic) force by ...</p>	
<p>8a observing and sorting objects that are and are not attracted to magnets.</p>	<p>Student Edition: 386-387 <i>Explore</i> 385 <i>Look and Wonder</i> 384 <i>Think, Talk, and Write</i> 389 #2, #3</p> <p>Teacher Wraparound Edition: AE 385; BS 389A-389B; DI 387; DMI 386; E 385; ELLS 386; LW 384; RC 387; SB 386; WU 384</p> <p>Leveled Readers: Grade 2 Beyond Level Reader <i>All About Magnets</i></p> <p>Teacher’s Resources: Activity Flipchart <i>Be a Scientist</i> 54 Activity Lab Book <i>Alternative Explore</i> 177 Activity Lab Book <i>Be a Scientist</i> 179 Activity Lab Book <i>Explore</i> 175-176 Reading and Writing <i>Vocabulary</i> 220 Visual Literacy <i>Read a Photo</i> 35</p>