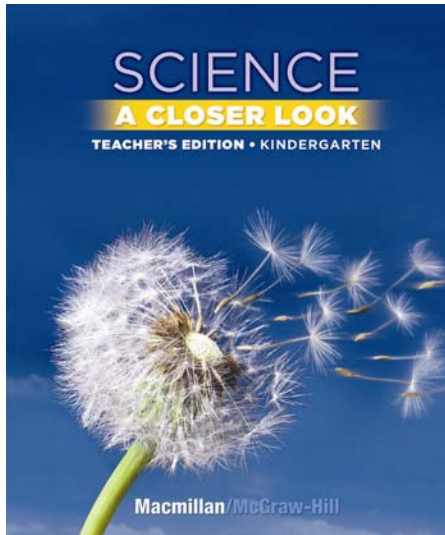




Macmillan/McGraw-Hill

Kindergarten Science
Grade Level
Content Expectations



SCIENCE

A CLOSER LOOK

Grade K
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STANDARDS	PAGE REFERENCES
SCIENCE PROCESSES Inquiry Process	
<i>K-7 Standard S.IP: Develop an understanding that scientific inquiry and reasoning involves observing, questioning, investigating, recording, and developing solutions to problems</i>	
S.IP.E.1 Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.	
S.IP.00.11 Make purposeful observation of the natural world using the appropriate senses.	Flipbook: <i>Be a Scientist Investigate Weather</i> 2 <i>Be a Scientist The Five Senses</i> 3 <i>Be a Scientist Song</i> S1 <i>Unit B Lesson 4</i> 19 <i>Unit F Lesson 4</i> 58 Teacher Wraparound Edition: AQ 11, 87, 265; BMW 263; BS 52, 88, 130, 136, 228, 266; CT 170, 218, 224, 262; IM 12; M 267; RS 12; SA 12; ST 131; TT 5, 11; UV 10, 86, 264

STANDARDS	PAGE REFERENCES
<p>S.IP.00.12 Generate questions based on observations.</p>	<p>Flipbook: <i>Unit A Lesson 4</i> 11 <i>Unit A Lesson 4</i> 12 <i>Unit C Lesson 1</i> 29 <i>Unit C Lesson 2</i> 30 <i>Unit D Lesson 5</i> 44 <i>Unit F Lesson 2</i> 56</p> <p>Teacher Wraparound Edition: AQ 129, 135, 201, 253; BMW 269; BS 52, 96, 102, 130, 136, 144, 202, 254, 260, 266; BW 161; C 237; CT 126, 170, 218, 268; IM 12, 82, 130, 136, 202; SA 12; UV 128, 200, 252</p>
<p>S.IP.00.13 Plan and conduct simple investigations.</p>	<p>Flipbook: <i>Unit E Lesson 4</i> 52 <i>Unit F Lesson 5</i> 59</p> <p>Teacher Wraparound Edition: B 255; BMW 257; BS 30, 38, 44, 52, 58, 68, 76, 82, 96, 102, 110, 130, 136, 144, 150, 158, 164, 176, 182, 188, 196, 202, 216, 222, 228, 236, 246, 254, 260, 266, 272; WT 151, 223</p>
<p>S.IP.00.14 Manipulate simple tools (for example: hand lens, pencils, balances, non-standard objects for measurement) that aid observation and data collection.</p>	<p>Flipbook: <i>Unit F Lesson 5</i> 59</p> <p>Teacher Wraparound Edition: BMW 127, 133, 153, 231, 243, 268; BS 76, 82, 110, 130, 246; IW TR7; ML TR7; UP 168F</p>
<p>S.IP.00.15 Make accurate measurements with appropriate (non-standard) units for the measurement tool.</p>	<p>Teacher Wraparound Edition: BMW 33, 99, 105, 127, 139, 199, 213, 231, 243, 268; IW TR7; ML TR7; T TR8; UP 168F</p>
<p>S.IP.00.16 Construct simple charts from data and observations.</p>	<p>Teacher Wraparound Edition: A 255; BMW 65, 71, 79, 161, 231, 249, 257; BS 110, 182; CT 184, 212, 218; GW 7; SV 168E; UP 168F</p>

STANDARDS	PAGE REFERENCES
Inquiry Analysis and Communication	
<i>K-7 Standard S.IA: Develop an understanding that scientific inquiry and investigations require analysis and communication of findings, using appropriate technology.</i>	
S.IA.E.1 Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.	
<p>S.IA.00.12 Share ideas about science through purposeful conversation.</p>	<p>Flipbook: <i>Unit B Lesson 3</i> 18 <i>Unit B Lesson 6</i> 22 <i>Unit C Lesson 2</i> 30 <i>Unit C Lesson 6</i> 36 <i>Unit D Lesson 5</i> 44 <i>Unit E Lesson 4</i> 52 <i>Unit F Lesson 1</i> 54</p> <p>Teacher Wraparound Edition: AQ 81, 101, 163, 201, 235, 245; BS 96, 102, 182, 222, 260; BW 171; CT 126, 160, 170, 218, 256, 262, 268; IM 30, 52, 96, 266; TT 81, 101, 163, 201, 235; UV 80, 162, 200, 234, 244</p>
<p>S.IA.00.13 Communicate and present findings of observations.</p>	<p>Teacher Wraparound Edition: BMW 231; BS 102, 110, 116, 136, 150, 164, 182, 188, 222, 236, 246, 254, 260; BW 153</p>
<p>S.IA.00.14 Develop strategies for information gathering (ask an expert, use a book, make observations, conduct simple investigations, and watch a video).</p>	<p>Flipbook: <i>Be a Scientist The Five Senses</i> 3 <i>Be a Scientist Living Things</i> 4 <i>Unit B Lesson 2</i> 16 <i>Unit C Lesson 1</i> 29 <i>Unit D Lesson 2</i> 40 <i>Unit E Lesson 1</i> 48 <i>Unit E Lesson 4</i> 52</p> <p>Teacher Wraparound Edition: AQ 11, 17, 129, 181, 215, 235; BMW 185, 249; BS 76, 102, 116, 130, 176, 236, 246, 254; BW 161; CT 32, 64, 112, 126, 184, 212; LN 18; SA 12; SF 4; SP 19; SV 24E, 124E, 210E, 240E; TS 8-9; UP 24F, 62F, 168F; UV 10, 16</p>

STANDARDS	PAGE REFERENCES
<p>Reflection and Social Implications</p>	
<p><i>K-7 Standard S.RS: Develop an understanding that claims and evidence for their scientific merit should be analyzed. Understand how scientists decide what constitutes scientific knowledge. Develop an understanding of the importance of reflection on scientific knowledge and its application to new situations to better understand the role of science in society and technology.</i></p>	
<p>S.RS.E.1 Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision making and the application of science throughout history and within society.</p>	
<p>S.RS.00.11 Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.</p>	<p>Flipbook: <i>Review Together Plants and Animals</i> 26 <i>Unit A Lesson 3</i> 10 <i>Unit B Lesson 7</i> 23 <i>Unit C Lesson 3</i> 32 <i>Unit D Lesson 2</i> 40 <i>Unit D Lesson 4</i> 43 <i>Unit E Lesson 1</i> 48 <i>Unit E Lesson 4</i> 52 <i>Unit F Lesson 2</i> 56</p> <p>Teacher Wraparound Edition: A 145; B 255; BMW 179, 219; BS 38, 110, 144, 196, 216; CT 40, 54, 212; DW 111; RS 106; SF 120; TTr 107; UV 121, 142, 180, 194, 214, 234, 252; WT 151, 223, 237</p>
<p>PHYSICAL SCIENCE</p>	
<p>Force and Motion</p>	
<p><i>K-7 Standard P.FM: Develop an understanding that the position and/or motion of an object is relative to a point of reference. Understand forces affect the motion and speed of an object and that the net force on an object is the total of all of the forces acting on it. Understand the Earth pulls down on objects with a force called gravity. Develop an understanding that some forces are in direct contact with objects, while other forces are not in direct contact with objects.</i></p>	
<p>P.FM.E.1 Position- A position of an object can be described by locating the object relative to other objects or a background. The description of the motion of an object from one observer’s view may be different from that reported from a different observer’s view.</p>	
<p>P.FM.00.11 Compare the position of an object (for example: above, below, in front of, behind, on) in relation to other objects around it.</p>	<p>Flipbook: Position words are introduced: <i>Unit F Lesson 2</i> 55</p> <p>Teacher Wraparound Edition: AQ 251; BPK 250; DV 250; ELLS 251; TT 251</p>

STANDARDS	PAGE REFERENCES
<p>P.FM.00.12 Describe the motion of an object (for example: away from or closer to) from different observers' views.</p>	<p>Flipbook: Motion in objects is introduced: <i>Unit F Lesson 2 56</i></p> <p>Teacher Wraparound Edition: AQ 253; TT 251</p>
<p>P.FM.E.2 Gravity- Earth pulls down on all objects with a force called gravity. With very few exceptions, objects fall to the ground no matter where the object is on the Earth.</p>	
<p>P.FM.00.21 Observe how objects fall toward the earth.</p>	<p>Teacher Wraparound Edition: B 261; BMW 257; BS 260; CT 256; IM 260; SF 252</p>
<p>P.FM.E.3 Force- A force is either a push or a pull. The motion of objects can be changed by forces. The size of the change is related to the size of the force. The change is also related to the weight (mass) of the object on which the force is being exerted. When an object does not move in response to a force, it is because another force is being applied by the environment.</p>	
<p>P.FM.00.31 Demonstrate pushes and pulls.</p>	<p>Teacher Wraparound Edition: CT 248; T 255</p>
<p>P.FM.00.32 Observe that objects initially at rest will move in the direction of the push or pull.</p>	<p>Flipbook: <i>Unit F Lesson 1 54</i></p> <p>Teacher Wraparound Edition: A 255; B 273; BR 249; BS 272; FA 253; TT 253</p>
<p>P.FM.00.33 Observe how pushes and pulls can change the speed or direction of moving objects.</p>	<p>Flipbook: <i>Unit F Lesson 2 56</i></p> <p>Teacher Wraparound Edition: AQ 253; BS 272; DW 273; SV 240E</p>
<p>P.FM.00.34 Observe how shape (for example: cone, cylinder, sphere), size, and weight of an object can affect motion.</p>	<p>Flipbook: <i>Unit F Lesson 2 56</i></p> <p>Teacher Wraparound Edition: AQ 253; B 255; BMW 249; BS 254; IM 254</p>

STANDARDS	PAGE REFERENCES
<p>LIFE SCIENCE Organization of Living Things</p>	
<p><i>K-7 Standard L.OL: Develop an understanding that plants and animals (including humans) have basic requirements for maintaining life which include the need for air, water and a source of energy. Understand that all life forms can be classified as producers, consumers, or decomposers as they are all part of a global food chain where food/energy is supplied by plants which need light to produce food/ energy. Develop an understanding that plants and animals can be classified by observable traits and physical characteristics. Understand that all living organisms are composed of cells and they exhibit cell growth and division. Understand that all plants and animals have a definite life cycle, body parts, and systems to perform specific life functions.</i></p>	
<p>L.OL.E.1 Life Requirements- Organisms have basic needs. Animals and plants need air, water, and food. Plants also require light. Plants and animals use food as a source of energy and as a source of building material for growth and repair.</p>	
<p>L.OL.00.11 Identify that living things have basic needs.</p>	<p>Flipbook: <i>Unit A Lesson 2 8</i> <i>Unit B Lesson 2 16</i></p> <p>Teacher Wraparound Edition: AQ 35, 73; BPK 34; BS 38; BW 71; CT 32, 70; DI 35; DV 34, 72; F TR6; GP TR6; HC TR5; M 77; P TR3; SF 34; TC TR4; TT 35, 75; UV 34, 72</p>
<p>L.OL.00.12 Identify and compare living and nonliving things.</p>	<p>Flipbook: <i>Be a Scientist Living Things 4</i> <i>Unit A Lesson 2 9</i> <i>Unit B Lesson 2 17</i> <i>Unit C Lesson 1 29</i></p> <p>Teacher Wraparound Edition: AQ 17, 37, 75, 129; BPK 74; DI 75; DV 36, 74; LN 18; TT 37, 75; UV 36, 74, 128</p>

STANDARDS	PAGE REFERENCES
EARTH SCIENCE	
Solid Earth	
<i>K-7 Standard E.SE: Develop an understanding of the properties of earth materials and how those properties make materials useful. Understand gradual and rapid changes in earth materials and features of the surface of Earth. Understand magnetic properties of Earth.</i>	
E.SE.E.1 Earth Materials- Earth materials that occur in nature include rocks, minerals, soils, water, and the gases of the atmosphere. Some Earth materials have properties which sustain plant and animal life.	
E.SE.00.11 Identify Earth materials (air, water, soil) that are used to grow plants.	Flipbook: <i>Unit A Lesson 2</i> 8 <i>Unit C Lesson 1</i> 29 <i>Unit C Lesson 5</i> 35 Teacher Wraparound Edition: AQ 129; BR 127; BS 38, 130; CT 126; DV 34, 72, 128; IM 130; SF 128; TT 129; UV 128, 156