

***SRA Life, Earth, and Physical Science Laboratories***  
**correlation to**  
**Louisiana Grade Level Expectations for Science**  
**Grade 6**

*SRA Life, Earth, and Physical Science Laboratories* provide core science content in an alternate reading format. Each *SRA Science Lab* contains 180 Science Cards covering key science concepts and vocabulary. Each lab covers 90 different science topics presented at two different reading levels to meet varied student abilities. The *Teacher's Handbook* includes hands-on inquiry activities as well as vocabulary building exercises. The *Classroom Resource CD-ROM* includes Writing Strategies in Science along with tests and vocabulary games.

**Science as Inquiry**

**The Abilities To Do Scientific Inquiry**

**1. Generate testable questions about objects, organisms, and events that can be answered through scientific investigations. (SI-M-A1)**

**Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 5, *Making Fossils*, pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

**Earth Science Lab Teacher's Handbook:** Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map*, pages 81-83; Hands-On Activity 4, *Using Sound Waves*, pages 85-87; Hands-On Activity 5, *What is in the Air?*, pages 89-91; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95; Hands-On Activity 7, *Sizes in the Solar System*, pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

**Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

**Classroom Resource CD-ROM:** Writing Strategy 15

**Science as Inquiry**

**The Abilities To Do Scientific Inquiry**

**2. Identify problems, factors, and questions that must be considered in a scientific investigation. (SI-M-A1)**

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**Earth Science Lab Teacher's Handbook:** Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map*, pages 81-83; Hands-On Activity 4, *Using Sound Waves*, pages 85-87; Hands-On Activity 5, *What is in the Air?*, pages 89-91; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95; Hands-On Activity 7, *Sizes in the Solar System*, pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

**Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

**Classroom Resource CD-ROM:** Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>3. Use a variety of sources to answer questions. (SI-M-A1)</b>
<b>Classroom Resource CD-ROM:</b> Writing Strategy 9, 25

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>4. Design, predict outcomes, and conduct experiments to answer guiding questions. (SI-M-A2)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
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<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>5. Identify independent variables, dependent variables, and variables that should be controlled in designing and experiment. (SI-M-A2)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83
<b>Classroom Resource CD-ROM:</b> Writing Strategy 23

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>6. Select and use appropriate equipment, technology, tools, and metric system units of measurement to make observations. (SI-MA3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>7. Record observations using methods that complement investigations (e.g., journals, tables, charts). (SI-M-A3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 5, 11, 15, 16, 22, 24</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>8. Use consistency and precision in data collection, analysis, and reporting. (SI-M-A3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>9. Use computers and/or calculators to analyze and interpret quantitative data. (SI-M-A3)</b>
<b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>10. Identify the difference between description and explanation. (SI-M-A4)</b>
<p><b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher's Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher's Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 2</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>11. Construct, use, and interpret appropriate graphical representations to collect, record, and report data (e.g., tables, charts, circle graphs, bar and line graphs, diagrams, scatter plots, symbols). (SI-M-A4)</b>
<p><b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher's Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher's Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 16, 22, 24</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>12. Use data and information gathered to develop an explanation of experimental results. (SI-M-A4)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
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<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>13. Use patterns in data to explain natural events. (SI-M-A4)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
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<b>Classroom Resource CD-ROM:</b> Writing Strategy 22, 24

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>14. Develop models to illustrate or explain conclusions reached through investigation. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 20

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>15. Identify and explain the limitations of models used to represent the natural world. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
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<b>Classroom Resource CD-ROM:</b> Writing Strategy 20

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>16. Use evidence to make inferences and predict trends. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95
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<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91
<b>Classroom Resource CD-ROM:</b> Writing Strategy 17

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>17. Recognize that there may be more than one way to interpret a given set of data, which can result in alternative scientific explanations and predictions. (SI-M-A6)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
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<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>18. Identify faulty reasoning and statements that misinterpret or are not supported by the evidence. (SI-M-A6)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>19. Communicate ideas in a variety of ways (e.g., symbols, illustrations, graphs, charts, spreadsheets, concept maps, oral and written reports, equations). (SI-M-A7)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 1-30</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>20. Write clear, step-by-step instructions that others can follow to carry out procedures or conduct investigations. (SI-M-A7)</b>
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>21. Distinguish between observations and inferences. (SI-M-A7)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 11, 17</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>22. Use evidence and observations to explain and communicate the results of investigations. (SI-M-A7)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>



<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>23. Use relevant safety procedures and equipment to conduct scientific investigations. (SI-M-A8)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>24. Provide appropriate care and utilize safe practices and ethical treatment when animals are involved in scientific field and laboratory research. (SI-M-A8)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>25. Compare and critique scientific investigations. (SI-M-B1)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>26. Use and describe alternate methods for investigating different types of testable questions. (SI-M-B1)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>27. Recognize that science uses processes that involve a logical and empirical, but flexible, approach to problem solving. (SI-M-B1)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>28. Recognize that investigations generally begin with a review of the work or others. (SI-M-B2)</b>
This topic is not covered at this level.

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>29. Explain how technology can expand the senses and contribute to the increase and/or modification of scientific knowledge. (SI-M-B3)</b>
<b>Life Science Lab, Level A:</b> Cards 5, 59, 83 <b>Life Science Lab, Level B:</b> Cards 5, 59, 83
<b>Earth Science Lab, Level A:</b> Cards 16, 79, 80, 81, 88 <b>Earth Science Lab, Level B:</b> Cards 16, 79, 80, 81, 88
<b>Physical Science Lab, Level A:</b> Cards 3, 81, 84, 90 <b>Physical Science Lab, Level B:</b> Cards 3, 81, 84, 90

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>30. Describe why all questions cannot be answered with present technologies. (SI-M-B3)</b>
This topic is not covered at this level.

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>31. Recognize that there is an acceptable range of variation in collected data. (SI-M-B3)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>32. Explain the use of statistical methods to confirm the significance of data (e.g., mean, median, mode, range). (SI-M-B3)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>33. Evaluate models, identify problems in design, and make recommendations for improvement. (SI-M-B4)</b>
This topic is not covered at this level.

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>34. Recognize the importance of communication among scientists about investigations in progress and the work of others. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>35. Explain how skepticism about accepted scientific investigations (i.e., hypotheses and theories) lead to new understanding. (SI-M-B5)</b>
<p><b>Life Science Lab, Level A:</b> Card 5  <b>Life Science Lab, Level B:</b> Card5</p> <p><b>Earth Science Lab, Level A:</b> Cards 10, 68, 72, 78  <b>Earth Science Lab, Level B:</b> Cards 10, 68, 72, 78</p> <p><b>Physical Science Lab, Level A:</b> Cards 3, 53, 59  <b>Physical Science Lab, Level B:</b> Cards 3, 53, 59</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>36. Explain why an experiment must be verified through multiple investigations and yield consistent results before the findings are accepted. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>37. Critique and analyze their own inquires and the inquiries of others. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>38. Explain, that through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas. (SI-M-B6)</b>
<p><b>Life Science Lab, Level A:</b> Cards 46, 49, 64, 69  <b>Life Science Lab, Level B:</b> Cards 46, 49, 64, 69</p> <p><b>Earth Science Lab, Level A:</b> Cards 16, 20, 31, 37, 52, 54, 79, 80, 81, 88  <b>Earth Science Lab, Level B:</b> Cards 16, 20, 31, 37, 51, 54, 79, 80, 81, 88</p> <p><b>Physical Science Lab, Level A:</b> Cards 33, 35, 76, 81, 84, 90  <b>Physical Science Lab, Level B:</b> Cards 33, 35, 76, 81, 84, 90</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>39. Identify areas in which technology has changed human lives (e.g., transportation, communication, geographical information systems, DNA fingerprinting). (SI-M-B7)</b>
<p><b>Life Science Lab, Level A:</b> Cards 49, 64, 69, 83, 87, 89, 90  <b>Life Science Lab, Level B:</b> Cards 49, 64, 69, 83, 87, 89, 90</p> <p><b>Earth Science Lab, Level A:</b> Cards 16, 20, 37, 51, 54, 79, 80, 81  <b>Earth Science Lab, Level B:</b> Cards 16, 20, 37, 51, 54, 79, 80, 81</p> <p><b>Physical Science Lab, Level A:</b> Cards 33, 35, 76, 81, 84, 90  <b>Physical Science Lab, Level B:</b> Cards 33, 35, 76, 81, 84, 90</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>40. Evaluate the impact of research on scientific thought, society, and the environment. (SI-M-B7)</b>
<b>Life Science Lab, Level A:</b> Cards 5, 49, 64, 69 <b>Life Science Lab, Level B:</b> Cards 5, 49, 64, 69
<b>Earth Science Lab, Level A:</b> Cards 16, 37, 51, 54, 70, 79, 80, 81 <b>Earth Science Lab, Level B:</b> Cards 16, 37, 51, 54, 70, 79, 80, 81
<b>Physical Science Lab, Level A:</b> Cards 33, 35, 55, 81, 84, 90 <b>Physical Science Lab, Level B:</b> Cards 33, 35, 55, 81, 84, 90

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>1. Measure and record the volume and mass of substances in metric system units. (PS-M-A1)</b>
<b>Physical Science Lab, Level A:</b> Card 2 <b>Physical Science Lab, Level B:</b> Card 2

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>2. Calculate the density of large and small quantities of a variety of substances (e.g., aluminum foil, water, copper, clay, rock). (PS-M-A1)</b>
<b>Physical Science Lab, Level A:</b> Card 2 <b>Physical Science Lab, Level B:</b> Card 2

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>3. Construct models that replicate atomic structure for selected common elements from the periodic table. (PS-M-A2)</b>
<b>Physical Science Lab, Level A:</b> Card 21 <b>Physical Science Lab, Level B:</b> Card 21

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>4. Differentiate between the physical and chemical properties of selected substances. (PS-M-A3)</b>
<b>Physical Science Lab, Level A:</b> Cards 1, 2, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16 <b>Physical Science Lab, Level B:</b> Cards 1, 2, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>5. Compare physical and chemical changes. (PS-M-A3)</b>
<b>Physical Science Lab, Level A:</b> Cards 8, 9, 27, 28, 29, 30 <b>Physical Science Lab, Level B:</b> Cards 8, 9, 27, 28, 29, 30

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>6. Draw or model the movement of atoms in solid, liquid, and gaseous states. (PS-M-A4)</b>
<b>Physical Science Lab, Level A:</b> Cards 5, 6, 7, 42 <b>Physical Science Lab, Level B:</b> Cards 5, 6, 7, 42

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>7. Simulate how atoms and molecules have kinetic energy exhibited by constant motion. (PS-M-A4)</b>
Physical Science Lab, Level A: Card 42
Physical Science Lab, Level B: Card 42

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>8. Determine the temperatures at which water changes physical phases (e.g., freezing point, melting point, boiling point). (PS-M-A5)</b>
Physical Science Lab, Level A: Cards 6, 42
Physical Science Lab, Level B: Cards 6, 42

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>9. Describe the properties of reactants and products of chemical reactions observed in the lab. (PS-M-A6)</b>
Physical Science Lab, Level A: Cards 9, 27, 28, 29, 30
Physical Science Lab, Level B: Cards 9, 27, 28, 29, 30
Physical Science Lab Teacher's Handbook: Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>10. Identify the average atomic masses of given elements using the periodic table. (PS-M-A7)</b>
Physical Science Lab, Level A: Cards 17, 18, 19, 20
Physical Science Lab, Level B: Cards 17, 18, 19, 20

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>11. Compare the masses of reactants and products of a chemical reaction. (PS-M-A7)</b>
Physical Science Lab, Level A: Cards 9, 27, 28, 29, 30
Physical Science Lab, Level B: Cards 9, 27, 28, 29, 30
Physical Science Lab Teacher's Handbook: Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>12. Determine the effect of particle size of the same reactants on the rate of chemical reactions during a lab activity (e.g., powdered vs. solid forms). (PS-M-A8)</b>
Physical Science Lab, Level A: Cards 27, 28, 29
Physical Science Lab, Level B: Cards 27, 28, 29

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>13. Use a variety of resources to identify elements and compounds in common substances. (PS-M-A9)</b>
Physical Science Lab, Level A: Cards 10, 11
Physical Science Lab, Level B: Cards 10, 11

<b>Physical Science</b>
<b>Motions and Forces</b>
<b>14. Construct and analyze graphs that represent one-dimensional motion (e.g., motion in a straight line) and predict the future positions and speed of a moving object. (PS-M-B1)</b>
Physical Science Lab, Level A: Cards 51, 52
Physical Science Lab, Level B: Cards 51, 52

<b>Physical Science</b>
<b>Motions and Forces</b>
<b>15. Explain why velocity is expressed in both speed and direction. (PS-M-B1)</b>
Physical Science Lab, Level A: Card 51
Physical Science Lab, Level B: Card 51

<b>Physical Science</b>
<b>Motions and Forces</b>
<b>16. Compare line graphs of acceleration, constant speed, and deceleration. (PS-M-B1)</b>
Physical Science Lab, Level A: Card 52
Physical Science Lab, Level B: Card 52

<b>Physical Science</b>
<b>Motions and Forces</b>
<b>17. Describe and demonstrate that friction is a force that acts whenever two surfaces or objects move past one another. (PS-M-B2)</b>
Physical Science Lab, Level A: Card 58
Physical Science Lab, Level B: Card 58
Physical Science Lab Teacher's Handbook: Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91

<b>Physical Science</b>
<b>Motions and Forces</b>
<b>18. Explain how the resistance of materials affects the rate of electrical flow. (PS-M-B2)</b>
Physical Science Lab, Level A: Card 69
Physical Science Lab, Level B: Card 69

<b>Physical Science</b>
<b>Motions and Forces</b>
<b>19. Identify forces acting on all objects. (PS-M-B3)</b>
Physical Science Lab, Level A: Cards 54, 55, 56, 57, 58, 59
Physical Science Lab, Level B: Cards 54, 55, 56, 57, 58, 59
Physical Science Lab Teacher's Handbook: Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91

<b>Physical Science</b>
<b>Motions and Forces</b>
<b>20. Draw and label a diagram to represent forces acting upon an object. (PS-M-B4)</b>
Physical Science Lab, Level A: Cards 54, 55, 56, 57, 58, 59
Physical Science Lab, Level B: Cards 54, 55, 56, 57, 58, 59
Physical Science Lab Teacher's Handbook: Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91



Physical Science
Motions and Forces
<b>21. Determine the magnitude and direction of unbalanced (i.e., net) forces acting on an object. (PS-M-B4)</b>
Physical Science Lab, Level A: Card 56
Physical Science Lab, Level B: Card 56

Physical Science
Motions and Forces
<b>22. Demonstrate that an object will remain at rest or move at a constant speed and in a straight line if it is not subjected to an unbalanced force. (PS-M-B5) (PS-M-B3)</b>
Physical Science Lab, Level A: Cards 55, 56
Physical Science Lab, Level B: Cards 55, 56

Physical Science
Motions and Forces
<b>23. Predict the direction of a force applied to an object and how it will change the speed and direction of the object. (PS-M-B5)</b>
Physical Science Lab, Level A: Cards 54, 55, 56
Physical Science Lab, Level B: Cards 54, 55, 56

Physical Science
Transformations of Energy
<b>24. Describe and give examples of how all forms of energy may be classified as potential or kinetic energy. (PS-M-C1)</b>
Physical Science Lab, Level A: Cards 36, 37, 38, 39, 40, 41, 42
Physical Science Lab, Level B: Cards 36, 37, 38, 39, 40, 41, 42

Physical Science
Transformations of Energy
<b>25. Compare forms of energy (e.g., light, heat, sound, electrical, nuclear, mechanical). (PS-M-C1)</b>
Physical Science Lab, Level A: Cards 34, 41, 42, 45, 46, 47, 48, 49, 66, 67, 77, 78, 79, 82, 83
Physical Science Lab, Level B: Cards 34, 41, 42, 45, 46, 47, 48, 49, 66, 67, 77, 78, 79, 82, 83

Physical Science
Transformations of Energy
<b>26. Describe and summarize observations of the transmission, reflection, and absorption of sound, light, and heat energy. (PS-M-C1)</b>
Physical Science Lab, Level A: Cards 42, 43, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88
Physical Science Lab, Level B: Cards 42, 43, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88
Physical Science Lab Teacher's Handbook: Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

Physical Science
Transformations of Energy
<b>27. Explain the relationship between work input and work output by using simple machines. (PS-M-C2)</b>
Physical Science Lab, Level A: Cards 62, 63, 64
Physical Science Lab, Level B: Cards 62, 63, 64

Physical Science
Transformations of Energy
<b>28. Explain the law of conservation of energy. (PS-M-C2)</b>
Physical Science Lab, Level A: Card37
Physical Science Lab, Level B: Card 37

Physical Science
Transformations of Energy
<b>29. Compare and/or investigate the relationships among work, power, and efficiency. (PS-M-C2)</b>
Physical Science Lab, Level A: Cards 62, 63, 64, 65
Physical Science Lab, Level B: Cards 62, 63, 64, 65

Physical Science
Transformations of Energy
<b>30. Trace energy transformations in a simple system (e.g., flashlight). (PS-M-C2)</b>
Physical Science Lab, Level A: Cards 68, 69, 70, 76
Physical Science Lab, Level B: Cards 68, 69, 70, 76
Physical Science Lab Teacher's Handbook: Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95

Physical Science
Transformations of Energy
<b>31. Compare types of electromagnetic waves. (PS-M-C3)</b>
Physical Science Lab, Level A: Cards 82, 83, 84, 85
Physical Science Lab, Level B: Cards 82, 83, 84, 85

Physical Science
Transformations of Energy
<b>32. Identify and illustrate key characteristics of waves (e.g., wavelength, frequency, amplitude). (PS-M-C4)</b>
Physical Science Lab, Level A: Cards 77, 78
Physical Science Lab, Level B: Cards 77, 78
Physical Science Lab Teacher's Handbook: Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

Physical Science
Transformations of Energy
<b>33. Predict the direction in which light will refract when it passes from one transparent material to another (e.g., from air to water, from prism to air). (PS-M-C4)</b>
Physical Science Lab, Level A: Card 87
Physical Science Lab, Level B: Card 87

Physical Science
Transformations of Energy
<b>34. Apply the law of reflection and law of refraction to demonstrate everyday phenomena (e.g., how light is reflected from tinted windows, how light is refracted by cameras, telescopes, eyeglasses). (PS-M-C4)</b>
Physical Science Lab, Level A: Cards 86, 87, 90
Physical Science Lab, Level B: Cards 86, 87, 90

<b>Physical Science</b>
<b>Transformations of Energy</b>
<b>35. Determine through experimentation whether light is reflected, transmitted, and/or absorbed by a given object or material. (PS-M-C4)</b>
<b>Physical Science Lab, Level A:</b> Cards 85, 86, 87
<b>Physical Science Lab, Level B:</b> Cards 85, 86, 87

<b>Physical Science</b>
<b>Transformations of Energy</b>
<b>36. Explain the relationship between an object's color and the wavelength of light reflected or transmitted to the viewer's eyes. (PS-M-C4)</b>
<b>Physical Science Lab, Level A:</b> Cards 85
<b>Physical Science Lab, Level B:</b> Cards 85

<b>Physical Science</b>
<b>Transformations of Energy</b>
<b>37. Compare how heat is transferred by conduction, convection, and radiation. (PS-M-C5)</b>
<b>Physical Science Lab, Level A:</b> Cards 43
<b>Physical Science Lab, Level B:</b> Cards 43

<b>Physical Science</b>
<b>Transformations of Energy</b>
<b>38. Identify conditions under which thermal energy tends to flow from a system of higher energy to a system of lower energy. (PS-M-C5)</b>
<b>Physical Science Lab, Level A:</b> Cards 43, 44
<b>Physical Science Lab, Level B:</b> Cards 43, 44

<b>Physical Science</b>
<b>Transformations of Energy</b>
<b>39. Describe how electricity can be produced from other types of energy (e.g., magnetism, solar, mechanical). (PS-M-C6)</b>
<b>Physical Science Lab, Level A:</b> Cards 46, 47, 48, 49, 70, 76
<b>Physical Science Lab, Level B:</b> Cards 46, 47, 48, 49, 70, 76

<b>Physical Science</b>
<b>Transformations of Energy</b>
<b>40. Identify heat energy gains and losses during exothermic and endothermic chemical reactions. (PS-M-C7)</b>
<b>Physical Science Lab, Level A:</b> Cards 28
<b>Physical Science Lab, Level B:</b> Cards 28

<b>Physical Science</b>
<b>Transformations of Energy</b>
<b>41. Identify risks associated with the production and use of coal, petroleum, hydroelectricity, nuclear energy, and other energy forms. (PS-M-C8)</b>
<p><b>Life Science Lab, Level A:</b> Cards 84, 87, 89, 90  <b>Life Science Lab, Level B:</b> Cards 84, 87, 89, 90  <b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab, Level A:</b> Cards 37, 42, 59, 60, 61, 86  <b>Earth Science Lab, Level B:</b> Cards 37, 42, 59, 60, 61, 86  <b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91</p> <p><b>Physical Science Lab, Level A:</b> Cards 34, 38, 49  <b>Physical Science Lab, Level B:</b> Cards 34, 38, 49</p>

<b>Science and the Environment</b>
<b>42. Identify energy types from their source to their use and determine if the energy types are renewable, nonrenewable, or inexhaustible. (SE-M-A6)</b>
<p><b>Earth Science Lab, Level A:</b> Cards 35, 90  <b>Earth Science Lab, Level B:</b> Cards 35, 90</p> <p><b>Physical Science Lab, Level A:</b> Cards 38, 46, 47, 48, 49  <b>Physical Science Lab, Level B:</b> Cards 38, 46, 47, 48, 49</p>

<b>Science and the Environment</b>
<b>43. Explain how the use of different energy resources affects the environment and the economy. (SE-M-A6)</b>
<p><b>Life Science Lab, Level A:</b> Cards 84, 87, 88, 89, 90  <b>Life Science Lab, Level B:</b> Cards 84, 87, 88, 89, 90  <b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab, Level A:</b> Cards 35, 37, 42, 59, 60, 61, 86  <b>Earth Science Lab, Level B:</b> Cards 35, 37, 42, 59, 60, 61, 86  <b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91</p> <p><b>Physical Science Lab, Level A:</b> Cards 34, 46, 47, 48, 49  <b>Physical Science Lab, Level B:</b> Cards 34, 46, 47, 48, 49</p>

<b>Science and the Environment</b>
<b>44. Explain how an inexhaustible resource can be harnessed for energy production. (SE-M-A6)</b>
<p><b>Earth Science Lab, Level A:</b> Card 90  <b>Earth Science Lab, Level B:</b> Card 90</p> <p><b>Physical Science Lab, Level A:</b> Cards 46, 47, 48, 49  <b>Physical Science Lab, Level B:</b> Cards 46, 47, 48, 49</p>

<b>Science and the Environment</b>
<b>45. Describe methods for sustaining renewable resources. (SE-M-A6)</b>
Life Science Lab, Level A: Cards 84, 85, 90 Life Science Lab, Level B: Cards 84, 85, 90
Earth Science Lab, Level A: Card 29 Earth Science Lab, Level B: Card 29
Physical Science Lab, Level A: Cards 46, 47, 48, 49 Physical Science Lab, Level B: Cards 46, 47, 48, 49

<b>Science and the Environment</b>
<b>46. Identify ways people can reuse, recycle, and reduce the use of resources to improve and protect the quality of life. (SE-M-A6)</b>
Life Science Lab, Level A: Cards 88, 90 Life Science Lab, Level B: Cards 88, 90
Earth Science Lab, Level A: Card 29 Earth Science Lab, Level B: Card 29

<b>Science and the Environment</b>
<b>47. Illustrate how various technologies influence resource use in an ecosystem (e.g., forestry management, soil conservation, fishery improvement). (SE-M-A8)</b>
Life Science Lab, Level A: Cards 84, 85, 86, 87, 88, 90 Life Science Lab, Level B: Cards 84, 85, 86, 87, 88, 90
Earth Science Lab, Level A: Card 29 Earth Science Lab, Level B: Card 29

***SRA Life, Earth, and Physical Science Laboratories***  
**correlation to**  
**Louisiana Grade Level Expectations for Science**  
**Grade 7**

*SRA Life, Earth, and Physical Science Laboratories* provide core science content in an alternate reading format. Each *SRA Science Lab* contains 180 Science Cards covering key science concepts and vocabulary. Each lab covers 90 different science topics presented at two different reading levels to meet varied student abilities. The *Teacher's Handbook* includes hands-on inquiry activities as well as vocabulary building exercises. The *Classroom Resource CD-ROM* includes Writing Strategies in Science along with tests and vocabulary games.

**Science as Inquiry**

**The Abilities To Do Scientific Inquiry**

**1. Generate testable questions about objects, organisms, and events that can be answered through scientific investigations. (SI-M-A1)**

**Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 5, *Making Fossils*, pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

**Earth Science Lab Teacher's Handbook:** Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map*, pages 81-83; Hands-On Activity 4, *Using Sound Waves*, pages 85-87; Hands-On Activity 5, *What is in the Air?*, pages 89-91; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95; Hands-On Activity 7, *Sizes in the Solar System*, pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

**Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

**Classroom Resource CD-ROM:** Writing Strategy 15

**Science as Inquiry**

**The Abilities To Do Scientific Inquiry**

**2. Identify problems, factors, and questions that must be considered in a scientific investigation. (SI-M-A1)**

**Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 5, *Making Fossils*, pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

**Earth Science Lab Teacher's Handbook:** Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map*, pages 81-83; Hands-On Activity 4, *Using Sound Waves*, pages 85-87; Hands-On Activity 5, *What is in the Air?*, pages 89-91; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95; Hands-On Activity 7, *Sizes in the Solar System*, pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

**Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

**Classroom Resource CD-ROM:** Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>3. Use a variety of sources to answer questions. (SI-M-A1)</b>
<b>Classroom Resource CD-ROM:</b> Writing Strategy 9, 25

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>4. Design, predict outcomes, and conduct experiments to answer guiding questions. (SI-M-A2)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>5. Identify independent variables, dependent variables, and variables that should be controlled in designing and experiment. (SI-M-A2)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83
<b>Classroom Resource CD-ROM:</b> Writing Strategy 23

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>6. Select and use appropriate equipment, technology, tools, and metric system units of measurement to make observations. (SI-MA3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>7. Record observations using methods that complement investigations (e.g., journals, tables, charts). (SI-M-A3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 5, 11, 15, 16, 22, 24</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>8. Use consistency and precision in data collection, analysis, and reporting. (SI-M-A3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>



<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>9. Use computers and/or calculators to analyze and interpret quantitative data. (SI-M-A3)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>10. Identify the difference between description and explanation. (SI-M-A4)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 2</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>11. Construct, use, and interpret appropriate graphical representations to collect, record, and report data (e.g., tables, charts, circle graphs, bar and line graphs, diagrams, scatter plots, symbols). (SI-M-A4)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 16, 22, 24</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>12. Use data and information gathered to develop an explanation of experimental results. (SI-M-A4)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>13. Use patterns in data to explain natural events. (SI-M-A4)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 22, 24

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>14. Develop models to illustrate or explain conclusions reached through investigation. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 20

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>15. Identify and explain the limitations of models used to represent the natural world. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 20

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>16. Use evidence to make inferences and predict trends. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91
<b>Classroom Resource CD-ROM:</b> Writing Strategy 17

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>17. Recognize that there may be more than one way to interpret a given set of data, which can result in alternative scientific explanations and predictions. (SI-M-A6)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>18. Identify faulty reasoning and statements that misinterpret or are not supported by the evidence. (SI-M-A6)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>19. Communicate ideas in a variety of ways (e.g., symbols, illustrations, graphs, charts, spreadsheets, concept maps, oral and written reports, equations). (SI-M-A7)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 1-30</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>20. Write clear, step-by-step instructions that others can follow to carry out procedures or conduct investigations. (SI-M-A7)</b>
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>21. Distinguish between observations and inferences. (SI-M-A7)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 11, 17</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>22. Use evidence and observations to explain and communicate the results of investigations. (SI-M-A7)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>23. Use relevant safety procedures and equipment to conduct scientific investigations. (SI-M-A8)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>24. Provide appropriate care and utilize safe practices and ethical treatment when animals are involved in scientific field and laboratory research. (SI-M-A8)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>25. Compare and critique scientific investigations. (SI-M-B1)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>26. Use and describe alternate methods for investigating different types of testable questions. (SI-M-B1)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>27. Recognize that science uses processes that involve a logical and empirical, but flexible, approach to problem solving. (SI-M-B1)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>28. Recognize that investigations generally begin with a review of the work or others. (SI-M-B2)</b>
This topic is not covered at this level.

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>29. Explain how technology can expand the senses and contribute to the increase and/or modification of scientific knowledge. (SI-M-B3)</b>
<b>Life Science Lab, Level A:</b> Cards 5, 59, 83 <b>Life Science Lab, Level B:</b> Cards 5, 59, 83
<b>Earth Science Lab, Level A:</b> Cards 16, 79, 80, 81, 88 <b>Earth Science Lab, Level B:</b> Cards 16, 79, 80, 81, 88
<b>Physical Science Lab, Level A:</b> Cards 3, 81, 84, 90 <b>Physical Science Lab, Level B:</b> Cards 3, 81, 84, 90

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>30. Describe why all questions cannot be answered with present technologies. (SI-M-B3)</b>
This topic is not covered at this level.

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>31. Recognize that there is an acceptable range of variation in collected data. (SI-M-B3)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>32. Explain the use of statistical methods to confirm the significance of data (e.g., mean, median, mode, range). (SI-M-B3)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>33. Evaluate models, identify problems in design, and make recommendations for improvement. (SI-M-B4)</b>
This topic is not covered at this level.



<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>34. Recognize the importance of communication among scientists about investigations in progress and the work of others. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>35. Explain how skepticism about accepted scientific investigations (i.e., hypotheses and theories) lead to new understanding. (SI-M-B5)</b>
<p><b>Life Science Lab, Level A:</b> Card 5  <b>Life Science Lab, Level B:</b> Card5</p> <p><b>Earth Science Lab, Level A:</b> Cards 10, 68, 72, 78  <b>Earth Science Lab, Level B:</b> Cards 10, 68, 72, 78</p> <p><b>Physical Science Lab, Level A:</b> Cards 3, 53, 59  <b>Physical Science Lab, Level B:</b> Cards 3, 53, 59</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>36. Explain why an experiment must be verified through multiple investigations and yield consistent results before the findings are accepted. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>37. Critique and analyze their own inquires and the inquiries of others. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>38. Explain, that through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas. (SI-M-B6)</b>
<p><b>Life Science Lab, Level A:</b> Cards 46, 49, 64, 69  <b>Life Science Lab, Level B:</b> Cards 46, 49, 64, 69</p> <p><b>Earth Science Lab, Level A:</b> Cards 16, 20, 31, 37, 52, 54, 79, 80, 81, 88  <b>Earth Science Lab, Level B:</b> Cards 16, 20, 31, 37, 51, 54, 79, 80, 81, 88</p> <p><b>Physical Science Lab, Level A:</b> Cards 33, 35, 76, 81, 84, 90  <b>Physical Science Lab, Level B:</b> Cards 33, 35, 76, 81, 84, 90</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>39. Identify areas in which technology has changed human lives (e.g., transportation, communication, geographical information systems, DNA fingerprinting). (SI-M-B7)</b>
<p><b>Life Science Lab, Level A:</b> Cards 49, 64, 69, 83, 87, 89, 90  <b>Life Science Lab, Level B:</b> Cards 49, 64, 69, 83, 87, 89, 90</p> <p><b>Earth Science Lab, Level A:</b> Cards 16, 20, 37, 51, 54, 79, 80, 81  <b>Earth Science Lab, Level B:</b> Cards 16, 20, 37, 51, 54, 79, 80, 81</p> <p><b>Physical Science Lab, Level A:</b> Cards 33, 35, 76, 81, 84, 90  <b>Physical Science Lab, Level B:</b> Cards 33, 35, 76, 81, 84, 90</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>40. Evaluate the impact of research on scientific thought, society, and the environment. (SI-M-B7)</b>
<b>Life Science Lab, Level A:</b> Cards 5, 49, 64, 69 <b>Life Science Lab, Level B:</b> Cards 5, 49, 64, 69
<b>Earth Science Lab, Level A:</b> Cards 16, 37, 51, 54, 70, 79, 80, 81 <b>Earth Science Lab, Level B:</b> Cards 16, 37, 51, 54, 70, 79, 80, 81
<b>Physical Science Lab, Level A:</b> Cards 33, 35, 55, 81, 84, 90 <b>Physical Science Lab, Level B:</b> Cards 33, 35, 55, 81, 84, 90

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>1. Identify the elements most often found in living organisms (e.g., C, N, H, O, P, S, Ca, FE). (PS-M-A9)</b>
<b>Life Science Lab, Level A:</b> Card 4 <b>Life Science Lab, Level B:</b> Card 4
<b>Earth Science Lab, Level A:</b> Cards 31, 32 <b>Earth Science Lab, Level B:</b> Cards 31, 32

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>2. Compare the basic structures and functions of different types of cells. (LS-M-A1)</b>
<b>Life Science Lab, Level A:</b> Cards 6, 7, 8, 9, 10 <b>Life Science Lab, Level B:</b> Cards 6, 7, 8, 9, 10 <b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>3. Illustrate and demonstrate osmosis and diffusion in cells. (LS-M-A1)</b>
<b>Life Science Lab, Level A:</b> Card 8 <b>Life Science Lab, Level B:</b> Card 8

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>4. Compare functions of plant and animal cell structures (i.e., organelles). (LS-M-A2)</b>
<b>Life Science Lab, Level A:</b> Cards 6, 7 <b>Life Science Lab, Level B:</b> Cards 6, 7 <b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>5. Compare complete and incomplete metamorphosis in insects (e.g., butterflies, mealworms, grasshoppers). (LS-M-A3)</b>
<b>Life Science Lab, Level A:</b> Card 42 <b>Life Science Lab, Level B:</b> Card 42

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>6. Compare the life cycles of a variety of organisms, including non-flowering and flowering plants, reptiles, birds, amphibians, and mammals. (LS-M-A3)</b>
<b>Life Science Lab, Level A:</b> Cards 18, 19, 20, 21, 22, 40, 42
<b>Life Science Lab, Level B:</b> Cards 18, 19, 20, 21, 22, 40, 42

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>7. Construct a word equation that illustrates the processes of photosynthesis and respiration. (LS-M-A4)</b>
<b>Life Science Lab, Level A:</b> Cards 16, 17
<b>Life Science Lab, Level B:</b> Cards 16, 17
<b>Earth Science Lab, Level A:</b> Card 35
<b>Earth Science Lab, Level B:</b> Card 35
<b>Physical Science Lab, Level A:</b> Card 38
<b>Physical Science Lab, Level B:</b> Card 38

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>8. Distinguish between aerobic respiration and anaerobic respiration. (LS-M-A4)</b>
<b>Life Science Lab, Level A:</b> Card 45
<b>Life Science Lab, Level B:</b> Card 45

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>9. Relate structural features of organs to their functions in major systems. (LS-M-A5)</b>
<b>Life Science Lab, Level A:</b> Cards 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58
<b>Life Science Lab, Level B:</b> Cards 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58
<b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>10. Describe the way major organ systems in the human body interact to sustain life. (LS-M-A5)</b>
<b>Life Science Lab, Level A:</b> Cards 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58
<b>Life Science Lab, Level B:</b> Cards 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58
<b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>11. Describe the growth and development of humans from infancy to old age. (LS-M-A6)</b>
This topic is not covered at this level.

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>12. Explain how external factors and genetics can influence the quality and length of human life (e.g., nutrition, smoking, drug use, exercise). (LS-M-A6)</b>
<b>Life Science Lab, Level A:</b> Cards 45, 46, 47, 49, 51, 64
<b>Life Science Lab, Level B:</b> Cards 45, 46, 47, 49, 51, 64
<b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91

<b>Life Science</b>
<b>Structure and Function in Living Systems</b>
<b>13. Identify and describe common communicable and noncommunicable diseases and the methods by which they are transmitted, treated, and prevented. (LS-M-A)</b>
<b>Life Science Lab, Level A:</b> Card 49
<b>Life Science Lab, Level B:</b> Card 49

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>14. Differentiate between sexual and asexual reproduction. (LS-M-B1)</b>
<b>Life Science Lab, Level A:</b> Cards 60, 61
<b>Life Science Lab, Level B:</b> Cards 60, 61

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>15. Contrast the processes of mitosis and meiosis in relation to growth, repair, reproduction, and heredity. (LS-M-B1)</b>
<b>Life Science Lab, Level A:</b> Cards 10, 60, 61
<b>Life Science Lab, Level B:</b> Cards 10, 60, 61

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>16. Explain why chromosomes in body cells exist in pairs. (LS-M-B2)</b>
<b>Life Science Lab, Level A:</b> Cards 10, 61, 62, 63
<b>Life Science Lab, Level B:</b> Cards 10, 61, 62, 63

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>17. Explain the relationship of genes to chromosomes and genotype to phenotype. (LS-M-B2)</b>
<b>Life Science Lab, Level A:</b> Cards 62, 63
<b>Life Science Lab, Level B:</b> Cards 62, 63

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>18. Recognize genetic errors caused by changes in chromosomes. (LS-M-B2)</b>
<b>Life Science Lab, Level A:</b> Cards 64, 65
<b>Life Science Lab, Level B:</b> Cards 64, 65

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>19. Apply the basic laws of Mendelian genetics to solve simple monohybrid crosses, using a Punnett square. (LS-M-B3)</b>
<b>Life Science Lab, Level A:</b> Cards 62, 63
<b>Life Science Lab, Level B:</b> Cards 62, 63

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>20. Explain the differences among the inheritance of dominant, recessive, and incomplete dominant traits. (LS-M-B3)</b>
<b>Life Science Lab, Level A:</b> Cards 62, 63
<b>Life Science Lab, Level B:</b> Cards 62, 63

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>21. Use a Punnett square to demonstrate how sex-linked traits are inherited. (LS-M-B3)</b>
<b>Life Science Lab, Level A:</b> Card 63
<b>Life Science Lab, Level B:</b> Card 63

<b>Life Science</b>
<b>Reproduction and Heredity</b>
<b>22. Give examples of the importance of selective breeding (e.g., domestic animals, livestock, horticulture) (LS-M-B3)</b>
<b>Life Science Lab, Level A:</b> Cards 62, 63
<b>Life Science Lab, Level B:</b> Cards 62, 63

<b>Life Science</b>
<b>Populations and Ecosystems</b>
<b>23. Classify organisms based on structural characteristics, using a dichotomous key. (LS-M-C1)</b>
<b>Life Science Lab, Level A:</b> Cards 2, 3
<b>Life Science Lab, Level B:</b> Cards 2, 3

<b>Life Science</b>
<b>Populations and Ecosystems</b>
<b>24. Analyze food webs to determine energy transfer among organisms. (LS-M-C2)</b>
<b>Life Science Lab, Level A:</b> Cards 76, 77
<b>Life Science Lab, Level B:</b> Cards 76, 77
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99

<b>Life Science</b>
<b>Populations and Ecosystems</b>
<b>25. Locate and describe the major biomes of the world. (LS-M-C3)</b>
<b>Life Science Lab, Level A:</b> Cards 81, 82
<b>Life Science Lab, Level B:</b> Cards 81, 82
<b>Earth Science Lab, Level A:</b> Card 89
<b>Earth Science Lab, Level B:</b> Card 89

<b>Life Science</b>
<b>Populations and Ecosystems</b>
<b>26. Describe and compare the levels of organization of living things within an ecosystem. (LS-M-C3)</b>
<b>Life Science Lab, Level A:</b> Cards 71, 73, 74, 75, 76, 77
<b>Life Science Lab, Level B:</b> Cards 71, 73, 74, 75, 76, 77

<b>Life Science</b>
<b>Populations and Ecosystems</b>
<b>27. Identify the various relationships among plants and animals (e.g., mutualistic, parasitic, producer/consumer). (LS-M-C3)</b>
<b>Life Science Lab, Level A:</b> Cards 73, 74, 76, 77
<b>Life Science Lab, Level B:</b> Cards 73, 74, 76, 77

<b>Life Science</b>
<b>Populations and Ecosystems</b>
<b>28. Differentiate between ecosystem components of habitat and niche. (LS-M-C4)</b>
<b>Life Science Lab, Level A:</b> Cards 70, 71, 75
<b>Life Science Lab, Level B:</b> Cards 70, 71, 75

<b>Life Science</b>
<b>Populations and Ecosystems</b>
<b>29. Predict the impact changes in a species' population have on an ecosystem. (LS-M-C4)</b>
<b>Life Science Lab, Level A:</b> Card 78
<b>Life Science Lab, Level B:</b> Card 78

<b>Life Science</b>
<b>Adaptations of Organisms</b>
<b>30. Differentiate between structural and behavioral adaptations in a variety of organisms. (LS-M-D1)</b>
<b>Life Science Lab, Level A:</b> Cards 23, 24, 36, 52, 53, 83
<b>Life Science Lab, Level B:</b> Cards 23, 24, 36, 41, 43, 83

<b>Life Science</b>
<b>Adaptations of Organisms</b>
<b>31. Describe and evaluate the impact of introducing nonnative species into an ecosystem. (LS-M-D1)</b>
<b>Life Science Lab, Level A:</b> Card 86
<b>Life Science Lab, Level B:</b> Card 86

<b>Life Science</b>
<b>Adaptations of Organisms</b>
<b>32. Describe changes that can occur in various ecosystems and relate the changes to the ability of an organism to survive. (LS-M-D2)</b>
<b>Life Science Lab, Level A:</b> Cards 84, 86, 87, 88, 89, 90
<b>Life Science Lab, Level B:</b> Cards 84, 86, 87, 88, 89, 90
<b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab, Level A:</b> Cards 15, 17, 37, 42, 59, 60, 61, 86
<b>Earth Science Lab, Level B:</b> Cards 15, 17, 37, 42, 59, 60, 61, 86
<b>Earth Science Lab Teacher's Handbook:</b> Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91

<b>Life Science</b>
<b>Adaptations of Organisms</b>
<b>33. Illustrate how variations in individual organisms within a population determine the success of the population. (LS-M-D2)</b>
<b>Life Science Lab, Level A:</b> Cards 65, 66
<b>Life Science Lab, Level B:</b> Cards 65, 66

<b>Life Science</b>
<b>Adaptations of Organisms</b>
<b>34. Explain how environmental factors impact survival of a population. (LS-M-D2)</b>
<b>Life Science Lab, Level A:</b> Cards 84, 86, 87, 88, 89, 90
<b>Life Science Lab, Level B:</b> Cards 84, 86, 87, 88, 89, 90
<b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab, Level A:</b> Cards 15, 17, 37, 42, 59, 60, 61, 86
<b>Earth Science Lab, Level B:</b> Cards 15, 17, 37, 42, 59, 60, 61, 86
<b>Earth Science Lab Teacher's Handbook:</b> Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91

<b>Science and the Environment</b>
<b>35. Identify resources humans derive from ecosystems. (SE-M-A1)</b>
<b>Life Science Lab, Level A:</b> Cards 84, 85, 87, 90
<b>Life Science Lab, Level B:</b> Cards 84, 85, 87, 90
<b>Earth Science Lab, Level A:</b> Cards 3, 23, 29, 90
<b>Earth Science Lab, Level B:</b> Cards 3, 23, 29, 90

<b>Science and the Environment</b>
<b>36. Distinguish the essential roles played by biotic and abiotic components in various ecosystems. (SE-M-A1)</b>
<b>Life Science Lab, Level A:</b> Cards 70, 78, 79
<b>Life Science Lab, Level B:</b> Cards 70, 78, 79
<b>Earth Science Lab, Level A:</b> Cards 23, 36, 47, 82
<b>Earth Science Lab, Level B:</b> Cards 23, 36, 47, 82

<b>Science and the Environment</b>
<b>37. Identify and describe the effects of limiting factors on a given population. (SE-M-A)</b>
<b>Life Science Lab, Level A:</b> Card 72
<b>Life Science Lab, Level B:</b> Card 72

<b>Science and the Environment</b>
<b>38. Evaluate the carrying capacity of an ecosystem. (SE-M-A2)</b>
<b>Life Science Lab, Level A:</b> Card 72
<b>Life Science Lab, Level B:</b> Card 72



<b>Science and the Environment</b>
<b>39. Analyze the consequences of human activities on ecosystems. (SE-M-A4)</b>
<b>Life Science Lab, Level A:</b> Cards 84, 85, 86, 87, 88, 89, 90 <b>Life Science Lab, Level B:</b> Cards 84, 85, 86, 87, 88, 89, 90 <b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab, Level A:</b> Cards 29, 37, 42, 59, 60, 61, 85, 86 <b>Earth Science Lab, Level B:</b> Cards 29, 37, 42, 59, 60, 61, 85, 86 <b>Earth Science Lab Teacher's Handbook:</b> Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91

<b>Science and the Environment</b>
<b>40. Construct or draw food webs for various ecosystems. (SE-M-A5)</b>
<b>Life Science Lab, Level A:</b> Card 76 <b>Life Science Lab, Level B:</b> Card 76

<b>Science and the Environment</b>
<b>41. Describe the nitrogen cycle and explain why it is important for the survival of organisms. (SE-M-A7)</b>
<b>Life Science Lab, Level A:</b> Card 79 <b>Life Science Lab, Level B:</b> Card 79

<b>Science and the Environment</b>
<b>42. Describe how photosynthesis and respiration relate to the carbon cycle. (SE-M-A7)</b>
<b>Life Science Lab, Level A:</b> Card 78 <b>Life Science Lab, Level B:</b> Card 78

<b>Science and the Environment</b>
<b>43. Identify and analyze the environmental impact of humans' use of technology (e.g., energy production, agriculture, transportation, human habitation). (SE-M-A8)</b>
<b>Life Science Lab, Level A:</b> Cards 84, 86, 87, 88, 89, 90 <b>Life Science Lab, Level B:</b> Cards 84, 86, 87, 88, 89, 90 <b>Life Science Lab Teacher's Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab, Level A:</b> Cards 37, 42, 59, 60, 61, 86 <b>Earth Science Lab, Level B:</b> Cards 37, 42, 59, 60, 61, 86 <b>Earth Science Lab Teacher's Handbook:</b> Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91

***SRA Life, Earth, and Physical Science Laboratories***  
**correlation to**  
**Louisiana Grade Level Expectations for Science**  
**Grade 8**

*SRA Life, Earth, and Physical Science Laboratories* provide core science content in an alternate reading format. Each *SRA Science Lab* contains 180 Science Cards covering key science concepts and vocabulary. Each lab covers 90 different science topics presented at two different reading levels to meet varied student abilities. The *Teacher's Handbook* includes hands-on inquiry activities as well as vocabulary building exercises. The *Classroom Resource CD-ROM* includes Writing Strategies in Science along with tests and vocabulary games.

**Science as Inquiry**

**The Abilities To Do Scientific Inquiry**

**1. Generate testable questions about objects, organisms, and events that can be answered through scientific investigations. (SI-M-A1)**

**Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 5, *Making Fossils*, pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

**Earth Science Lab Teacher's Handbook:** Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map*, pages 81-83; Hands-On Activity 4, *Using Sound Waves*, pages 85-87; Hands-On Activity 5, *What is in the Air?*, pages 89-91; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95; Hands-On Activity 7, *Sizes in the Solar System*, pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

**Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

**Classroom Resource CD-ROM:** Writing Strategy 15

**Science as Inquiry**

**The Abilities To Do Scientific Inquiry**

**2. Identify problems, factors, and questions that must be considered in a scientific investigation. (SI-M-A1)**

**Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 5, *Making Fossils*, pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

**Earth Science Lab Teacher's Handbook:** Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map*, pages 81-83; Hands-On Activity 4, *Using Sound Waves*, pages 85-87; Hands-On Activity 5, *What is in the Air?*, pages 89-91; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95; Hands-On Activity 7, *Sizes in the Solar System*, pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

**Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

**Classroom Resource CD-ROM:** Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>3. Use a variety of sources to answer questions. (SI-M-A1)</b>
<b>Classroom Resource CD-ROM:</b> Writing Strategy 9, 25

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>4. Design, predict outcomes, and conduct experiments to answer guiding questions. (SI-M-A2)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>5. Identify independent variables, dependent variables, and variables that should be controlled in designing and experiment. (SI-M-A2)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83
<b>Classroom Resource CD-ROM:</b> Writing Strategy 23

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>6. Select and use appropriate equipment, technology, tools, and metric system units of measurement to make observations. (SI-MA3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>7. Record observations using methods that complement investigations (e.g., journals, tables, charts). (SI-M-A3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 5, 11, 15, 16, 22, 24</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>8. Use consistency and precision in data collection, analysis, and reporting. (SI-M-A3)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>9. Use computers and/or calculators to analyze and interpret quantitative data. (SI-M-A3)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>10. Identify the difference between description and explanation. (SI-M-A4)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 2</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>11. Construct, use, and interpret appropriate graphical representations to collect, record, and report data (e.g., tables, charts, circle graphs, bar and line graphs, diagrams, scatter plots, symbols). (SI-M-A4)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 16, 22, 24</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>12. Use data and information gathered to develop an explanation of experimental results. (SI-M-A4)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>13. Use patterns in data to explain natural events. (SI-M-A4)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 22, 24

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>14. Develop models to illustrate or explain conclusions reached through investigation. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 20

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>15. Identify and explain the limitations of models used to represent the natural world. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99
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<b>Classroom Resource CD-ROM:</b> Writing Strategy 20

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>16. Use evidence to make inferences and predict trends. (SI-M-A5)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91
<b>Classroom Resource CD-ROM:</b> Writing Strategy 17

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>17. Recognize that there may be more than one way to interpret a given set of data, which can result in alternative scientific explanations and predictions. (SI-M-A6)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>18. Identify faulty reasoning and statements that misinterpret or are not supported by the evidence. (SI-M-A6)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>19. Communicate ideas in a variety of ways (e.g., symbols, illustrations, graphs, charts, spreadsheets, concept maps, oral and written reports, equations). (SI-M-A7)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 1-30

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>20. Write clear, step-by-step instructions that others can follow to carry out procedures or conduct investigations. (SI-M-A7)</b>
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15



<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>21. Distinguish between observations and inferences. (SI-M-A7)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 11, 17</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>22. Use evidence and observations to explain and communicate the results of investigations. (SI-M-A7)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>23. Use relevant safety procedures and equipment to conduct scientific investigations. (SI-M-A8)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

<b>Science as Inquiry</b>
<b>The Abilities To Do Scientific Inquiry</b>
<b>24. Provide appropriate care and utilize safe practices and ethical treatment when animals are involved in scientific field and laboratory research. (SI-M-A8)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>25. Compare and critique scientific investigations. (SI-M-B1)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i> , pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>26. Use and describe alternate methods for investigating different types of testable questions. (SI-M-B1)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>27. Recognize that science uses processes that involve a logical and empirical, but flexible, approach to problem solving. (SI-M-B1)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>28. Recognize that investigations generally begin with a review of the work or others. (SI-M-B2)</b>
This topic is not covered at this level.

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>29. Explain how technology can expand the senses and contribute to the increase and/or modification of scientific knowledge. (SI-M-B3)</b>
<b>Life Science Lab, Level A:</b> Cards 5, 59, 83 <b>Life Science Lab, Level B:</b> Cards 5, 59, 83
<b>Earth Science Lab, Level A:</b> Cards 16, 79, 80, 81, 88 <b>Earth Science Lab, Level B:</b> Cards 16, 79, 80, 81, 88
<b>Physical Science Lab, Level A:</b> Cards 3, 81, 84, 90 <b>Physical Science Lab, Level B:</b> Cards 3, 81, 84, 90

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>30. Describe why all questions cannot be answered with present technologies. (SI-M-B3)</b>
This topic is not covered at this level.

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>31. Recognize that there is an acceptable range of variation in collected data. (SI-M-B3)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i> , pages 89-91; Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i> , pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
<b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83; Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i> , pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i> , pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i> , pages 89-91; Hands-On Activity 6, <i>Making Sound</i> , pages 97-99
<b>Classroom Resource CD-ROM:</b> Writing Strategy 15

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>32. Explain the use of statistical methods to confirm the significance of data (e.g., mean, median, mode, range). (SI-M-B3)</b>
<b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 2, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>
<b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>33. Evaluate models, identify problems in design, and make recommendations for improvement. (SI-M-B4)</b>
This topic is not covered at this level.

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>34. Recognize the importance of communication among scientists about investigations in progress and the work of others. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>35. Explain how skepticism about accepted scientific investigations (i.e., hypotheses and theories) lead to new understanding. (SI-M-B5)</b>
<p><b>Life Science Lab, Level A:</b> Card 5  <b>Life Science Lab, Level B:</b> Card5</p> <p><b>Earth Science Lab, Level A:</b> Cards 10, 68, 72, 78  <b>Earth Science Lab, Level B:</b> Cards 10, 68, 72, 78</p> <p><b>Physical Science Lab, Level A:</b> Cards 3, 53, 59  <b>Physical Science Lab, Level B:</b> Cards 3, 53, 59</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>36. Explain why an experiment must be verified through multiple investigations and yield consistent results before the findings are accepted. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>37. Critique and analyze their own inquires and the inquiries of others. (SI-M-B5)</b>
<p><b>Life Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p> <p><b>Earth Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p> <p><b>Physical Science Lab Teacher’s Handbook:</b> Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p> <p><b>Classroom Resource CD-ROM:</b> Writing Strategy 15</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>38. Explain, that through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas. (SI-M-B6)</b>
<p><b>Life Science Lab, Level A:</b> Cards 46, 49, 64, 69  <b>Life Science Lab, Level B:</b> Cards 46, 49, 64, 69</p> <p><b>Earth Science Lab, Level A:</b> Cards 16, 20, 31, 37, 52, 54, 79, 80, 81, 88  <b>Earth Science Lab, Level B:</b> Cards 16, 20, 31, 37, 51, 54, 79, 80, 81, 88</p> <p><b>Physical Science Lab, Level A:</b> Cards 33, 35, 76, 81, 84, 90  <b>Physical Science Lab, Level B:</b> Cards 33, 35, 76, 81, 84, 90</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>39. Identify areas in which technology has changed human lives (e.g., transportation, communication, geographical information systems, DNA fingerprinting). (SI-M-B7)</b>
<p><b>Life Science Lab, Level A:</b> Cards 49, 64, 69, 83, 87, 89, 90  <b>Life Science Lab, Level B:</b> Cards 49, 64, 69, 83, 87, 89, 90</p> <p><b>Earth Science Lab, Level A:</b> Cards 16, 20, 37, 51, 54, 79, 80, 81  <b>Earth Science Lab, Level B:</b> Cards 16, 20, 37, 51, 54, 79, 80, 81</p> <p><b>Physical Science Lab, Level A:</b> Cards 33, 35, 76, 81, 84, 90  <b>Physical Science Lab, Level B:</b> Cards 33, 35, 76, 81, 84, 90</p>

<b>Science as Inquiry</b>
<b>Understanding Scientific Inquiry</b>
<b>40. Evaluate the impact of research on scientific thought, society, and the environment. (SI-M-B7)</b>
Life Science Lab, Level A: Cards 5, 49, 64, 69 Life Science Lab, Level B: Cards 5, 49, 64, 69
Earth Science Lab, Level A: Cards 16, 37, 51, 54, 70, 79, 80, 81 Earth Science Lab, Level B: Cards 16, 37, 51, 54, 70, 79, 80, 81
Physical Science Lab, Level A: Cards 33, 35, 55, 81, 84, 90 Physical Science Lab, Level B: Cards 33, 35, 55, 81, 84, 90

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>1. Determine that all atoms of the same elements are similar to but different from atoms of other elements. (PS-M-A2)</b>
Physical Science Lab, Level A: Cards 3, 10, 21 Physical Science Lab, Level B: Cards 3, 10, 21

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>2. Recognize that elements with the same number of protons may or may not have the same charge. (PS-M-A2)</b>
Physical Science Lab, Level A: Cards 21, 22, 23, 24, 25 Physical Science Lab, Level B: Cards 21, 22, 23, 24, 25

<b>Physical Science</b>
<b>Properties and Changes of Properties of in Matter</b>
<b>3. Define ions and describe them in terms of the number of protons, electrons, and their charges. (PS-M-A2)</b>
Physical Science Lab, Level A: Cards 23, 24, 25 Physical Science Lab, Level B: Cards 23, 24, 25

<b>Physical Science</b>
<b>Motion and Forces</b>
<b>4. Demonstrate that Earth has a magnetic field by using magnets and compasses. (PS-M-B2)</b>
Physical Science Lab, Level A: Cards 74, 75 Physical Science Lab, Level B: Cards 74, 75

<b>Physical Science</b>
<b>Motion and Forces</b>
<b>5. Define gravity and describe the relationship among the force of gravity, the mass of objects, and the distance between objects. (PS-M-B2)</b>
Physical Science Lab, Level A: Cards 57, 59 Physical Science Lab, Level B: Cards 57, 59

<b>Physical Science</b>
<b>Motion and Forces</b>
<b>6. Predict how the gravitational attraction between two masses will increase or decrease when changes are made in the masses or in the distance between the objects. (PS-M-B2)</b>
Physical Science Lab, Level A: Cards 57, 59 Physical Science Lab, Level B: Cards 57, 59

<b>Physical Science</b>
<b>Motion and Forces</b>
<b>7. Explain the relationship among force, mass, and acceleration. (PS-M-B5)</b>
Physical Science Lab, Level A: Cards 51, 52, 53, 54
Physical Science Lab, Level B: Cards 51, 52, 53, 54

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>8. Identify and Describe the four density layers of Earth. (ESS-M-A1)</b>
Earth Science Lab, Level A: Cards 1, 2
Earth Science Lab, Level B: Cards 1, 2

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>9. Explain the historical development of the theories of plate tectonics, including continental drift and sea-floor spreading. (ESS-M-A2)</b>
Earth Science Lab, Level A: Cards 10, 11, 12, 13, 14, 88
Earth Science Lab, Level B: Cards 10, 11, 12, 13, 14, 88
Earth Science Lab Teacher's Handbook: Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>10. Illustrate the movement of convection currents. (ESS-M-A2)</b>
Earth Science Lab, Level A: Cards 10, 12, 13
Earth Science Lab, Level B: Cards 10, 12, 13

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>11. Illustrate the movements of lithospheric plates as stated in the plate tectonics theory. (ESS-M-A2)</b>
Earth Science Lab, Level A: Cards 10, 11, 12, 13, 14
Earth Science Lab, Level B: Cards 10, 11, 12, 13, 14
Earth Science Lab Teacher's Handbook: Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>12. Identify the edges of plate boundaries as likely areas of earthquakes and volcanic action. (ESS-M-A3)</b>
Earth Science Lab, Level A: Cards 15, 16, 17
Earth Science Lab, Level B: Cards 15, 16, 17

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>13. Describe the processes responsible for earthquakes and volcanoes and identify the effects of these processes (e.g., faulting, folding). (ESS-M-A3)</b>
Earth Science Lab, Level A: Cards 13, 14, 15, 16, 17
Earth Science Lab, Level B: Cards 13, 14, 15, 16, 17
Earth Science Lab Teacher's Handbook: Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79



<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>14. Distinguish between chemical and mechanical (physical) weathering and identify the role of weathering agents (e.g., wind, water, ice, gravity). (ESS-M-A4)</b>
Earth Science Lab, Level A: Card 22
Earth Science Lab, Level B: Card 22

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>15. Illustrate the role of organic processes in soil formation. (ESS-M-A4)</b>
Earth Science Lab, Level A: Cards 23, 29
Earth Science Lab, Level B: Cards 23, 29

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>16. Compare the physical characteristics of rock and mineral specimens to observe that a rock is a mixture of minerals. (ESS-M-A5)</b>
Earth Science Lab, Level A: Cards 3, 4, 5, 6, 7, 8
Earth Science Lab, Level B: Cards 3, 4, 5, 6, 7, 8
Earth Science Lab Teacher's Handbook: Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>17. Describe the properties of minerals (e.g., color, luster, hardness, streak). (ESS-M-A5)</b>
Earth Science Lab, Level A: Cards 3, 4, 5
Earth Science Lab, Level B: Cards 3, 4, 5
Earth Science Lab Teacher's Handbook: Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>18. Describe how sedimentary, igneous, and metamorphic rocks form and change in the rock cycle. (ESS-M-A6)</b>
Earth Science Lab, Level A: Cards 6, 7, 8, 9
Earth Science Lab, Level B: Cards 6, 7, 8, 9

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>19. Determine the results of constructive and destructive forces upon landform development with the aid of geologic maps of Louisiana. (ESS-M-A7)</b>
Earth Science Lab, Level A: Cards 15, 17, 22, 24, 25, 26, 27, 28
Earth Science Lab, Level B: Cards 15, 17, 22, 24, 25, 26, 27, 28
Earth Science Lab Teacher's Handbook: Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>20. Describe how humans' actions and natural processes have modified coastal regions in Louisiana and other locations. (ESS-M-A8)</b>
Earth Science Lab, Level A: Cards 22, 24, 25, 26, 27, 28
Earth Science Lab, Level B: Cards 22, 24, 25, 26, 27, 28

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>21. Read and interpret topographic maps. (ESS-M-A9)</b>
Earth Science Lab, Level A: Cards 19, 20 Earth Science Lab, Level B: Cards 19, 20 Earth Science Lab Teacher's Handbook: Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>22. Compare ocean floor topography to continental topography by using topographic maps. (ESS-M-A9)</b>
Earth Science Lab, Level A: Cards 19, 20, 21, 88 Earth Science Lab, Level B: Cards 19, 20, 21, 88

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>23. Explain the processes of evaporation, condensation, precipitation, infiltration, transpiration, and sublimation as they relate to the water cycle. (ESS-M-A10)</b>
Earth Science Lab, Level A: Cards 47, 48, 49 Earth Science Lab, Level B: Cards 47, 48, 49

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>24. Investigate and explain how given factors affect the rate of water movement in the water cycle (e.g., climate, type of rock, ground cover). (ESS-M-A10)</b>
Earth Science Lab, Level A: Cards 47, 55, 56, 60 Earth Science Lab, Level B: Cards 47, 55, 56, 60

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>25. Explain and give examples of how climatic conditions on Earth are affected by the proximity of water. (ESS-M-A11)</b>
Earth Science Lab, Level A: Cards 55, 56, 57, 58, 60, 61 Earth Science Lab, Level B: Cards 55, 56, 57, 58, 60, 61

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>26. Describe and illustrate the layers of Earth's atmosphere. (ESS-M-A11)</b>
Earth Science Lab, Level A: Cards 36, 37 Earth Science Lab, Level B: Cards 36, 37

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>27. Identify different air masses, jet streams, global wind patterns, and other atmospheric phenomena and describe how they relate to weather events, such as El Niño and La Niña. (ESS-M-A12)</b>
Earth Science Lab, Level A: Cards 38, 39, 40, 41, 42, 45, 46, 60 Earth Science Lab, Level B: Cards 38, 39, 40, 41, 42, 45, 46, 60

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>28. Use historical data to plot the movement of hurricanes and explain events or conditions that affected their paths. (ESS-M-A12)</b>
Earth Science Lab, Level A: Card 54
Earth Science Lab, Level B: Card 54

<b>Earth and Space Science</b>
<b>Structure of Earth</b>
<b>29. Make predictions about future weather conditions based on collected weather data. (ESS-M-A12)</b>
Earth Science Lab, Level A: Card 51
Earth Science Lab, Level B: Card 51

<b>Earth and Space Science</b>
<b>Earth History</b>
<b>30. Interpret a geologic timeline. (ESS-M-B1)</b>
Earth Science Lab, Level A: Cards 30, 32
Earth Science Lab, Level B: Cards 30, 32

<b>Earth and Space Science</b>
<b>Earth History</b>
<b>31. Compare fossils from different geologic eras and areas of Earth to show that life changes over time. (ESS-M-B1)</b>
Life Science Lab, Level A: Card 67
Life Science Lab, Level B: Card 67
Life Science Lab Teacher's Handbook: Hands-On Activity 5, <i>Making Fossils</i> , pages 93-95
Earth Science Lab, Level A: Cards 30, 31, 32, 33, 34
Earth Science Lab, Level B: Cards 30, 31, 32, 33, 34

<b>Earth and Space Science</b>
<b>Earth History</b>
<b>32. Interpret a timeline starting with the birth of the solar system to the present day. (ESS-M-B2)</b>
Earth Science Lab, Level A: Cards 68, 78
Earth Science Lab, Level B: Cards 68, 78

<b>Earth and Space Science</b>
<b>Earth History</b>
<b>33. Use historical data to draw conclusions about the age of Earth (e.g., half-life, rock strata). (ESS-M-B2)</b>
Earth Science Lab, Level A: Cards 30, 31
Earth Science Lab, Level B: Cards 30, 31

<b>Earth and Space Science</b>
<b>Earth History</b>
<b>34. Apply geological principles to determine the relative ages of rock layers (e.g., original horizontality, superposition, cross-cutting relationships). (ESS-M-B3)</b>
Earth Science Lab, Level A: Cards 30, 31
Earth Science Lab, Level B: Cards 30, 31

<b>Earth and Space Science</b>
<b>Earth History</b>
<b>35. Describe how processes seen today are similar to those in the past (e.g., weathering, erosion, lithospheric plate movement). (ESS-M-B3)</b>
<b>Earth Science Lab, Level A:</b> Cards 10, 11, 12, 13, 14, 15, 17, 22, 24, 25, 26, 27, 28
<b>Earth Science Lab, Level B:</b> Cards 10, 11, 12, 13, 14, 15, 17, 22, 24, 25, 26, 27, 28

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>36. Describe the life cycle of a star and predict the next likely stage of the Sun. (ESS-M-C1)</b>
<b>Earth Science Lab, Level A:</b> Cards 67, 75, 76
<b>Earth Science Lab, Level B:</b> Cards 67, 75, 76

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>37. Use a Hertzsprung-Russell diagram and other data to compare the approximate mass, size, luminosity temperature, structure, and composition of the Sun to other stars. (ESS-M-C1)</b>
<b>Earth Science Lab, Level A:</b> Cards 75, 76
<b>Earth Science Lab, Level B:</b> Cards 75, 76

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>38. Use data to compare the planets in terms of orbit, size, composition, density, rotation, revolution, and atmosphere. (ESS-M-C2)</b>
<b>Earth Science Lab, Level A:</b> Cards 69, 70, 71, 72
<b>Earth Science Lab, Level B:</b> Cards 69, 70, 71, 72

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>39. Relate Newton’s laws of gravity to the motions of celestial bodies and objects on Earth. (ESS-M-C3)</b>
<b>Earth Science Lab, Level A:</b> Card 68
<b>Earth Science Lab, Level B:</b> Card 68
<b>Physical Science Lab, Level A:</b> Cards 55, 57, 59
<b>Physical Science Lab, Level B:</b> Cards 55, 57, 59

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>40. Identify and illustrate the relative positions of Earth, the Moon, and the Sun during eclipses and phases of the Moon. (ESS-M-C4)</b>
<b>Earth Science Lab, Level A:</b> Cards 64, 65
<b>Earth Science Lab, Level B:</b> Cards 64, 65

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>41. Describe the effects of the Moon on tides. (ESS-M-C4)</b>
<b>Earth Science Lab, Level A:</b> Cards 66, 90
<b>Earth Science Lab, Level B:</b> Cards 66, 90
<b>Physical Science Lab, Level A:</b> Card 48
<b>Physical Science Lab, Level B:</b> Card 48

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>42. Interpret a scale model of the solar system. (ESS-M-C5)</b>
Earth Science Lab, Level A: Cards 67, 68, 69, 70, 71
Earth Science Lab, Level B: Cards 68, 69, 70, 71
Earth Science Lab Teacher's Handbook: Hands-On Activity 7, <i>Sizes in the Solar System</i> , pages 97-99

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>43. Identify the processes involved in the creation of land and sea breezes. (ESS-M-C6)</b>
Earth Science Lab, Level A: Card 41
Earth Science Lab, Level B: Card 41

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>44. Describe how unequal heating of Earth's surface affects movement of air masses and water in the atmosphere and hydrosphere. (ESS-M-C6)</b>
Earth Science Lab, Level A: Cards 38, 39, 40, 41, 45, 46, 48, 52, 53, 54, 55, 57, 58, 60
Earth Science Lab, Level B: Cards 38, 39, 40, 41, 45, 46, 48, 52, 53, 54, 55, 57, 58, 60

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>45. Explain how seasonal changes are caused by the tilt of Earth as it rotates on its axis and revolves around the Sun. (ESS-M-C7)</b>
Earth Science Lab, Level A: Cards 55, 62
Earth Science Lab, Level B: Cards 55, 62

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>46. Illustrate and explain how the angle at which sunlight strikes Earth produces changes in the seasons and length of daylight. (ESS-M-C7)</b>
Earth Science Lab, Level A: Cards 55, 62
Earth Science Lab, Level B: Cards 55, 62

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>47. Compare the relative distances from Earth to the Sun on the first day of summer and the first day of winter. (ESS-M-C7)</b>
Earth Science Lab, Level A: Card 62
Earth Science Lab, Level B: Card 62

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>48. Communicate ways that information from space exploration and technological research have advanced understanding about Earth, the solar system, and the universe. (ESS-M-C8)</b>
Earth Science Lab, Level A: Cards 20, 51, 54, 79, 80, 81, 88
Earth Science Lab, Level B: Cards 20, 51, 54, 79, 80, 81, 88

<b>Earth and Space Science</b>
<b>Earth in the Solar System</b>
<b>49. Identify practical applications of technological advances resulting from space exploration and scientific and technological research. (ESS-M-C8)</b>
Life Science Lab, Level A: Card 83 Life Science Lab, Level B: Card 83
Earth Science Lab, Level A: Cards 16, 20, 51, 54, 79, 80, 81, 88 Earth Science Lab, Level B: Cards 16, 20, 51, 54, 79, 80, 81, 88

<b>Science and the Environment</b>
<b>50. Illustrate possible point and non-point source contributions to pollution and natural or human-induced pathways of a pollutant in an ecosystem. (SE-M-A3)</b>
Life Science Lab, Level A: Cards 84, 87, 89, 90 Life Science Lab, Level B: Cards 84, 87, 89, 90 Life Science Lab Teacher's Handbook: Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
Earth Science Lab, Level A: Cards 37, 42, 59, 86 Earth Science Lab, Level B: Cards 37, 42, 59, 86 Earth Science Lab Teacher's Handbook: Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91

<b>Science and the Environment</b>
<b>51. Analyze the consequences of human activities on global Earth systems. (SE-M-A4)</b>
Life Science Lab, Level A: Cards 84, 85, 86, 87, 88, 89, 90 Life Science Lab, Level B: Cards 84, 85, 86, 87, 88, 89, 90 Life Science Lab Teacher's Handbook: Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103
Earth Science Lab, Level A: Cards 37, 42, 59, 60, 61, 86 Earth Science Lab, Level B: Cards 37, 42, 59, 60, 61, 86 Earth Science Lab Teacher's Handbook: Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91

<b>Science and the Environment</b>
<b>52. Describe the relationship between plant type and soil compatibility. (SE-M-A9)</b>
Life Science Lab, Level A: Cards 23, 81 Life Science Lab, Level B: Cards 23, 81
Earth Science Lab, Level A: Card 23 Earth Science Lab, Level B: Card 23

<b>Science and the Environment</b>
<b>53. Distinguish among several examples of erosion (e.g., stream bank, topsoil, coastal) and describe common preventive measures. (SE-M-A10)</b>
Earth Science Lab, Level A: Cards 24, 25, 26, 27, 28, 29 Earth Science Lab, Level B: Cards 24, 25, 26, 27, 28, 29