

***SRA Snapshots Video Science™: Level A***  
**correlation to**  
**Vermont Grade Expectations for Science**  
**Grade 3**

*SRA Snapshots Video Science™* consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (**SE**) provides student friendly text that reinforces the concepts introduced in the video. The Teacher’s Resource Book (**TRB**) provides support activities in a blackline master format. The Teacher’s Guide (**TG**) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

**KEY:**

<b>Reference</b>	<b>Program Component</b>
<b>Video</b>	Video lessons on program DVDs
<b>SE</b>	Student Edition
<b>TRB</b>	Teacher’s Resource Book
<b>TG</b>	Teacher’s Guide

Scientific Questioning
S3-4:1 Students demonstrate their understanding of SCIENTIFIC QUESTIONING by:
<ul style="list-style-type: none"> <li>• Identifying at least one variable that affects a system and using that variable to generate an experimental question that includes a cause and effect relationship.</li> </ul>
<b>Chapter 7, Lesson 1, Process Skill, SE page 139</b>

Predicting and Hypothesizing
S3-4:2 Students demonstrate their understanding of PREDICTING AND HYPOTHESIZING by:
<ul style="list-style-type: none"> <li>• Identifying simple patterns of evidence used to develop a prediction and propose an explanation.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S3-4:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question that includes:             <ol style="list-style-type: none"> <li>a. A list of materials needed.</li> </ol> </li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S3-4:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question that includes:</li> </ul>
b. A diagram, with important elements labeled, that supports procedures and illustrates the setup.
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S3-4:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question that includes:</li> </ul>
c. A procedure that lists steps sequentially (beginning, middle, and end) and describes how the experimenter will manipulate or change only one variable at a time. (“Fair Test”)
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S3-4:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question that includes:</li> </ul>
d. Appropriate timing between observations (intervals) and/or number of trials needed.
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>• Referring to and following a detailed plan for an investigation.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Clearly describing evidence and quantifying observations with appropriate units.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 2, Process Skill, SE page 59; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Recording data at various points during an investigation by reporting what actually happens, even when data conflicts with expectations.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 2, Process Skill, SE page 59; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Reporting the sequence in which events take place.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 2, Process Skill, SE page 59; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Recording relevant details of an object and its surroundings when applicable.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 2, Process Skill, SE page 59; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Drawing scientifically.</li> </ul>
a. Recording varying degrees of color, shading or texture and consistent proportion throughout.
<b>Chapter 2, Lesson 1, Process Skill, SE page 29</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Drawing scientifically.</li> </ul>
b. Labeling significant parts of a scientific drawing or diagram and include a key if necessary.
<b>Chapter 2, Lesson 1, Process Skill, SE page 29; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Classifying objects and phenomena into sets and subsets and justifying groupings.</li> </ul>
<b>Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Process Skill, SE page 13</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51</b> <b>Chapter 8, Lesson 1, Process Skill, SE page 161</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 197</b> <b>Classification, SE page 202</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Displaying and labeling data for separate trials/observations.</li> </ul>
<b>Chapter 1, Lesson 2, Math in Science, SE page 13; Process Skill, SE page 13</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 103; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Determining an appropriate representation (graph or table or chart or diagram) to represent their findings most accurately.</li> </ul>
<b>Chapter 1, Lesson 2, Math in Science, SE page 13; Process Skill, SE page 13</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 103; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Including in tables a title, labeled rows and columns and any necessary keys.</li> </ul>
<b>Chapter 1, Lesson 2, Math in Science, SE page 13; Process Skill, SE page 13</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 103; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Including in graphs a title, labels, scale, and recording data accurately.</li> </ul>
<b>Chapter 1, Lesson 2, Math in Science, SE page 13; Process Skill, SE page 13</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 103; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:6 Students demonstrate their ability to ANALYZE DATA by:
<ul style="list-style-type: none"> <li>Interpreting patterns or trends in data.</li> </ul>
<b>Chapter 1, Lesson 2 Math in Science, SE page 13</b> <b>Chapter 3, Lesson 3 Process Skill, SE page 65</b> <b>Chapter 5, Lesson 2 Math in Science, SE page 103; Process Skill, SE page 103</b> <b>Chapter 6, Lesson 2 Writing in Science. SE page 123</b> <b>Chapter 7, LabTime Hands-On Activity, TRB pages 123-125; TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity, TRB pages 141-143; TG page 156</b>

Representing Data and Analysis
S3-4:6 Students demonstrate their ability to ANALYZE DATA by:
<ul style="list-style-type: none"> <li>Relating data to the original question and prediction.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Providing a reasonable explanation that accurately reflects data.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Identifying differences between proposed predictions and experimental data.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Applying Results
S3-4:8 Students demonstrate their ability to APPLY RESULTS by:
<ul style="list-style-type: none"> <li>Generating a new question to obtain additional information.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Applying Results
S3-4:8 Students demonstrate their ability to APPLY RESULTS by:
<ul style="list-style-type: none"> <li>Creating a plan to investigate a scientific concept further or connecting a classroom model to a real-world example.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Applying Results
S3-4:8 Students demonstrate their ability to APPLY RESULTS by:
<ul style="list-style-type: none"> <li>Connecting the investigation or model to a real-world example.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Physical Science
S3-4:9 Students demonstrate their understanding of the Properties of Matter by:
<ul style="list-style-type: none"> <li>Investigating and measuring how the total weight of the parts of a substance, no matter how they are combined, remains the same (e.g., water and gravel mixtures, or a Lego car system, or the weight of sugar plus the weight of water equal the total weight of the sugar solution).</li> </ul>
a. All matter has weight that can be measured.
<b>Chapter 8, Lesson 1, Video A, SE page 157</b>

Physical Science
S3-4:9 Students demonstrate their understanding of the Properties of Matter by:
<ul style="list-style-type: none"> <li>Investigating and measuring how the total weight of the parts of a substance, no matter how they are combined, remains the same (e.g., water and gravel mixtures, or a Lego car system, or the weight of sugar plus the weight of water equal the total weight of the sugar solution).</li> </ul>
b. The weight of the whole is the same as the sum of its parts.
<b>Chapter 8, Lesson 1, Video A, SE page 157</b>

Physical Science
S3-4:9 Students demonstrate their understanding of the Properties of Matter by:
<ul style="list-style-type: none"> <li>Investigating and measuring how the total weight of the parts of a substance, no matter how they are combined, remains the same (e.g., water and gravel mixtures, or a Lego car system, or the weight of sugar plus the weight of water equal the total weight of the sugar solution).</li> </ul>
c. Most objects/substances are made of smaller parts.
<b>See Level B:</b>
<b>Chapter 7, Lesson 3, Video A, SE page 149; Video B, SE page 150; Critical Thinking, SE page 153</b>

Physical Science
S3-4:12 Students demonstrate their understanding of the States of Matter by:
<ul style="list-style-type: none"> <li>Identifying, describing and comparing the properties of selected solids, liquids and gases.</li> </ul>
a. Solids, liquids and gases are states of matter that can be observed, described, and measured.
<b>Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Process Skills 161</b>

Physical Science
S3-4:12 Students demonstrate their understanding of the States of Matter by:
<ul style="list-style-type: none"> <li>Identifying, describing and comparing the properties of selected solids, liquids and gases.</li> </ul>
b. Gases take up as much space as you give them.
<b>Chapter 8, Lesson 2, Video A, SE page 163</b>

Physical Science
S3-4:13 Students demonstrate their understanding of the Properties of a Gas by:
<ul style="list-style-type: none"> <li>Experimenting with gas in a closed container (such as a balloon or a bag) and describing how pressure on the container changes when the volume of the gas changes.</li> </ul>
a. Gas is a state of matter that takes up space.
<b>Chapter 8, Lesson 1, Video A, SE page 157; Critical Thinking, SE page 161; Lesson 2, Video A, SE page 163</b>

Physical Science
S3-4:14 Students demonstrate their understanding of Physical Change by:
<ul style="list-style-type: none"> <li>Investigating and explaining what happens to liquids in open containers.</li> </ul>
a. Adding heat can change a substance from a solid, to a liquid, to a gas.
<b>Chapter 8, Lesson 2, Video A, SE page 163; Process Skill, SE page 167</b>

Physical Science
S3-4:21 Students demonstrate their understanding of Force by:
<ul style="list-style-type: none"> <li>Investigating and describing how different amounts of force can change the direction and speed of an object in motion.</li> </ul>
a. Changes in speed or direction of motion are caused by forces.
<b>Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144</b>

Physical Science
S3-4:21 Students demonstrate their understanding of Force by:
<ul style="list-style-type: none"> <li>Investigating and describing how different amounts of force can change the direction and speed of an object in motion.</li> </ul>
b. The greater the force, the greater the change of motion.
<b>Chapter 7, Lesson 1, Video A, SE page 135; KnowZone, SE pages 140-141</b>

Physical Science
S3-4:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Building complete circuits, drawing diagrams of these electric circuits and explaining why electricity flows or does not flow through the circuit.</li> <li>Using experimental data to classify different materials as conductors and insulators.</li> </ul>
a. A complete loop is needed through which an electric charge can flow.
<b>Chapter 9, Lesson 2, Video B, SE page 188; Video C, SE page 189; Process Skill, SE page 191</b>

Physical Science
S3-4:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Building complete circuits, drawing diagrams of these electric circuits and explaining why electricity flows or does not flow through the circuit.</li> <li>Using experimental data to classify different materials as conductors and insulators.</li> </ul>
b. Batteries are a source of electrical energy.
<b>Chapter 9, Lesson 2, Video A, SE page 187; Critical Thinking, SE page 191; Math in Science, SE page 191; Process Skill, SE page 191; Lesson 3, Video A, SE page 193</b>

Physical Science
S3-4:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Building complete circuits, drawing diagrams of these electric circuits and explaining why electricity flows or does not flow through the circuit.</li> <li>Using experimental data to classify different materials as conductors and insulators.</li> </ul>
c. Electric currents can produce light, run motors and create sounds.
<b>Chapter 9, Lesson 2, Video B, SE page 188; Video C, SE page 189; Process Skill, SE page 191</b>

Physical Science
S3-4:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Building complete circuits, drawing diagrams of these electric circuits and explaining why electricity flows or does not flow through the circuit.</li> <li>Using experimental data to classify different materials as conductors and insulators.</li> </ul>
d. Certain materials are conductors of electricity. Non-conductors of electricity are called insulators.
<b>See Level B: Chapter 9, Lesson 1, Video B, SE page 180</b>



Physical Science
S3-4:25 Students demonstrate their understanding of Magnetism by:
<ul style="list-style-type: none"> <li>Describing what happens when like and opposite poles of the magnet are placed near each other.</li> </ul>
a. Magnets have opposite charged poles.
<b>Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Critical Thinking, SE page 147; Process Skill, SE page 147</b>

Physical Science
S3-4:25 Students demonstrate their understanding of Magnetism by:
<ul style="list-style-type: none"> <li>Describing what happens when like and opposite poles of the magnet are placed near each other.</li> </ul>
b. When the same poles of a magnet are placed near each
<b>Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Critical Thinking, SE page 147; Process Skill, SE page 147</b>

Physical Science
S3-4:28 Students demonstrate their understanding of Light Energy by:
<ul style="list-style-type: none"> <li>Investigating with flash lights and other light sources and describing how light rays reflect off of objects.</li> <li>Explaining what occurs when lich rays are blocked (e.g., shadows).</li> </ul>
a. Light maintains direction of motion until it interacts with another object.
<b>Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Physical Science
S3-4:28 Students demonstrate their understanding of Light Energy by:
<ul style="list-style-type: none"> <li>Investigating with flash lights and other light sources and describing how light rays reflect off of objects.</li> <li>Explaining what occurs when lich rays are blocked (e.g., shadows).</li> </ul>
b. Light can be reflected or absorbed.
<b>Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Life Science
S3-4: 30 Students demonstrate their understanding of Structure and Function-Survival Requirements by:
<ul style="list-style-type: none"> <li>Identifying how the physical structure/characteristic of an organism allows it to survive and defend itself (e.g., The coloring of a fiddler crab allows it to camouflage itself in the sane and grasses of its environment so that it will be protected from predators. A rose is protected by its thorns.)</li> </ul>
a. Organisms have characteristics that help them find what they need to survive in their environment and provide for their survival:
<ul style="list-style-type: none"> <li>Defense</li> <li>Obtaining food</li> <li>Reproduction</li> <li>Eliminate waste.</li> </ul>
<b>Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video C, SE page 19 Chapter 2, Lesson 2, Video A, SE page 31; KnowZone, SE pages 36-37; Lesson 3, Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43</b>

Life Science
S3-4: 31 Students demonstrate their understanding of Reproduction by:
<ul style="list-style-type: none"> <li>Investigating and describing a variety of plant and animal life cycles.</li> </ul>
a. Although all organisms have common stages of development, details of a life cycle are different for different organisms.
<b>Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21</b>

Life Science
S3-4: 34 Students demonstrate their understanding of Energy Flow in an Ecosystem by:
<ul style="list-style-type: none"> <li>Identifying the source of energy for the survival of organisms.</li> </ul>
a. Energy derived from food is needed for all organisms (plants and animals) to stay alive and grow.
<b>Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5</b>
<b>Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b>
<b>Chapter 3, Lesson 1, Video A, SE page 47; Video C, SE page 49; Critical Thinking, SE page 51</b>

Life Science
S3-4: 35 Students demonstrate their understanding of Food Webs in an Ecosystem by:
<ul style="list-style-type: none"> <li>Recognizing that, in a simple food chain, all animals' food begins with plants.</li> <li>Researching and designing a habitat and explaining how it meets the needs of the organisms that live there.</li> </ul>
a. Food for animals can be traced back to plants.
<b>Chapter 2, Lesson 2, Video A, 31; Video B, SE page 32; Video C, SE page 33; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b>
<b>Energy Transfer, SE page 203</b>

Life Science
S3-4: 35 Students demonstrate their understanding of Food Webs in an Ecosystem by:
<ul style="list-style-type: none"> <li>Recognizing that, in a simple food chain, all animals' food begins with plants.</li> <li>Researching and designing a habitat and explaining how it meets the needs of the organisms that live there.</li> </ul>
b. Organisms can survive best only in habitats in which their needs are met.
<b>Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63</b>

Life Science
S3-4: 36 Students demonstrate their understanding of Equilibrium in an Ecosystem by:
<ul style="list-style-type: none"> <li>Explaining how one organism depends upon another organism to survive.</li> </ul>
a. Organisms interact with one another in various ways besides providing food (e.g., Many plants depend on animals for carrying their pollen to other plants for fertilizing their flowers).
<b>Chapter 1, Lesson 3, Critical Thinking, SE page 21; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b>
<b>Chapter 2, Lesson 2, Video A, SE page 25; Critical Thinking, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b>
<b>Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65</b>

Life Science
S3-4: 38 Students demonstrate their understanding of Classification of Organisms by:
<ul style="list-style-type: none"> <li>Describing and sorting plants and animals into groups based on structural similarities and differences (e.g., All pine, spruce and evergreen trees have similar leaf structure; Spiders have eight legs, and insects have six).</li> </ul>
a. The great variety of living things can be sorted into groups in many ways using various characteristics to decide which things belong to which group.
<b>Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Math in Science, SE page 13</b>
<b>Classification, SE page 202</b>

Life Science
S3-4: 39 Students demonstrate their understanding of Evolution/Natural Selection by:
<ul style="list-style-type: none"> <li>Identifying differences in characteristics of a certain type of organism (e.g., dogs with long hair r short hair; humans with blue or brown eyes).</li> </ul>
a. Organisms of the same kind differ in their individual characteristics (traits) (e.g., Even though all dogs are of the same species, they can have very different traits).
<b>Chapter 1, Lesson 3, SE page 19</b>

Human Body
S3-4:40 Students demonstrate their understanding of Human Heredity by:
<ul style="list-style-type: none"> <li>Identifying similarities that are inherited from a biological parent.</li> </ul>
a. Some similarities between children and parents such as eye color, are inherited.
<b>Chapter 2, Lesson 3, Video B, SE page 40; Video C, SE page 41</b>

Human Body
S3-4:41 Students demonstrate their understanding of Human Body Systems by:
<ul style="list-style-type: none"> <li>Showing connections between external and internal body structures and how they help humans survive.</li> </ul>
a. There are external and internal structures that provide for the survival needs of human organisms.
<ul style="list-style-type: none"> <li>Skin protects the body from harmful substances and other organisms and from drying out.</li> <li>The skeletal system provides shape and protection for the body’s organs.</li> <li>The brain gets/gives signals from/to all parts of the body “telling” the body what to do.</li> <li>From food, people obtain nutrients and other materials for body repair and growth. The un-digested parts of food are eliminated. Key structures are mouth, esophagus, stomach, intestine and anus.</li> <li>By breathing, people take in the oxygen that they need to live. Key structure is the lung.</li> </ul>
<b>See Level C:</b>
<b>Chapter 1, Lesson 3, Video B, SE page 16; Video C, SE page 17</b>

Human Body
S3-4:42 Students demonstrate their understanding of the Patterns of Human Health/Disease by:
<ul style="list-style-type: none"> <li>Explaining that tears, saliva, and skin, can protect the body from harmful germs.</li> </ul>
a. If germs are able to get inside a person’s body, they may keep it from working properly. Tears, saliva, and skin protect our bodies from germs.
<b>Chapter 3, Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59</b>

Universe, Earth, Environment
S3-4:44 Students demonstrate their understanding of Characteristics of the Solar System by:
<ul style="list-style-type: none"> <li>Creating a model of the planets and their correct order from the sun.</li> <li>Drawing or building and then explaining a model of the earth rotating on its axis in relation to the sun and moon (i.e., day and night).</li> </ul>
a. The earth is one of several planets that orbit the sun, and the moon orbits the earth.
<b>Chapter 6, Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Writing in Science, SE page 123</b>

Universe, Earth, Environment
S3-4:44 Students demonstrate their understanding of Characteristics of the Solar System by:
<ul style="list-style-type: none"> <li>Creating a model of the planets and their correct order from the sun.</li> <li>Drawing or building and then explaining a model of the earth rotating on its axis in relation to the sun and moon (i.e., day and night).</li> </ul>
b. Like all planets and stars, the earth is approximately spherical in shape. The rotation of the earth on its axis every 24 hours produces the night and day cycle.
<b>Chapter 6, Lesson 1, Video A, SE page 113; Process Skill, SE page 117</b>

Universe, Earth, Environment
S3-4:45 Students demonstrate their understanding of Processes and Change over Time within Systems of the Universe by:
<ul style="list-style-type: none"> <li>Identifying similar star patterns/or groups from night photographs of the same location at different times of the years.</li> <li>Comparing (similarities) between the sun and stars.</li> </ul>
a. Stars are like the sun, but so far away that they look like points of light. Some are smaller; some are larger than the sun.
<b>Chapter 6, Lesson 3, Video A, SE page 127Chapter 2,</b>

Universe, Earth, Environment
S3-4:45 Students demonstrate their understanding of Processes and Change over Time within Systems of the Universe by:
<ul style="list-style-type: none"> <li>Identifying similar star patterns/or groups from night photographs of the same location at different times of the years.</li> <li>Comparing (similarities) between the sun and stars.</li> </ul>
b. The patterns of the stars stay the same, although they appear to move across the sky.
<b>Chapter 6, Lesson 3, Video A, SE page 127; Process Skill, SE page 131</b>

Universe, Earth, Environment
S3-4:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Observing and identifying components of soils and rocks.</li> <li>Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases).</li> <li>Observing and describing the properties of rocks.</li> </ul>
a. Soil is made partly from rock, partly from plant remains, and also contains many living organisms.
<b>Chapter 4, Lesson 2, Video C, SE page 77; Process Skill , SE page 79</b>

Universe, Earth, Environment
S3-4:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Observing and identifying components of soils and rocks.</li> <li>Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases).</li> <li>Observing and describing the properties of rocks.</li> </ul>
b. Earth materials are solid rocks, soils, water and the gases of the atmosphere.
<b>Chapter 4, Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; Lesson 3, Video A, SE page 83; Video B, SE page 84</b>
<b>Chapter 5, Lesson 1, Video A, SE page 91; Lesson 2, Video A, SE page 99</b>
<b>Chapter 9, Lesson 3, Video C, SE page 195</b>

Universe, Earth, Environment
S3-4:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Observing and identifying components of soils and rocks.</li> <li>Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases).</li> <li>Observing and describing the properties of rocks.</li> </ul>
c. Rock is composed of different combinations of minerals. Large rocks can be broken down into small rocks.
<b>Chapter 4, Lesson 2, Video A, SE page 75</b>

Universe, Earth, Environment
S3-4:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Observing and identifying components of soils and rocks.</li> <li>Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases).</li> <li>Observing and describing the properties of rocks.</li> </ul>
d. Rocks have properties of color, texture, and hardness. Rocks can be classified by their physical properties.
<b>Chapter 4, Lesson 2, Video A, SE page 75</b>

Universe, Earth, Environment
S3-4:47 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Building models that simulate deposits of sediments (e.g., a stream table).</li> <li>Investigating local land forms and comparing them with models created in the classroom.</li> </ul>
a. Waves, wind, water and ice shape and reshape the earth's land surface by eroding rock and soil in some areas and depositing them in other areas.
<b>Chapter 4, Lesson 1, Video B, SE page 70</b>
<b>Chapter 5, Lesson 2, Video A, SE page 99; Video B, SE page 100; Video C, SE page 101</b>

Universe, Earth, Environment
S3-4:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing, recording and analyzing local weather data and making predictions based on that data.</li> <li>• Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled.</li> <li>• Explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
a. Weather changes from day to day and over the seasons. Weather can be described by measurable quantities (such as temperature, wind direction and speed, precipitation and air pressure).
<b>Chapter 5, KnowZone, SE pages 96-97; Lesson 2, Process Skill, SE page 103; Lesson 3, Video A, SE page 105; Video B, SE page 106; Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b>

Universe, Earth, Environment
S3-4:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing, recording and analyzing local weather data and making predictions based on that data.</li> <li>• Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled.</li> <li>• Explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
b. Air is a substance that surrounds us, takes up space and whose movement we feel as wind.
<b>Chapter 4, Lesson 3, Video A, SE page 83</b>
<b>Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b>

Universe, Earth, Environment
S3-4:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing, recording and analyzing local weather data and making predictions based on that data.</li> <li>• Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled.</li> <li>• Explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
c. Liquid water is changed by heat from the sun to gas (vapor) and returns to a liquid or solid state when cooled to the freezing point.
<b>Chapter 5, Lesson 2, Video B, SE page 100</b>
<b>The Planet Earth, SE page 204</b>

Universe, Earth, Environment
S3-4:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing, recording and analyzing local weather data and making predictions based on that data.</li> <li>• Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled.</li> <li>• Explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
d. Clouds and fog are made of small drops of water.
<b>Chapter 5, Lesson 2, Video B, SE page 100</b>

Universe, Earth, Environment
S3-4:49 Students demonstrate their understanding of Processes and Change within Natural Resources by:
<ul style="list-style-type: none"> <li>• Observing and describing properties of living and nonliving resources.</li> <li>• Explaining how the properties of living and nonliving resources make them suitable for use by humans.</li> </ul>
a. The varied earth materials have different physical and chemical properties, which make them useful in different ways, for example, as building materials, as sources of fuel, for growing plants we use as food, or supporting animal life. Earth materials provide many of the resources that humans use.
<b>Chapter 4, Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; Lesson 3, Video A, SE page 83; Video B, SE page 84</b>
<b>Chapter 5, Lesson 1, Video A, SE page 91; Lesson 2, Video A, SE page 99</b>
<b>Chapter 9, Lesson 3, Video C, SE page 195</b>

Universe, Earth, Environment
S3-4:49 Students demonstrate their understanding of Processes and Change within Natural Resources by:
<ul style="list-style-type: none"> <li>• Observing and describing properties of living and nonliving resources.</li> <li>• Explaining how the properties of living and nonliving resources make them suitable for use by humans.</li> </ul>
b. Earth materials have chemical and physical properties that make them useful as building materials, or for growing plants or for fuel.
<b>Chapter 4, Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; Lesson 3, Video A, SE page 83; Video B, SE page 84</b> <b>Chapter 5, Lesson 1, Video A, SE page 91; Lesson 2, Video A, SE page 99</b> <b>Chapter 9, Lesson 3, Video C, SE page 195</b>

***SRA Snapshots Video Science™: Level B***  
**correlation to**  
**Vermont Grade Expectations for Science**  
**Grade 4**

*SRA Snapshots Video Science™* consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (**SE**) provides student friendly text that reinforces the concepts introduced in the video. The Teacher’s Resource Book (**TRB**) provides support activities in a blackline master format. The Teacher’s Guide (**TG**) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

**KEY:**

<b>Reference</b>	<b>Program Component</b>
<b>Video</b>	Video lessons on program DVDs
<b>SE</b>	Student Edition
<b>TRB</b>	Teacher’s Resource Book
<b>TG</b>	Teacher’s Guide

Scientific Questioning
S3-4:1 Students demonstrate their understanding of SCIENTIFIC QUESTIONING by:
<ul style="list-style-type: none"> <li>• Identifying at least one variable that affects a system and using that variable to generate an experimental question that includes a cause and effect relationship.</li> </ul>
<b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b>

Predicting and Hypothesizing
S3-4:2 Students demonstrate their understanding of PREDICTING AND HYPOTHESIZING by:
<ul style="list-style-type: none"> <li>• Identifying simple patterns of evidence used to develop a prediction and propose an explanation.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b>
<b>Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b>
<b>Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b>
<b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b>
<b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b>
<b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b>
<b>Chapter 7, Lesson 1, Process Skill, SE page 139; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b>
<b>Chapter 8, Lesson 2, Process Skill, SE page 167; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b>
<b>Chapter 9, Lesson 3, Process Skill, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S3-4:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question that includes: <ul style="list-style-type: none"> <li>a. A list of materials needed.</li> </ul> </li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b>
<b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b>
<b>Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b>
<b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b>
<b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b>
<b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b>
<b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b>
<b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b>
<b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S3-4:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question that includes:</li> </ul>
b. A diagram, with important elements labeled, that supports procedures and illustrates the setup.
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S3-4:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question that includes:</li> </ul>
c. A procedure that lists steps sequentially (beginning, middle, and end) and describes how the experimenter will manipulate or change only one variable at a time. (“Fair Test”)
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S3-4:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question that includes:</li> </ul>
d. Appropriate timing between observations (intervals) and/or number of trials needed.
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>• Referring to and following a detailed plan for an investigation.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>



Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Clearly describing evidence and quantifying observations with appropriate units.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Recording data at various points during an investigation by reporting what actually happens, even when data conflicts with expectations.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; Lesson 3, Process Skill, SE page 21; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, Lesson 1, Process Skill, SE page 29; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, SE page 79; Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 1, Writing in Science, SE page 117; Process Skill, SE page 117; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 1, Video A, SE page 161; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Reporting the sequence in which events take place.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; Lesson 3, Process Skill, SE page 21; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, Lesson 1, Process Skill, SE page 29; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, SE page 79; Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 1, Writing in Science, SE page 117; Process Skill, SE page 117; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 1, Video A, SE page 161; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Recording relevant details of an object and its surroundings when applicable.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; Lesson 3, Process Skill, SE page 21; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, Lesson 1, Process Skill, SE page 29; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, SE page 79; Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 1, Writing in Science, SE page 117; Process Skill, SE page 117; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 1, Video A, SE page 161; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Drawing scientifically.</li> </ul>
a. Recording varying degrees of color, shading or texture and consistent proportion throughout.
<b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 2, Process Skill, SE page 59</b> <b>Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 189</b>

Conducting Experiments
S3-4:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Drawing scientifically.</li> </ul>
b. Labeling significant parts of a scientific drawing or diagram and include a key if necessary.
<b>Chapter 2, Lesson 2, Process Skill, SE page 35</b> <b>Chapter 3, Lesson 2, Process Skill, SE page 59</b> <b>Chapter 4, Lesson 1, Process Skill, SE page 73</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95</b> <b>Chapter 6, Lesson 1, Process Skill, SE page 117</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 189</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Classifying objects and phenomena into sets and subsets and justifying groupings.</li> </ul>
<b>Chapter 1, Lesson 1, Process Skill, SE page 7; Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, Lesson 1, Process Skill, SE page 29; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>• Displaying and labeling data for separate trials/observations.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 1, Math in Science, SE page 117; Lesson 3, Math in Science, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 189; Lesson 3, Math in Science, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>• Determining an appropriate representation (graph or table or chart or diagram) to represent their findings most accurately.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 1, Math in Science, SE page 117; Lesson 3, Math in Science, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 189; Lesson 3, Math in Science, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>• Including in tables a title, labeled rows and columns and any necessary keys.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 1, Math in Science, SE page 117; Lesson 3, Math in Science, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 189; Lesson 3, Math in Science, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Including in graphs a title, labels, scale, and recording data accurately.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 1, Math in Science, SE page 117; Lesson 3, Math in Science, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 189; Lesson 3, Math in Science, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:6 Students demonstrate their ability to ANALYZE DATA by:
<ul style="list-style-type: none"> <li>Interpreting patterns or trends in data.</li> </ul>
<b>Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 3, Lesson 3, Math in Science, SE page 65</b> <b>Chapter 4, Lesson 1, Math in Science, SE page 73</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, math in Science, SE page 147</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 195</b> <b>The Metric System, SE pages 200-201</b>

Representing Data and Analysis
S3-4:6 Students demonstrate their ability to ANALYZE DATA by:
<ul style="list-style-type: none"> <li>Relating data to the original question and prediction.</li> </ul>
<b>Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 3, Lesson 3, Math in Science, SE page 65</b> <b>Chapter 4, Lesson 1, Math in Science, SE page 73</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 2, math in Science, SE page 147</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 195</b> <b>The Metric System, SE pages 200-201</b>

Representing Data and Analysis
S3-4:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Providing a reasonable explanation that accurately reflects data.</li> </ul>
<b>Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, Lesson 2, Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 2, Process Skill, SE page 123; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 1, Process Skill, SE page 139; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 1, Process Skill, SE page 183; Lesson 3, Process Skill, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S3-4:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Identifying differences between proposed predictions and experimental data.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 1, Process Skill, SE page 139; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson 2, Process Skill, SE page 167; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Applying Results
S3-4:8 Students demonstrate their ability to APPLY RESULTS by:
<ul style="list-style-type: none"> <li>Generating a new question to obtain additional information.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Applying Results
S3-4:8 Students demonstrate their ability to APPLY RESULTS by:
<ul style="list-style-type: none"> <li>Creating a plan to investigate a scientific concept further or connecting a classroom model to a real-world example.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Applying Results
S3-4:8 Students demonstrate their ability to APPLY RESULTS by:
<ul style="list-style-type: none"> <li>Connecting the investigation or model to a real-world example.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Physical Science
S3-4:9 Students demonstrate their understanding of the Properties of Matter by:
<ul style="list-style-type: none"> <li>Investigating and measuring how the total weight of the parts of a substance, no matter how they are combined, remains the same (e.g., water and gravel mixtures, or a Lego car system, or the weight of sugar plus the weight of water equal the total weight of the sugar solution).</li> </ul>
a. All matter has weight that can be measured.
<b>Chapter 7, Lesson 1, Video A, SE page 136; Video B, SE page 136; Lesson 2, Video B, SE page 144 The Metric System, SE pages 200-201</b>

Physical Science
S3-4:9 Students demonstrate their understanding of the Properties of Matter by:
<ul style="list-style-type: none"> <li>Investigating and measuring how the total weight of the parts of a substance, no matter how they are combined, remains the same (e.g., water and gravel mixtures, or a Lego car system, or the weight of sugar plus the weight of water equal the total weight of the sugar solution).</li> </ul>
b. The weight of the whole is the same as the sum of its parts.
<b>Chapter 7, Lesson 2, Video B, SE page 144</b>

Physical Science
S3-4:9 Students demonstrate their understanding of the Properties of Matter by:
<ul style="list-style-type: none"> <li>Investigating and measuring how the total weight of the parts of a substance, no matter how they are combined, remains the same (e.g., water and gravel mixtures, or a Lego car system, or the weight of sugar plus the weight of water equal the total weight of the sugar solution).</li> </ul>
c. Most objects/substances are made of smaller parts.
<b>Chapter 7, Lesson 3, Video A, SE page 149; Video B, SE page 150; Critical Thinking, SE page 153 The Periodic Table, SE pages 206-207</b>

Physical Science
S3-4:12 Students demonstrate their understanding of the States of Matter by:
<ul style="list-style-type: none"> <li>Identifying, describing and comparing the properties of selected solids, liquids and gases.</li> </ul>
a. Solids, liquids and gases are states of matter that can be observed, described, and measured.
<b>Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139; Process Skill, SE page 139; Lesson 3, Video C, SE page 151</b>

Physical Science
S3-4:12 Students demonstrate their understanding of the States of Matter by:
<ul style="list-style-type: none"> <li>Identifying, describing and comparing the properties of selected solids, liquids and gases.</li> </ul>
b. Gases take up as much space as you give them.
<b>Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139; Lesson 3, Process Skill, SE page 153</b>

Physical Science
S3-4:13 Students demonstrate their understanding of the Properties of a Gas by:
<ul style="list-style-type: none"> <li>Experimenting with gas in a closed container (such as a balloon or a bag) and describing how pressure on the container changes when the volume of the gas changes.</li> </ul>
a. Gas is a state of matter that takes up space.
<b>Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139; Lesson 3, Process Skill, SE page 153</b>

Physical Science
S3-4:14 Students demonstrate their understanding of Physical Change by:
<ul style="list-style-type: none"> <li>Investigating and explaining what happens to liquids in open containers.</li> </ul>
a. Adding heat can change a substance from a solid, to a liquid, to a gas.
<b>Chapter 7, Lesson 1, Video C, SE page 137; Process Skill, SE page 139</b>

Physical Science
S3-4:21 Students demonstrate their understanding of Force by:
<ul style="list-style-type: none"> <li>Investigating and describing how different amounts of force can change the direction and speed of an object in motion.</li> </ul>
a. Changes in speed or direction of motion are caused by forces.
<b>See Level A: Chapter 7, Lesson 1, Video A, SE page 135</b>
<b>See also Level C: Chapter 9, Lesson 2, Video A, SE page 187</b>

Physical Science
S3-4:21 Students demonstrate their understanding of Force by:
<ul style="list-style-type: none"> <li>Investigating and describing how different amounts of force can change the direction and speed of an object in motion.</li> </ul>
b. The greater the force, the greater the change of motion.
<b>Chapter 8, Lesson 3, Video A, SE page 171</b>

Physical Science
S3-4:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Building complete circuits, drawing diagrams of these electric circuits and explaining why electricity flows or does not flow through the circuit.</li> <li>Using experimental data to classify different materials as conductors and insulators.</li> </ul>
a. A complete loop is needed through which an electric charge can flow.
<b>Chapter 9, Lesson 1, Video C, SE page 181</b>

Physical Science
S3-4:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Building complete circuits, drawing diagrams of these electric circuits and explaining why electricity flows or does not flow through the circuit.</li> <li>Using experimental data to classify different materials as conductors and insulators.</li> </ul>
b. Batteries are a source of electrical energy.
<b>Chapter 8, Lesson 2, Video B, SE page 172</b>
<b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Physical Science
S3-4:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Building complete circuits, drawing diagrams of these electric circuits and explaining why electricity flows or does not flow through the circuit.</li> <li>Using experimental data to classify different materials as conductors and insulators.</li> </ul>
c. Electric currents can produce light, run motors and create sounds.
<b>Chapter 9, Lesson 1, Video C, SE page 181</b>

Physical Science
S3-4:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>• Building complete circuits, drawing diagrams of these electric circuits and explaining why electricity flows or does not flow through the circuit.</li> <li>• Using experimental data to classify different materials as conductors and insulators.</li> </ul>
d. Certain materials are conductors of electricity. Non-conductors of electricity are called insulators.
<b>Chapter 9, Lesson 1, Video B, SE page 180</b>

Physical Science
S3-4:25 Students demonstrate their understanding of Magnetism by:
<ul style="list-style-type: none"> <li>• Describing what happens when like and opposite poles of the magnet are placed near each other.</li> </ul>
a. Magnets have opposite charged poles.
<b>Chapter 9, Lesson 2, Video A, SE page 185</b>

Physical Science
S3-4:25 Students demonstrate their understanding of Magnetism by:
<ul style="list-style-type: none"> <li>• Describing what happens when like and opposite poles of the magnet are placed near each other.</li> </ul>
b. When the same poles of a magnet are placed near each
<b>Chapter 9, Lesson 2, Video A, SE page 185</b>

Physical Science
S3-4:28 Students demonstrate their understanding of Light Energy by:
<ul style="list-style-type: none"> <li>• Investigating with flash lights and other light sources and describing how light rays reflect off of objects.</li> <li>• Explaining what occurs when lich rays are blocked (e.g., shadows).</li> </ul>
a. Light maintains direction of motion until it interacts with another object.
<b>Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165</b>

Physical Science
S3-4:28 Students demonstrate their understanding of Light Energy by:
<ul style="list-style-type: none"> <li>• Investigating with flash lights and other light sources and describing how light rays reflect off of objects.</li> <li>• Explaining what occurs when lich rays are blocked (e.g., shadows).</li> </ul>
b. Light can be reflected or absorbed.
<b>Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165</b>

Life Science
S3-4: 30 Students demonstrate their understanding of Structure and Function-Survival Requirements by:
<ul style="list-style-type: none"> <li>• Identifying how the physical structure/characteristic of an organism allows it to survive and defend itself (e.g., The coloring of a fiddler crab allows it to camouflage itself in the sane and grasses of its environment so that it will be protected from predators. A rose is protected by its thorns.)</li> </ul>
a. Organisms have characteristics that help them find what they need to survive in their environment and provide for their survival:
<ul style="list-style-type: none"> <li>○ Defense</li> <li>○ Obtaining food</li> <li>○ Reproduction</li> <li>○ Eliminate waste.</li> </ul>
<b>Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; KnowZone, SE pages 14-15; Lesson 3, Video B, SE page 18; Video C, SE page 19</b>
<b>Chapter 2, KnowZone, SE pages 36-37</b>
<b>Chapter 3, Lesson 1, Video B, SE page 48; KnowZone, SE pages 52-53; Lesson 2, Video B, SE page 56</b>



Life Science
S3-4: 31 Students demonstrate their understanding of Reproduction by:
<ul style="list-style-type: none"> <li>Investigating and describing a variety of plant and animal life cycles.</li> </ul>
a. Although all organisms have common stages of development, details of a life cycle are different for different organisms.
<b>Level B:</b>
<b>Chapter 1, Lesson 3, Video C, SE page 19</b>
<b>See also Level A:</b>
<b>Chapter 1, Lesson 3, Video B, SE page 18; Process Skill, SE page 21</b>
<b>See also Level C:</b>
<b>Chapter 2, Lesson 2, Video A, SE page 31; KnowZone, SE pages 36-37</b>

Life Science
S3-4: 34 Students demonstrate their understanding of Energy Flow in an Ecosystem by:
<ul style="list-style-type: none"> <li>Identifying the source of energy for the survival of organisms.</li> </ul>
a. Energy derived from food is needed for all organisms (plants and animals) to stay alive and grow.
<b>Chapter 1, Lesson 1, Video A, SE page 3</b>
<b>Chapter 2, Lesson 2, Video B, SE page 32; Video C, SE page 33' Critical Thinking, SE page 35; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b>

Life Science
S3-4: 35 Students demonstrate their understanding of Food Webs in an Ecosystem by:
<ul style="list-style-type: none"> <li>Recognizing that, in a simple food chain, all animals' food begins with plants.</li> <li>Researching and designing a habitat and explaining how it meets the needs of the organisms that live there.</li> </ul>
a. Food for animals can be traced back to plants.
<b>Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b>

Life Science
S3-4: 35 Students demonstrate their understanding of Food Webs in an Ecosystem by:
<ul style="list-style-type: none"> <li>Recognizing that, in a simple food chain, all animals' food begins with plants.</li> <li>Researching and designing a habitat and explaining how it meets the needs of the organisms that live there.</li> </ul>
b. Organisms can survive best only in habitats in which their needs are met.
<b>Chapter 1, Lesson 1, Video C, SE page 5</b>
<b>Chapter 2, Lesson 1, Video B, SE page 26; Lesson 3, Video C, SE page 41; Process Skill, SE page 43</b>
<b>Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 2, Video C, SE page 57; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b>

Life Science
S3-4: 36 Students demonstrate their understanding of Equilibrium in an Ecosystem by:
<ul style="list-style-type: none"> <li>Explaining how one organism depends upon another organism to survive.</li> </ul>
a. Organisms interact with one another in various ways besides providing food (e.g., Many plants depend on animals for carrying their pollen to other plants for fertilizing their flowers).
<b>Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43; Lesson 3, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Process Skill, SE page 51</b>

Life Science
S3-4: 38 Students demonstrate their understanding of Classification of Organisms by:
<ul style="list-style-type: none"> <li>Describing and sorting plants and animals into groups based on structural similarities and differences (e.g., All pine, spruce and evergreen trees have similar leaf structure; Spiders have eight legs, and insects have six).</li> </ul>
a. The great variety of living things can be sorted into groups in many ways using various characteristics to decide which things belong to which group.
<b>Chapter 1, Lesson 1, Video B, SE page 4; Lesson 2, Video A, SE page 9; Video B, SE page 10; Process Skill, SE page 13; Lesson 3, Video A, SE page 17; Process Skill, SE page 21</b>

Life Science
S3-4: 39 Students demonstrate their understanding of Evolution/Natural Selection by:
<ul style="list-style-type: none"> <li>Identifying differences in characteristics of a certain type of organism (e.g., dogs with long hair r short hair; humans with blue or brown eyes).</li> </ul>
a. Organisms of the same kind differ in their individual characteristics (traits) (e.g., Even though all dogs are of the same species, they can have very different traits).
<b>Chapter 1, Lesson 2, Video B, SE page 10</b>

Human Body
S3-4:40 Students demonstrate their understanding of Human Heredity by:
<ul style="list-style-type: none"> <li>Identifying similarities that are inherited from a biological parent.</li> </ul>
a. Some similarities between children and parents such as eye color, are inherited.
<b>Chapter 1, Lesson 2, Video C, SE page 11; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b>

Human Body
S3-4:41 Students demonstrate their understanding of Human Body Systems by:
<ul style="list-style-type: none"> <li>Showing connections between external and internal body structures and how they help humans survive.</li> </ul>
a. There are external and internal structures that provide for the survival needs of human organisms. <ul style="list-style-type: none"> <li>Skin protects the body from harmful substances and other organisms and from drying out.</li> <li>The skeletal system provides shape and protection for the body’s organs.</li> <li>The brain gets/gives signals from/to all parts of the body “telling” the body what to do.</li> <li>From food, people obtain nutrients and other materials for body repair and growth. The un-digested parts of food are eliminated. Key structures are mouth, esophagus, stomach, intestine and anus.</li> <li>By breathing, people take in the oxygen that they need to live. Key structure is the lung.</li> </ul>
<b>See Level C:</b>
<b>Chapter 1, Lesson 3, Video B, SE page 16; Video C, SE page 17</b>

Human Body
S3-4:42 Students demonstrate their understanding of the Patterns of Human Health/Disease by:
<ul style="list-style-type: none"> <li>Explaining that tears, saliva, and skin, can protect the body from harmful germs.</li> </ul>
a. If germs are able to get inside a person’s body, they may keep it from working properly. Tears, saliva, and skin protect our bodies from germs.
<b>See Level A:</b>
<b>Chapter 3, Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59</b>

Universe, Earth, Environment
S3-4:44 Students demonstrate their understanding of Characteristics of the Solar System by:
<ul style="list-style-type: none"> <li>Creating a model of the planets and their correct order from the sun.</li> <li>Drawing or building and then explaining a model of the earth rotating on its axis in relation to the sun and moon (i.e., day and night).</li> </ul>
a. The earth is one of several planets that orbit the sun, and the moon orbits the earth.
<b>Chapter 6, Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121</b>

Universe, Earth, Environment
S3-4:44 Students demonstrate their understanding of Characteristics of the Solar System by:
<ul style="list-style-type: none"> <li>• Creating a model of the planets and their correct order from the sun.</li> <li>• Drawing or building and then explaining a model of the earth rotating on its axis in relation to the sun and moon (i.e., day and night).</li> </ul>
b. Like all planets and stars, the earth is approximately spherical in shape. The rotation of the earth on its axis every 24 hours produces the night and day cycle.
<b>Chapter 6, Lesson 1, Video B, SE page 114; Process Skill, SE pages 117</b>

Universe, Earth, Environment
S3-4:45 Students demonstrate their understanding of Processes and Change over Time within Systems of the Universe by:
<ul style="list-style-type: none"> <li>• Identifying similar star patterns/or groups from night photographs of the same location at different times of the years.</li> <li>• Comparing (similarities) between the sun and stars.</li> </ul>
a. Stars are like the sun, but so far away that they look like points of light. Some are smaller; some are larger than the sun.
<b>Chapter 6, Lesson 1, Video A, SE page 113</b>

Universe, Earth, Environment
S3-4:45 Students demonstrate their understanding of Processes and Change over Time within Systems of the Universe by:
<ul style="list-style-type: none"> <li>• Identifying similar star patterns/or groups from night photographs of the same location at different times of the years.</li> <li>• Comparing (similarities) between the sun and stars.</li> </ul>
b. The patterns of the stars stay the same, although they appear to move across the sky.
<b>See Level A: Chapter 6, Lesson 3, Video A, SE page 127</b>

Universe, Earth, Environment
S3-4:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing and identifying components of soils and rocks.</li> <li>• Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases).</li> <li>• Observing and describing the properties of rocks.</li> </ul>
a. Soil is made partly from rock, partly from plant remains, and also contains many living organisms.
<b>See Level A: Chapter 4, Lesson 2, Video C, SE page 77; Process Skill, SE page 79</b>
<b>See also Level C: Chapter 4, Lesson 3, Video C, SE page 85</b>

Universe, Earth, Environment
S3-4:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing and identifying components of soils and rocks.</li> <li>• Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases).</li> <li>• Observing and describing the properties of rocks.</li> </ul>
b. Earth materials are solid rocks, soils, water and the gases of the atmosphere.
<b>Chapter 4, Lesson 2, Video B, SE page 76; Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; KnowZone, SE pages 86-87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video A, SE page 97 Chapter 9, Lesson 2, Video A, SE page 191; Video B, SE page 192; Critical Thinking, SE page 195; Process Skill, SE page 195</b>

Universe, Earth, Environment
S3-4:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing and identifying components of soils and rocks.</li> <li>• Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases).</li> <li>• Observing and describing the properties of rocks.</li> </ul>
c. Rock is composed of different combinations of minerals. Large rocks can be broken down into small rocks.
<b>Chapter 4, Lesson 2, Video B, SE page 76; Video C, SE page 77; Process Skills, SE page 79; Lesson 3, Video A, SE page 81</b>

Universe, Earth, Environment
S3-4:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing and identifying components of soils and rocks.</li> <li>• Recognizing and identifying the four basic materials of the earth (i.e., rocks, soil, water, and gases).</li> <li>• Observing and describing the properties of rocks.</li> </ul>
d. Rocks have properties of color, texture, and hardness. Rocks can be classified by their physical properties.
<b>Chapter 4, Lesson 2, Video B, SE page 76; Video C, SE page 77; Writing in Science, SE page 79; Process Skill, SE page 79; Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b>

Universe, Earth, Environment
S3-4:47 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Building models that simulate deposits of sediments (e.g., a stream table).</li> <li>• Investigating local land forms and comparing them with models created in the classroom.</li> </ul>
a. Waves, wind, water and ice shape and reshape the earth's land surface by eroding rock and soil in some areas and depositing them in other areas.
<b>Chapter 4, Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; Critical Thinking, SE page 79</b>

Universe, Earth, Environment
S3-4:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing, recording and analyzing local weather data and making predictions based on that data.</li> <li>• Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled.</li> <li>• Explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
a. Weather changes from day to day and over the seasons. Weather can be described by measurable quantities (such as temperature, wind direction and speed, precipitation and air pressure).
<b>Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video B, SE page 98; Video C, SE page 99; Process Skill, SE page 101; Lesson 3, Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b>

Universe, Earth, Environment
S3-4:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing, recording and analyzing local weather data and making predictions based on that data.</li> <li>• Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled.</li> <li>• Explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
b. Air is a substance that surrounds us, takes up space and whose movement we feel as wind.
<b>Chapter 5, Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b>

Universe, Earth, Environment
S3-4:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing, recording and analyzing local weather data and making predictions based on that data.</li> <li>• Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled.</li> <li>• Explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
c. Liquid water is changed by heat from the sun to gas (vapor) and returns to a liquid or solid state when cooled to the freezing point.
<b>Chapter 5, Lesson 1, Video A, SE page 91 The Water Cycle, SE page 204</b>

Universe, Earth, Environment
S3-4:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Observing, recording and analyzing local weather data and making predictions based on that data.</li> <li>• Describing water as it changes into vapor in the air and reappears as a liquid when it is cooled.</li> <li>• Explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
d. Clouds and fog are made of small drops of water.
<b>Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Process Skill, SE page 95; Lesson 3, Video C, SE page 107</b>

Universe, Earth, Environment
S3-4:49 Students demonstrate their understanding of Processes and Change within Natural Resources by:
<ul style="list-style-type: none"> <li>• Observing and describing properties of living and nonliving resources.</li> <li>• Explaining how the properties of living and nonliving resources make them suitable for use by humans.</li> </ul>
a. The varied earth materials have different physical and chemical properties, which make them useful in different ways, for example, as building materials, as sources of fuel, for growing plants we use as food, or supporting animal life. Earth materials provide many of the resources that humans use.
<b>Chapter 4, Lesson 2, Video B, SE page 76; Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; KnowZone, SE pages 86-87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video A, SE page 97 Chapter 9, Lesson 2, Video A, SE page 191; Video B, SE page 192; Critical Thinking, SE page 195; Process Skill, SE page 195</b>

Universe, Earth, Environment
S3-4:49 Students demonstrate their understanding of Processes and Change within Natural Resources by:
<ul style="list-style-type: none"> <li>• Observing and describing properties of living and nonliving resources.</li> <li>• Explaining how the properties of living and nonliving resources make them suitable for use by humans.</li> </ul>
b. Earth materials have chemical and physical properties that make them useful as building materials, or for growing plants or for fuel.
<b>Chapter 4, Lesson 2, Video B, SE page 76; Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; KnowZone, SE pages 86-87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video A, SE page 97 Chapter 9, Lesson 2, Video A, SE page 191; Video B, SE page 192; Critical Thinking, SE page 195; Process Skill, SE page 195</b>

***SRA Snapshots Video Science™: Level C***  
**correlation to**  
**Vermont Grade Expectations for Science**  
**Grade 5**

*SRA Snapshots Video Science™* consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (**SE**) provides student friendly text that reinforces the concepts introduced in the video. The Teacher’s Resource Book (**TRB**) provides support activities in a blackline master format. The Teacher’s Guide (**TG**) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

**KEY:**

<b>Reference</b>	<b>Program Component</b>
<b>Video</b>	Video lessons on program DVDs
<b>SE</b>	Student Edition
<b>TRB</b>	Teacher’s Resource Book
<b>TG</b>	Teacher’s Guide

Scientific Questioning
S5-6:1 Students demonstrate their understanding of SCIENTIFIC QUESTIONING by:
<ul style="list-style-type: none"> <li>Distinguishing between observational, experimental, and research questions (e.g., Observational-How does a cricket chirp? Experimental-Does the amount of light affect how a cricket chirps? Research-Do all crickets chirp? Why do crickets chirp?).</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Scientific Questioning
S5-6:1 Students demonstrate their understanding of SCIENTIFIC QUESTIONING by:
<ul style="list-style-type: none"> <li>Identifying multiple variables that affect a system and using the variables to generate experimental questions that include cause and effect relationships.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; Lesson 3, Process Skill, SE page 19</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147</b> <b>Chapter 8, Lesson 2, Process Skill, SE page 167</b>

Predicting and Hypothesizing
S5-6:2 Students demonstrate their understanding of PREDICTING AND HYPOTHESIZING by:
<ul style="list-style-type: none"> <li>Using logical inferences derived from evidence to predict what may happen or be observed in the future.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Predicting and Hypothesizing
S5-6:2 Students demonstrate their understanding of PREDICTING AND HYPOTHESIZING by:
<ul style="list-style-type: none"> <li>Providing an explanation (hypothesis) that is reasonable in terms of available evidence.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S5-6:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>Writing a plan related to the question and prediction that includes: <ul style="list-style-type: none"> <li>a. A list of materials needed that specifies quantities (e.g., 250 ml water).</li> </ul> </li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S5-6:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question and prediction that includes:</li> </ul>
b. A procedure that lists significant steps sequentially and describes which variable will be manipulated or changed and which variables will remain the same (“Fair Test”).
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S5-6:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question and prediction that includes:</li> </ul>
c. An appropriate format for recording data.
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Designing Experiments
S5-6:3 Students demonstrate their understanding of EXPERIMENTAL DESIGN by:
<ul style="list-style-type: none"> <li>• Writing a plan related to the question and prediction that includes:</li> </ul>
d. A strategy for conducting multiple trials (“Fair Test”).
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Conducting Experiments
S5-6:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>• Choosing appropriate measurements for the task and measuring accurately.</li> </ul>
<b>Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16</b> <b>Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129</b> <b>Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169</b> <b>Chapter 9, Lesson 2 Process Skill, SE page 191</b>



Conducting Experiments
S5-6:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Collecting data and recording accurate and complete data from multiple trials.</li> </ul>
<b>Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16</b> <b>Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129</b> <b>Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169</b> <b>Chapter 9, Lesson 2 Process Skill, SE page 191</b>

Conducting Experiments
S5-6:4 Students demonstrate their ability to CONDUCT EXPERIMENTS by:
<ul style="list-style-type: none"> <li>Drawing scientifically: <ul style="list-style-type: none"> <li>a. selecting an appropriate perspective (e.g., cross section, top view, side view) and recording precise proportions.</li> </ul> </li> </ul>
<b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, Lesson 3, Process Skill, SE page 131</b> <b>Chapter 9, Lesson 1, Process Skill, SE page 183; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Determining an appropriate representation (line graph in addition to prior examples) to represent their findings accurately.</li> </ul>
<b>Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Selecting a scale that is appropriate for range of data to be plotted, label units, and presents data in an objective way.</li> </ul>
<b>Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Including clearly labeled keys and symbols, when necessary.</li> </ul>
<b>Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:5 Students demonstrate their ability to REPRESENT DATA by:
<ul style="list-style-type: none"> <li>Using correct scientific terminology to label representations.</li> </ul>
<b>Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:6 Students demonstrate their ability to ANALYZE DATA by:
<ul style="list-style-type: none"> <li>Identifying relationships of variables based upon evidence.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; Lesson 3, Process Skill, SE page 19</b> <b>Chapter 3, Lesson 3, Process Skill, SE page 65</b> <b>Chapter 7, Lesson 2, Process Skill, SE page 147</b> <b>Chapter 8, Lesson 2, Process Skill, SE page 167</b>

Representing Data and Analysis
S5-6:6 Students demonstrate their ability to ANALYZE DATA by:
<ul style="list-style-type: none"> <li>Questioning data that might not seem accurate or does not fit into the pattern of other findings.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Explaining data using correct scientific terminology.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Using experimental results to support or refute original hypothesis.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Considering all data when developing an explanation/conclusion.</li> </ul>
<b>Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Using additional resources (e.g., books, journals, databases, interviews, etc.) to strengthen an explanation.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, Lesson 1, SE page 29; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Identifying problems/flaws with the experimental design.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Representing Data and Analysis
S5-6:7 Students demonstrate their ability to EXPLAIN DATA by:
<ul style="list-style-type: none"> <li>Preparing a conclusion statement/summary.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Applying Results
S5-6:8 Students demonstrate their ability to APPLY RESULTS by:
<ul style="list-style-type: none"> <li>Explaining how experimental findings can be generalized to other situations.</li> </ul>
<b>Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b> <b>Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66</b> <b>Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84</b> <b>Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120</b> <b>Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b> <b>Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156</b> <b>Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Physical Science
S5-6:9 Students demonstrate their understanding of the Properties of Matter by:
<ul style="list-style-type: none"> <li>Investigating and explaining how the relative volume or mass of an object affects the density of the object.</li> </ul>
a. All substances have a unique density that depends on the volume (amount of space) that the substance is packed into.
<b>Chapter 7, Lesson 2, Video A, SE page 143</b>

Physical Science
S5-6:9 Students demonstrate their understanding of the Properties of Matter by:
<ul style="list-style-type: none"> <li>Investigating and explaining how the relative volume or mass of an object affects the density of the object.</li> </ul>
b. The relative densities of substances can be observed and described.
<b>Chapter 7, Lesson 2, Video A, SE page 143</b>

Physical Science
S5-6:13 Students demonstrate their understanding of the Properties of a Gas by:
<ul style="list-style-type: none"> <li>Measuring the mass of a gas (e.g., air in a basketball).</li> </ul>
a. Gas is a state of matter that has mass.
<b>Chapter 7, Lesson 1, Video A, SE page 136; Lesson 2, Video B, SE page 144</b>

Physical Science
S5-6:14 Students demonstrate their understanding of Physical Change by:
<ul style="list-style-type: none"> <li>Predicting the effect of heating and cooling on the physical state and the mass of a substance.</li> </ul>
a. Energy is required to transform the physical state of a substance from solid to liquid to gas, while conserving mass. Physical changes are reversible.
<b>Chapter 7, Lesson 1, Video B, SE page 136; Video C, SE page 137; Process Skill, SE page 139; Lesson 2, Video C, SE page 145; Critical Thinking, SE page 147</b>
<b>Chapter 8, Lesson 2, Video C, SE page 165</b>

Physical Science
S5-6:15 Students demonstrate their understanding of Chemical Change by:
<ul style="list-style-type: none"> <li>Observing evidence of simple chemical change to identify that new substances are formed when a chemical reaction has occurred (e.g., rusted nail, vinegar combined with baking soda).</li> </ul>
a. Simple chemical reactions will produce new substances that might be indicated by a different state of matter, a color change, or a temperature change of the substance.
<b>Chapter 7, Lesson 2, Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; Critical Thinking, SE page 153; Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138</b>

Physical Science
S5-6:19 Students demonstrate their understanding of Motion by:
<ul style="list-style-type: none"> <li>Measuring and calculating speed (the distance an object moves over a measured amount of time).</li> </ul>
a. Speed indicates the rate at which an object is traveling.
<b>Chapter 9, KnowZone, SE pages 184-185; Lesson 2, Video B, SE page 188; Critical Thinking, SE page 191; Process Skill, SE page 191</b>

Physical Science
S5-6:19 Students demonstrate their understanding of Motion by:
<ul style="list-style-type: none"> <li>Measuring and calculating speed (the distance an object moves over a measured amount of time).</li> </ul>
b. Speed is a relationship between the distance an object travels and time elapsed.
<b>Chapter 9, KnowZone, SE pages 184-185; Lesson 2, Video B, SE page 188; Critical Thinking, SE page 191; Process Skill, SE page 191</b>

Physical Science
S5-6:20 Students demonstrate their understanding of Motion by:
<ul style="list-style-type: none"> <li>Investigating and identifying evidence of an object's inertia and explaining their observations in terms of the object's tendency to resist a change in motion.</li> </ul>
a. Inertia is the tendency of an object that depends on the object's mass. The inertia (mass) of an object resists change in the object's motion (stationary objects remain stationary; moving objects continue moving; Newton's First Law).
<b>Chapter 9, Lesson 3, Video A, SE page 193; Critical Thinking, SE page 197</b>

Physical Science
S5-6:21 Students demonstrate their understanding of Force by:
<ul style="list-style-type: none"> <li>Investigating variables that change an object's speed, direction, or both, and identifying and describing the forces that cause the change in motion.</li> </ul>
a. A force applied to a moving object will change the object's speed, direction, or both.
<b>Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Critical Thinking, SE page 183; Process Skill, SE page 183; Lesson 3, video A, SE page 193; Video B, SE page 194; Video C, SE page 195; Critical Thinking, SE page 197; Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174</b>

Physical Science
S5-6:21 Students demonstrate their understanding of Force by:
<ul style="list-style-type: none"> <li>Investigating variables that change an object's speed, direction, or both, and identifying and describing the forces that cause the change in motion.</li> </ul>
b. Friction is a force that often opposes motion.
<b>Chapter 9, Lesson 1, Video C, SE page 181</b>

Physical Science
S5-6:21 Students demonstrate their understanding of Force by:
<ul style="list-style-type: none"> <li>Investigating variables that change an object's speed, direction, or both, and identifying and describing the forces that cause the change in motion.</li> </ul>
c. Gravity and magnetism are examples of long-range forces that do not require direct contact of the interacting objects.
<b>Chapter 6, Lesson 1, Video B, SE page 114; Lesson 2, Video B, SE page 122</b>
<b>Chapter 9, Lesson 1, Video B, SE page 180</b>

Physical Science
S5-6:22 Students demonstrate their understanding of Gravitational Force by:
<ul style="list-style-type: none"> <li>Predicting the effect of gravitational forces between pairs of objects (i.e., earth and objects on the surface, earth and moon, earth and sun).</li> </ul>
a. Gravity is the force that holds objects to the earth's surface, keeps planets in orbit around the sun and governs the rest of the motion in the solar system.
<b>Chapter 6, Lesson 1, Video B, SE page 114</b>
<b>Chapter 9, Lesson 1, Video B, SE page 180</b>

Physical Science
S5-6:22 Students demonstrate their understanding of Gravitational Force by:
<ul style="list-style-type: none"> <li>Predicting the effect of gravitational forces between pairs of objects (i.e., earth and objects on the surface, earth and moon, earth and sun).</li> </ul>
b. The force of gravity pulls toward the center of mass of an object.
<b>Chapter 6, Lesson 1, Video B, SE page 114</b>
<b>Chapter 9, Lesson 1, Video B, SE page 180</b>

Physical Science
S5-6:23 Students demonstrate their understanding of Heat Energy by:
<ul style="list-style-type: none"> <li>Identifying real-world applications where heat energy is transferred and by showing the direction that the heat energy flows.</li> </ul>
a. Heat energy only flows from high temperature to lower temperature in order to reach equilibrium (same temperature).
<b>Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Critical Thinking, SE page 167; Process Skill, SE page 167</b>

Physical Science
S5-6:23 Students demonstrate their understanding of Heat Energy by:
<ul style="list-style-type: none"> <li>Identifying real-world applications where heat energy is transferred and by showing the direction that the heat energy flows.</li> </ul>
b. Heat can move from one object to another by conduction.
<b>Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Critical Thinking, SE page 167; Process Skill, SE page 167</b>

Physical Science
S5-6:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Investigating charged objects (static electricity) and describing their observations in terms of behavior of charges and equilibrium.</li> </ul>
a. Unbalanced charges produce a potential for a flow of electricity (Static).
<b>See Level B: Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Critical Thinking, SE page 183</b>

Physical Science
S5-6:24 Students demonstrate their understanding of Electrical Energy by:
<ul style="list-style-type: none"> <li>Investigating charged objects (static electricity) and describing their observations in terms of behavior of charges and equilibrium.</li> </ul>
b. Unbalanced charges will more toward equilibrium because like charges repel and opposite charges attract.
<b>See Level B: Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Critical Thinking, SE page 183</b>

Physical Science
S5-6:25 Students demonstrate their understanding of Magnetism by:
<ul style="list-style-type: none"> <li>Identifying real-world objects that demonstrate and utilize a magnetic force field acting over a distance.</li> <li>Distinguishing between objects affected by magnetic force and objects affected by other non-contact forces.</li> </ul>
a. Magnetism is a force field that acts over a distance.
<b>See Level B: Chapter 9, Lesson 2, Video A, SE page 185</b>

Physical Science
S5-6:26 Students demonstrate their understanding of Electromagnetic Forces by:
<ul style="list-style-type: none"> <li>Investigating devices that demonstrate the magnetic effects of electricity and the electric effect of moving magnets.</li> <li>Identifying relationship between the device and the magnetic or electrical effect it produces.</li> </ul>
a. Moving electrical charges (electricity) produce magnetic force (magnetism) (i.e., electromagnet, motor).
<b>Level C: Chapter 8, Lesson 3, video B, SE page 172</b>
<b>See also Level B: Chapter 9, Lesson 2, Video B, SE page 186; Video C, SE page 187; Critical Thinking, SE page 189; Process Skill, SE page 189</b>

Physical Science
S5-6:26 Students demonstrate their understanding of Electromagnetic Forces by:
<ul style="list-style-type: none"> <li>Investigating devices that demonstrate the magnetic effects of electricity and the electric effect of moving magnets.</li> <li>Identifying relationship between the device and the magnetic or electrical effect it produces.</li> </ul>
b. Moving magnets produce electricity (e.g., generator).
<b>Level C:</b>
<b>Chapter 8, Lesson 3, video B, SE page 172</b>
<b>See also Level B:</b>
<b>Chapter 9, Lesson 2, Video B, SE page 186; Video C, SE page 187; Process Skill, SE page 189</b>

Physical Science
S5-6:28 Students demonstrate their understanding of Light Energy by:
<ul style="list-style-type: none"> <li>Designing demonstrations that represent the characteristics of light energy transfer.</li> </ul>
a. Light travels from an energy source (such as the sun) in straight lines.
<b>See Level B:</b>
<b>Chapter 8, Lesson 2, Video B, SE page 164</b>

Physical Science
S5-6:28 Students demonstrate their understanding of Light Energy by:
<ul style="list-style-type: none"> <li>Designing demonstrations that represent the characteristics of light energy transfer.</li> </ul>
b. When light hits an object, it is absorbed, reflected, transmitted or some combination.
<b>See Level B:</b>
<b>Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Critical Thinking, SE page 167; Process Skill, SE page 167; KnowZone, SE pages 168-169</b>

Physical Science
S5-6:28 Students demonstrate their understanding of Light Energy by:
<ul style="list-style-type: none"> <li>Designing demonstrations that represent the characteristics of light energy transfer.</li> </ul>
c. Objects can be seen only when light waves are emitted from or reflected off the object and enter into the eye.
<b>See Level B:</b>
<b>Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165</b>

Physical Science
S5-6:29 Students demonstrate their understanding of Sound Energy by:
<ul style="list-style-type: none"> <li>Generating a sound and identifying the path of vibration from the source to the ear.</li> </ul>
a. Sound is produced by vibrations in materials that set up wavelike disturbances that spread away from the source.
<b>Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Process Skill, SE page 167</b>



Life Science
S5-6: 30 Students demonstrate their understanding of Structure and Function-Survival Requirements by:
<ul style="list-style-type: none"> <li>• Explaining that the cell, as the basic unit of life, has the same survival needs as the organism.</li> <li>• Identifying and drawing individual cells seen through a microscope and recognizing that most cells are microscopic.</li> <li>• Diagramming the exchange of materials through a cell membrane.</li> </ul>
a. All organisms are made of one or more cells. Cells are the basic unit of structure and function in an organism. <ul style="list-style-type: none"> <li>○ All cells carry out the same basic functions to survive</li> <li>○ Obtain food (energy) and materials for growth and repair</li> <li>○ Eliminate (recycle) waste</li> <li>○ Reproduce</li> <li>○ Provide for defense.</li> </ul>
<b>Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Critical Thinking, SE page 7; Lesson 2, Video A, SE page 9; Lesson 3, Video A, SE page 15; Video B, SE page 16; Critical Thinking, SE page 19; Lesson 3, Video A, SE page 15; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b>

Life Science
S5-6: 30 Students demonstrate their understanding of Structure and Function-Survival Requirements by:
<ul style="list-style-type: none"> <li>• Explaining that the cell, as the basic unit of life, has the same survival needs as the organism.</li> <li>• Identifying and drawing individual cells seen through a microscope and recognizing that most cells are microscopic.</li> <li>• Diagramming the exchange of materials through a cell membrane.</li> </ul>
b. All cells are enclosed in a membrane that allows materials to pass into and out of the cell.
<b>Chapter 1, Lesson 2, Video A, SE page 9; Lesson 3, Process Skill, SE page 19; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b>

Life Science
S5-6: 30 Students demonstrate their understanding of Structure and Function-Survival Requirements by:
<ul style="list-style-type: none"> <li>• Explaining that the cell, as the basic unit of life, has the same survival needs as the organism.</li> <li>• Identifying and drawing individual cells seen through a microscope and recognizing that most cells are microscopic.</li> <li>• Diagramming the exchange of materials through a cell membrane.</li> </ul>
c. Most cells are microscopic.
<b>Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Chapter 1, KnowZone, SE pages 20-21</b>

Life Science
S5-6: 32 Students demonstrate their understanding of how Differentiation by:
<ul style="list-style-type: none"> <li>• Explaining the relationship between cell, tissue, organ, and system.</li> <li>• Observing plant or animal tissue and explaining how “specialized” cells help to support the specialized function of tissue (e.g., muscle cells form muscle tissue, skin cells for skin tissue, nerve cells form brain tissue).</li> </ul>
a. In addition to basic functions, cells carry out “specialized” functions that support the survival of groups of cells and the organism.
<b>Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Critical Thinking, SE page 13; Process Skill, SE page 13; Lesson 3, Video A, SE page 15; Video B, SE page 16; Video C, SE page 17</b>

Life Science
S5-6: 32 Students demonstrate their understanding of how Differentiation by:
<ul style="list-style-type: none"> <li>• Explaining the relationship between cell, tissue, organ, and system.</li> <li>• Observing plant or animal tissue and explaining how “specialized” cells help to support the specialized function of tissue (e.g., muscle cells form muscle tissue, skin cells for skin tissue, nerve cells form brain tissue).</li> </ul>
b. Groups of similar cells connect and work together to form tissue, groups of tissue form organs, and groups of organs form systems.
<b>Chapter 1, Lesson 1, Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Critical Thinking, SE page 13; Lesson 3, Video A, SE page 15; Video B, SE page 16; Video C, SE page 17</b>

Life Science
S5-6: 33 Students demonstrate their understanding of how Energy Flow within Cells Supports an Organism’s Survival by:
<ul style="list-style-type: none"> <li>Demonstrating through drawings, stories or models that cells take in food and oxygen to produce energy and send out waste materials.</li> </ul>
a. In order to obtain energy for all the functions of survival, individual cells take in food and oxygen to produce energy and send out waste materials.
<b>Chapter 1, Lesson 1, Video B, SE page 4; Video C, SE page 5; Critical Thinking, SE page 7; Lesson 2, Video A, SE page 9; Lesson 3, Video A, SE page 15; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30</b>

Life Science
S5-6: 34 Students demonstrate their understanding of Energy Flow in an Ecosystem by:
<ul style="list-style-type: none"> <li>Developing a model that shows how the flow of energy from the sun is transferred to organisms as food in order to sustain life.</li> </ul>
a. Energy within an ecosystem originates from the sun. Plants use energy from the sun, carbon dioxide, and water to make energy rich food and oxygen. Plants are producers.
<b>Level C:</b> <b>Chapter 1, Lesson 2, Video A, SE page 9</b> <b>Chapter 7, Lesson 3, Video A, SE page 149</b>
<b>See also Level B:</b> <b>Chapter 2, Lesson 2, Video A, SE page 31; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b>

Life Science
S5-6: 34 Students demonstrate their understanding of Energy Flow in an Ecosystem by:
<ul style="list-style-type: none"> <li>Developing a model that shows how the flow of energy from the sun is transferred to organisms as food in order to sustain life.</li> </ul>
b. Animals eat food that plants make combined with oxygen to produce energy, carbon dioxide, and water. Animals are consumers.
<b>Level C:</b> <b>Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Process Skill, SE page 51</b> <b>Food Web, SE page 203</b> <b>Energy Pyramid, SE page 203</b>
<b>See also Level B:</b> <b>Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Process Skill, SE page 13; Lesson 3, Video A, SE page 17; Process Skill, SE page 21</b> <b>Food Web, SE page 203</b> <b>Energy Pyramid, SE page 203</b>

Life Science
S5-6: 35 Students demonstrate their understanding of Food Webs in an Ecosystem by:
<ul style="list-style-type: none"> <li>Developing a model for a food web of a local aquatic and local terrestrial environment.</li> </ul>
a. Food webs model the interdependent relationships that organisms engage in as they acquire their food and energy needs. Aquatic food webs (fresh water and marine) are supported by microscopic ocean plants. Land food webs are supported by land plants.
<b>Level C:</b> <b>Chapter 3, Lesson 1, Video C, SE page 49</b> <b>Food Web, SE page 203</b> <b>Energy Pyramid, SE page 203</b>
<b>See also Level B:</b> <b>Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35;</b> <b>Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48</b> <b>Food Web, SE page 203</b> <b>Energy Pyramid, SE page 203</b>

Life Science
S5-6: 36 Students demonstrate their understanding of Equilibrium in an Ecosystem by:
<ul style="list-style-type: none"> <li>Experimenting with a closed system, describing how an environmental change affects the system (e.g., bottle biology).</li> </ul>
a. The number of organisms an ecosystem can support depends on the kinds of organisms present and the availability of biotic and abiotic resources (i.e., quantity of light and water, range of temperatures, and soil composition).
<b>Level C:</b> <b>Chapter 3, Lesson 1, Video B, SE page 48; Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 3, Video A, SE page 61; Video B, SE page 62; Critical Thinking, SE page 65</b>
<b>See also Level A:</b> <b>Chapter 2, Lesson 2, Critical Thinking, SE page 35; Process Skill, SE page 35; Lesson 3, Video B, SE page 62</b>
<b>See also Level B:</b> <b>Chapter 2, Lesson 1, Video C, SE page 26; Critical Thinking, SE page 29</b> <b>Chapter 3, Lesson 3, Video B, SE page 62</b>

Life Science
S5-6: 37 Students demonstrate their understanding of Recycling in an Ecosystem by:
<ul style="list-style-type: none"> <li>Identifying the recycling role of decomposers in a variety of situations.</li> </ul>
a. Decomposers, primarily bacteria and fungi, are consumers that use waste material and dead organisms for food.
<b>Level C:</b> <b>Chapter 3, Lesson 1, Video C, SE page 49</b>
<b>See also Level B:</b> <b>Chapter 2, Lesson 2, Video C, SE page 33; Process Skill, SE page 35</b>

Life Science
S5-6: 39 Students demonstrate their understanding of Evolution/Natural Selection by:
<ul style="list-style-type: none"> <li>Explaining through engaging in simulations, how a variation in a characteristic (trait) enables an organism to survive in a changing environment.</li> </ul>
a. When the environment changes some plants and animals with advantageous traits are able to survive; others with less-advantageous traits, either move to new locations or die.
<b>Chapter 2, Lesson 1, Video C, SE page 27; KnowZone, SE pages 36-37</b> <b>Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62</b>

Human Body
S5-6:40 Students demonstrate their understanding of Human Heredity by:
<ul style="list-style-type: none"> <li>Identifying that an offspring's traits are determined by combining the sex cells (female egg and male sperm) of the parents.</li> </ul>
a. Organisms can reproduce sexually when a female egg cell is fertilized by a male sperm cell to produce an offspring that has the traits of both parents.
<b>Chapter 2, Lesson 2, Video B, SE page 32</b>

Human Body
S5-6:41 Students demonstrate their understanding of Human Body Systems by:
<ul style="list-style-type: none"> <li>Investigating circumstances that affect more than one body system and explaining the interconnected relationship between the body systems (e.g., the effects of exercise on several independent body systems, such as respiration, circulatory, digestive, nervous, skeletal systems).</li> </ul>
<p>a. The digestive, respiratory and circulatory systems are connected.</p> <ul style="list-style-type: none"> <li>The digestive system processes the food that cells need.</li> <li>The excretory system disposes of cellular waste and the intestinal tract removes solid waste.</li> <li>The respiratory system exchanges oxygen and carbon dioxide.</li> <li>The circulatory system moves all these substances to and from the cells.</li> </ul>
<b>Chapter 1, Lesson 3, Video B, SE page 16; Video C, SE page 17</b>

Human Body
S5-6:41 Students demonstrate their understanding of Human Body Systems by:
<ul style="list-style-type: none"> <li>Investigating circumstances that affect more than one body system and explaining the interconnected relationship between the body systems (e.g., the effects of exercise on several independent body systems, such as respiration, circulatory, digestive, nervous, skeletal systems).</li> </ul>
<p>b. A change in one system can have an effect on other systems (e.g., exercise changing heart rate and breathing rate).</p>
<b>Chapter 1, Lesson 3, Video B, SE page 16; Video C, SE page 17</b>

Human Body
S5-6:42 Students demonstrate their understanding of the Patterns of Human Health/Disease by:
<ul style="list-style-type: none"> <li>Connecting the specialized functions of white blood cells to their location in the circulatory system.</li> </ul>
<p>a. White blood cells engulf invading microbes or produce antibodies that attack them.</p>
<b>Chapter 1, KnowZone, SE pages 20-21</b>

Human Body
S5-6:43 Students demonstrate their understanding of the Patterns of Human Development by:
<ul style="list-style-type: none"> <li>Drawing/diagramming/modeling the life span of humans in a timeline highlighting major points in the cycle (e.g., one cells grows into a many-celled embryo, composed of different types of cells—grows into a fetus—baby is born—grows into a toddler—grows into a child—grows into a teenager—grows into an adult).</li> <li>Explaining what occurs in the processes of fertilization and early embryo development (e.g., sperm + egg combine to produce a new individual).</li> </ul>
<p>a. Following fertilization, cell division produces a small cluster of cells that then differentiate by appearance and function to form the basic tissues and organs of an embryo, which eventually grows into an adult organism.</p>
<b>This concept is not covered at this level.</b>

Universe, Earth, Environment
S5-6:44 Students demonstrate their understanding of Characteristics of the Solar System by:
<ul style="list-style-type: none"> <li>Creating a diagram or model of the orbit of the earth around the sun and the moon around the earth.</li> </ul>
<p>a. The earth orbits the sun in a near circular path that takes a year to complete.</p>
<b>Level C:</b>
<b>Chapter 6, Lesson 1, Critical Thinking, SE page 117; Lesson 2, Video A, SE page 121</b>
<b>See also Level B:</b>
<b>Chapter 6, Lesson 1, Video B, SE page 114; Process Skill, SE page 117</b>

Universe, Earth, Environment
S5-6:44 Students demonstrate their understanding of Characteristics of the Solar System by:
<ul style="list-style-type: none"> <li>• Creating a diagram or model of the orbit of the earth around the sun and the moon around the earth.</li> </ul>
b. The moon's orbit around the earth once in about 28 days changes the portion of the moon visible to us, as a result of the sun's reflected light (phases of the moon).
<b>Chapter 6, Lesson 2, Video C, SE page 123</b>

Universe, Earth, Environment
S5-6:45 Students demonstrate their understanding of Processes and Change over Time within Systems of the Universe by:
<ul style="list-style-type: none"> <li>• Explaining (after viewing a picture or illustration with sun/moon showing true relative size) why the sun and moon appear to be the same size when seen from the earth.</li> <li>• Relating this phenomenon to lunar and solar eclipses.</li> </ul>
a. From earth the moon and sun appear to be the same size, because the moon is so much closer to the earth than the sun.
<b>Chapter 6, Lesson 1, Video A, SE page 113; Lesson 2, Video B, SE page 122</b>

Universe, Earth, Environment
S5-6:45 Students demonstrate their understanding of Processes and Change over Time within Systems of the Universe by:
<ul style="list-style-type: none"> <li>• Explaining (after viewing a picture or illustration with sun/moon showing true relative size) why the sun and moon appear to be the same size when seen from the earth.</li> <li>• Relating this phenomenon to lunar and solar eclipses.</li> </ul>
b. Telescopes magnify the appearance of some very distant objects in the sky, including the moon and the planets. The number of stars that can be seen through telescopes is dramatically greater than can be seen by the unaided eye.
<b>Level C:</b>
<b>Chapter 6, KnowZone, SE pages 118-119; Lesson 3, Video B, SE page 128</b>
<b>See also Level B:</b>
<b>Chapter 6, Lesson 3, Video A, SE page 125; Critical Thinking, SE page 129</b>
<b>Chapter 8, Lesson 2, Video C, SE page 165</b>

Universe, Earth, Environment
S5-6:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Explaining the process of how rocks are formed (Rock Cycle).</li> <li>• Creating a model of the earth's structure explaining the nature of the layers.</li> </ul>
a. Rocks come from magma or lava, as well as from sediments that build up in layers. As all rocks from earth's surface weather, form sediments and become buried and heated (through pressure of direct heat), they may crystallize into new rock. Eventually those new rocks may be brought to the surface by forces that drive plate motions (The Rock Cycle).
<b>Chapter 4, Lesson 3, video A, SE page 83</b>

Universe, Earth, Environment
S5-6:46 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>• Explaining the process of how rocks are formed (Rock Cycle).</li> <li>• Creating a model of the earth's structure explaining the nature of the layers.</li> </ul>
b. The earth is layered with a rigid shell, a hot mantle, and a dense metallic core.
<b>Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70</b>
<b>Earth's Layers, SE page 204</b>

Universe, Earth, Environment
S5-6:47 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Identifying examples of geologic changes on the earth’s surface, where possible in the local environment (include slow and fast changes).</li> <li>Plotting locations of volcanoes and earthquakes and explaining the relationship between location and plate movements.</li> <li>Explaining the processes that occur when rocks are changed from one form to another.</li> <li>Determining the relative age of fossils within sedimentary rocks from their location in the strata (i.e., which fossils within a sequence are older).</li> </ul>
a. Some changes on the earth can be very slow, such as weathering and mountain-building, and come can be very fast, such as volcanoes and earthquakes.
<b>Chapter 4, Lesson 3, Video A, SE page 83; Video B, SE page 84; Critical Thinking, SE page 87; Writing in Science, SE page 87; Process Skill, SE page 87</b>

Universe, Earth, Environment
S5-6:47 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Identifying examples of geologic changes on the earth’s surface, where possible in the local environment (include slow and fast changes).</li> <li>Plotting locations of volcanoes and earthquakes and explaining the relationship between location and plate movements.</li> <li>Explaining the processes that occur when rocks are changed from one form to another.</li> <li>Determining the relative age of fossils within sedimentary rocks from their location in the strata (i.e., which fossils within a sequence are older).</li> </ul>
b. Earth’s rigid shell is composed of large plates that move at rates of centimeters a year. Major geologic events, such as earthquakes, volcanic eruptions and mountain building, result from these plate motions.
<b>Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70; Video C, SE page 71; Critical Thinking, SE page 73; Process Skill, SE page 73; KnowZone, SE pages 74-75</b>

Universe, Earth, Environment
S5-6:47 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Identifying examples of geologic changes on the earth’s surface, where possible in the local environment (include slow and fast changes).</li> <li>Plotting locations of volcanoes and earthquakes and explaining the relationship between location and plate movements.</li> <li>Explaining the processes that occur when rocks are changed from one form to another.</li> <li>Determining the relative age of fossils within sedimentary rocks from their location in the strata (i.e., which fossils within a sequence are older).</li> </ul>
c. Thousands of layers of sedimentary rock confirm the long history of the changing surface of the earth and the changing life forms whose remains are found in successive layers (land forms—coastlines, mountains, rivers, canyons, deltas).
<b>Chapter 4, Lesson 3, Video A, SE page 83; Critical Thinking, SE page 87</b>

Universe, Earth, Environment
S5-6:48 Students demonstrate their understanding of Processes and Change over Time within Earth Systems by:
<ul style="list-style-type: none"> <li>Diagramming, labeling, and explaining the process of the water cycle (e.g., evaporation, precipitation, run-off).</li> </ul>
a. The cycling of water in and out of the atmosphere plays an important role in determining climatic patterns. Water evaporates from the surface of the earth, rises and cools, and falls again to the surface as rain. The water falling on land collects in rivers and lakes, soil and porous layers of rock and much of it flows back into the ocean.
<b>Chapter 4, Lesson 1, Video A, SE page 69 Chapter 5, Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; Critical Thinking, SE page 101; Process Skill, SE page 101 The Water Cycle, SE page 204</b>

Universe, Earth, Environment
S5-6:49 Students demonstrate their understanding of Processes and Change within Natural Resources by:
<ul style="list-style-type: none"> <li>• Identifying examples of good and poor management of natural resources.</li> <li>• Explaining how overpopulation of living things can degrade an environment due to increased use of resources.</li> </ul>
a. Responsible management of the earth's resources (air, soil, water, trees) is beneficial for the environment and for human use.
<b>Chapter 2, Lesson 1, Video C, SE page 27</b> <b>Chapter 3, KnowZone, SE pages 58-59; Lesson 3, Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 654, Lesson 3, Video C, SE page 85; Critical Thinking, SE page 87apter 3,</b> <b>Chapter 5, Lesson 1, Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102</b> <b>Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173; Critical Thinking, SE page 175</b>