



SOUTH DAKOTA
Science Standards Sixth Grade
Science Level Red © 2005

SIXTH GRADE STANDARDS	REFERENCES
Goal 1 – NATURE OF SCIENCE	
Students will explore, evaluate, and communicate personal and scientific investigations to understand the nature of science.	
Indicator 1: Understand the nature and origin of scientific knowledge.	
✓ Recognize scientific knowledge as not merely a set of static facts, but is dynamic and affords the best current explanations. Examples: flat Earth, spontaneous generation	SE: pages 12-18 (Chapter 1, Section 2) page 26 (Chapter 1, Section 3) pages 27-30 (Chapter 1, Section 4) pages 99-105 (Chapter 4, Section 1) *Lab page 31 (Chapter 1, Section 4) Lab pages 32-33 (Chapter 1, Section 4) Science and History page 90 (Chapter 3, Section 2) Integrate Chemistry page 290 (Chapter 10, Section 1) Oops! Accidents in Science page 552 (Chapter 18, Section 4) TWE: TPK page 12 (Chapter 1, Section 2) IL page 17 (Chapter 1, Section 2) DI page 100 (Chapter 4, Section 2) IM page 107 (Chapter 4, Section 2) ACT page 398 (Chapter 13, Section 4) D page 604 (Chapter 20, Section 2) Chapter 4 (Atoms, Elements, and the Periodic Table) Fast File page 26 Chapter 15 (The Solar System and Beyond) Fast File page 31 Chapter 18 (Vertebrate Animals) Fast File page 31 Chapter 20 (The Role of Genes in Inheritance) Fast File pages 27-28 Critical Thinking/Problem Solving (Physical Science) pages 4, 7 Critical Thinking/Problem Solving (Earth Science) page 12

* available as a video lab

SIXTH GRADE STANDARDS	REFERENCES
<p>√ Identify important contributions to the advancement of science from people of differing cultures, genders, and ethnicity. Example: George W. Carver-peanuts, Gregor Mendel-genetics, Sylvia Earle-oceanography, Darwin-evolution</p>	<p>SE: page 342 (Chapter 12, Section 1) pages 424-425 (Chapter 14, Section 3) page 476 (Chapter 16, Section 1) <i>Science and History</i> page 34 (Chapter 1, Section 4) <i>National Geographic</i> page 108 (Chapter 4, Section 2) <i>Science and History</i> page 120 (Chapter 4, Section 3) <i>Science Online</i> page 140 (Chapter 5, Section 2) <i>Integrate History</i> page 198 (Chapter 7, Section 1) <i>Integrate Career</i> page 442 (Chapter 15, Section 1) <i>Science and History</i> page 582 (Chapter 19, Section 2)</p> <p>TWE: HS page 120 (Chapter 4, Section 3) CD page 145 (Chapter 5, Section 3) CD page 292 (Chapter 10, Section 1) CD page 416 (Chapter 14, Section 2) DI page 452 (Chapter 15, Section 2) CD page 479 (Chapter 16, Section 1) CD page 516 (Chapter 17, Section 4)</p> <p><i>Chapter 1 (The Nature of Science) Fast File</i> page 34</p> <p><i>Chapter 5 (Motion, Forces, and Simple Machines) Fast File</i> page 9</p> <p><i>Chapter 12 (The Atmosphere in Motion) Fast File</i> page 32</p> <p><i>Critical Thinking/Problem Solving (Earth Science)</i> page 23</p>

SIXTH GRADE STANDARDS	REFERENCES
Indicator 2: Apply the skills necessary to conduct scientific investigations.	
<p>1. (Ap) Pose questions that can be explored through scientific investigations. Example: How does light affect plant growth?</p>	<p>SE: pages 12-18 (Chapter 1, Section 2) <i>Design Your Own Lab</i> pages 60-61 (Chapter 2, Section 3) <i>Design Your Own Lab</i> pages 244-245 (Chapter 8, Section 3) <i>Design Your Own Lab</i> pages 332-333 (Chapter 11, Section 2) <i>Design Your Own Lab</i> pages 364-365 (Chapter 12, Section 3) <i>Model and Invent Lab</i> pages 306-307 (Chapter 13, Section 4) <i>Design Your Own Lab</i> pages 488-489 (Chapter 16, Section 2) <i>Design Your Own Lab</i> pages 580-581 (Chapter 19, Section 2)</p> <p>TWE: A page 5 (Chapter 1) DI page 328 (Chapter 11, Section 2) AIL page 333 (Chapter 11, Section 2) AIL page 580 (Chapter 19, Section 2) A page 623 (Chapter 21, Section 1) AIL page 636 (Chapter 21, Section 3) A page 637 (Chapter 21, Section 3) <i>Chapter 1 (The Nature of Science) Fast File</i> pages 11-14 <i>Critical Thinking/Problem Solving (Physical Science)</i> page 1 <i>Critical Thinking/Problem Solving (Life Science)</i> page 13 <i>Performance Assessment in the Science Classroom</i> pages 35-68 <i>Probeware Lab Manual</i> pages 16-88 <i>Science Inquiry Lab Manual</i> pages 1-40</p>

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> √ Conduct systematic scientific investigations. 	<p>SE: pages 12-18 (Chapter 1, Section 2) <i>Design Your Own Lab</i> pages 60-61 (Chapter 2, Section 3) <i>Design Your Own Lab</i> pages 244-245 (Chapter 8, Section 3) <i>Design Your Own Lab</i> pages 332-333 (Chapter 11, Section 2) <i>Design Your Own Lab</i> pages 364-365 (Chapter 12, Section 3) <i>Model and Invent Lab</i> pages 306-307 (Chapter 13, Section 4) <i>Design Your Own Lab</i> pages 488-489 (Chapter 16, Section 2) <i>Design Your Own Lab</i> pages 580-581 (Chapter 19, Section 2)</p> <p>TWE: A page 5 (Chapter 1) DI page 328 (Chapter 11, Section 2) AIL page 333 (Chapter 11, Section 2) AIL page 580 (Chapter 19, Section 2) A page 623 (Chapter 21, Section 1) AIL page 636 (Chapter 21, Section 3) A page 637 (Chapter 21, Section 3) <i>Chapter 1 (The Nature of Science) Fast File</i> pages 11-14, 53-54 <i>Chapter 18 (Vertebrate Animals) Fast File</i> page 30 <i>Performance Assessment in the Science Classroom</i> pages 35-68 <i>Probeware Lab Manual</i> pages 16-88 <i>Science Inquiry Lab Manual</i> pages 1-40 <i>Virtual Labs CD-ROM</i> (controlled experiment lab)</p>
<ul style="list-style-type: none"> ● Use appropriate supportive technologies. 	<p>SE: <i>Lab</i> page 363 (Chapter 12, Section 3) <i>Design Your Own Lab</i> pages 364-365 (Chapter 12, Section 3) <i>Lab</i> page 414 (Chapter 14, Section 1) <i>Use the Internet Lab</i> pages 430-431 (Chapter 14, Section 3) <i>Lab</i> page 482 (Chapter 16, Section 1) <i>Use the Internet Lab</i> pages 606-607 (Chapter 20, Section 2)</p> <p>TWE: MM page 206 (Chapter 7, Section 2) QD page 234 (Chapter 8, Section 2) AIL page 606 (Chapter 20, Section 2) <i>Chapter 14 (Exploring Space) Fast File</i> pages 9-10 <i>Chapter 16 (Cells–The Units of Life) Fast File</i> pages 13-16 <i>Performance Assessment in the Science Classroom</i> pages 48-49, 53-54 <i>Probeware Lab Manual</i> pages 16-88 <i>Reading and Writing Skill Activities</i> pages 43-44 <i>Science Inquiry Lab Manual</i> pages 1-2, 19-20</p>

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Describe the limits of accuracy inherent in a particular measuring device or measurement procedure. 	<p>SE: pages 44-49 (Chapter 2, Section 1) <i>Launch Lab</i> page 41 (Chapter 2) <i>*MiniLab</i> page 44 (Chapter 2, Section 1) <i>Design Your Own Lab</i> pages 60-61 (Chapter 2, Section 3) <i>Use the Internet Lab</i> pages 430-431 (Chapter 14, Section 3)</p> <p>TWE: A page 41 (Chapter 2) ACT page 43 (Chapter 2, Section 1) CC page 43 (Chapter 2, Section 1) D page 45 (Chapter 2, Section 1) AIL page 278 (Chapter 9, Section 3) A page 439 (Chapter 15)</p> <p><i>Chapter 2 (Measurement) Fast File</i> pages 11-12, 26</p> <p><i>Chapter 12 (The Atmosphere in Motion) Fast File</i> page 11</p> <p><i>Mathematics Skill Activities</i> page 21 <i>Probeware Lab Manual</i> pages 62, 66, 88 <i>Performance Assessment in the Science Classroom</i> page 53</p>
<ul style="list-style-type: none"> Manipulate one variable over time with many repeated trials to test an hypothesis. 	<p>SE: <i>Design Your Own Lab</i> pages 244-245 (Chapter 8, Section 3) <i>Model and Invent Lab</i> pages 306-307 (Chapter 10, Section 2) <i>Design Your Own Lab</i> pages 332-333 (Chapter 11, Section 2) <i>Lab</i> page 573 (Chapter 19, Section 1) <i>Design Your Own Lab</i> pages 636-637 (Chapter 21, Section 3)</p> <p>TWE: D page 29 (Chapter 1, Section 4) AIL page 244 (Chapter 8, Section 3) DI page 328 (Chapter 11, Section 2) AIL page 333 (Chapter 11, Section 2) A page 623 (Chapter 21, Section 1)</p> <p><i>Chapter 1 (The Nature of Science) Fast File</i> pages 11-14</p> <p><i>Chapter 5 (Motion, Forces, and Simple Machines) Fast File</i> pages 9-11</p> <p><i>Chapter 8 (Waves) Fast File</i> pages 9-12 <i>Performance Assessment in the Science Classroom</i> page 40 <i>Probeware Lab Manual</i> pages 86-88</p>

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Construct and interpret graphs from data to make predictions. 	<p>SE: pages 57-59 (Chapter 2, Section 3) <i>Lab</i> pages 32-33 (Chapter 1, Section 4) <i>Design Your Own Lab</i> pages 60-61 (Chapter 2, Section 3) <i>Lab</i> page 151 (Chapter 5, Section 3) <i>Lab</i> pages 184-185 (Chapter 6, Section 3) <i>Use the Internet Lab</i> pages 606-607 (Chapter 20, Section 2) <i>Applying Science</i> page 631 (Chapter 21, Section 2) <i>Design Your Own Lab</i> pages 636-637 (Chapter 21, Section 3)</p> <p>TWE: A page 59 (Chapter 2, Section 3) R page 135 (Chapter 5, Section 1) ACT page 326 (Chapter 11, Section 2) VL page 343 (Chapter 12, Section 1) ACT page 387 (Chapter 13, Section 3) A page 607 (Chapter 20, Section 2)</p> <p><i>Chapter 7 (Electricity and Magnetism) Fast File</i> pages 9-12 <i>Chapter 15 (The Solar System and Beyond) Fast File</i> pages 9-11 <i>Study Guide and Reinforcement</i> page 7 <i>Science Inquiry Lab Manual</i> pages 5-6, 9-10, 15-16, 37-38 <i>Critical Thinking/Problem Solving (Physical Science)</i> page 2 <i>Mathematics Skill Activities</i> pages 11-12, 49-52 <i>Probeware Lab Manual</i> pages 16-88 <i>Virtual Labs CD-ROM</i> (graphs lab)</p>

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Use research methods to investigate practical and/or personal scientific problems and questions. 	<p>SE: pages 12-18 (Chapter 1, Section 2) <i>Lab</i> pages 32-33 (Chapter 1, Section 4) <i>Integrate Chemistry</i> page 290 (Chapter 10, Section 1) <i>Design Your Own Lab</i> pages 332-333 (Chapter 11, Section 2) <i>Design Your Own Lab</i> pages 364-365 (Chapter 12, Section 3) <i>*Design Your Own Lab</i> pages 520-521 (Chapter 17, Section 4) <i>Design Your Own Lab</i> pages 580-581 (Chapter 19, Section 2) <i>Design Your Own Lab</i> pages 636-637 (Chapter 21, Section 3)</p> <p>TWE: A page 5 (Chapter 1) CC page 205 (Chapter 7, Section 2) AIL page 216 (Chapter 7, Section 3) DI page 328 (Chapter 11, Section 2) AIL page 580 (Chapter 19, Section 2) A page 623 (Chapter 21, Section 1) CD page 658 (Chapter 22, Section 2)</p> <p><i>Chapter 1 (The Nature of Science) Fast File</i> pages 11-14, 53-54 <i>Chapter 18 (Vertebrate Animals) Fast File</i> pages 9-11 <i>Performance Assessment in the Science Classroom</i> pages 35-68 <i>Probeware Lab Manual</i> pages 16-88 <i>Science Inquiry Lab Manual</i> pages 1-40</p>

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> √ Describe and demonstrate various safety factors associated with different types of scientific activity. 	<p>SE: pages 19-20 (Chapter 1, Section 2) page 70 (Chapter 3, Section 1) <i>Design Your Own Lab</i> pages 88-89 (Chapter 3, Section 2) *<i>Lab</i> pages 118-119 (Chapter 4, Section 3) <i>Lab</i> pages 184-185 (Chapter 6, Section 3) <i>Lab</i> pages 278-279 (Chapter 9, Section 3) <i>Lab</i> page 414 (Chapter 14, Section 1) <i>Lab</i> page 519 (Chapter 17, Section 4) <i>Design Your Own Lab</i> pages 580-581 (Chapter 19, Section 2) <i>Science Skill Handbook</i> pages 688-689</p> <p>TWE: CC page 19 (Chapter 1, Section 2) VL page 19 (Chapter 1, Section 2) R page 20 (Chapter 1, Section 2) QD page 71 (Chapter 3, Section 1) <i>Chapter 4 (Atoms, Elements, and the Periodic Table) Fast File</i> page 9 <i>Chapter 9 (Rocks and Minerals) Fast File</i> page 9 <i>Chapter 10 (Forces Shaping Earth) Fast File</i> page 16 <i>Chapter 19 (The Human Body) Fast File</i> page 9 <i>Performance Assessment in the Science Classroom</i> pages 41, 43 <i>Probeware Lab Manual</i> pages 14, 35, 49 <i>Science Inquiry Lab Manual</i> pages v, 5, 29, 35</p>
<ul style="list-style-type: none"> • Use appropriate scientific equipment safely in all investigations. 	<p>SE: pages 19-20 (Chapter 1, Section 2) *<i>Lab</i> pages 118-119 (Chapter 4, Section 3) <i>Lab</i> pages 184-185 (Chapter 6, Section 3) *<i>Lab</i> page 215 (Chapter 7, Section 3) <i>Lab</i> pages 216-217 (Chapter 7, Section 3) <i>Lab</i> pages 278-279 (Chapter 9, Section 3) <i>Lab</i> page 414 (Chapter 14, Section 1) <i>Use the Internet Lab</i> pages 430-431 (Chapter 14, Section 3) <i>Lab</i> page 482 (Chapter 16, Section 1) <i>Design Your Own Lab</i> pages 580-581 (Chapter 19, Section 2) <i>Science Skill Handbook</i> pages 688-689</p> <p>TWE: VL page 19 (Chapter 1, Section 2) QD page 71 (Chapter 3, Section 1) <i>Chapter 9 (Rocks and Minerals) Fast File</i> pages 9-11 <i>Chapter 11 (Weathering and Erosion) Fast File</i> pages 9-11 <i>Chapter 15 (The Solar System and Beyond) Fast File</i> page 9 <i>Performance Assessment in the Science Classroom</i> pages 41, 43, 68 <i>Probeware Lab Manual</i> page 14 <i>Science Inquiry Lab Manual</i> pages v, 1, 19, 29</p>

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Wear appropriate attire. 	SE: page 19 (Chapter 1, Section 2) <i>Design Your Own Lab</i> pages 88-89 (Chapter 3, Section 2) * <i>Lab</i> page 118 (Chapter 4, Section 3) <i>Lab</i> page 184 (Chapter 6, Section 3) <i>Lab</i> page 278 (Chapter 9, Section 3) <i>MiniLab</i> page 319 (Chapter 11, Section 1) <i>Design Your Own Lab</i> page 332 (Chapter 11, Section 2) <i>Design Your Own Lab</i> pages 488-489 (Chapter 16, Section 2) * <i>Design Your Own Lab</i> pages 520-521 (Chapter 17, Section 4) <i>Design Your Own Lab</i> pages 580-581 (Chapter 19, Section 2) <i>Design Your Own Lab</i> page 636 (Chapter 21, Section 3) <i>Science Skill Handbook</i> pages 688-689 <i>Chapter 17 (Invertebrate Animals) Fast File</i> pages 9, 13 <i>Chapter 22 (Earth's Resources) Fast File</i> page 13 <i>Performance Assessment in the Science Classroom</i> pages 39, 43 <i>Probeware Lab Manual</i> pages 14, 35, 49 <i>Science Inquiry Lab Manual</i> pages v, 5, 11
Goal 2 – PHYSICAL SCIENCE Students will use appropriate scientific models to describe and quantify the nature and interactions of matter and energy.	
Indicator 1: Describe structures, properties and changes of matter.	
1. (K) Identify the subatomic particles that make up atoms.	SE: pages 99-105 (Chapter 4, Section 1) page 109 (Chapter 4, Section 2) page 194 (Chapter 7, Section 1) <i>Science and History</i> page 90 (Chapter 3, Section 2) TWE: ACT page 102 (Chapter 4, Section 1) MM page 104 (Chapter 4, Section 1) A page 105 (Chapter 4, Section 1) R page 105 (Chapter 4, Section 1) <i>Chapter 4 (Atoms, Elements, and the Periodic Table) Fast File</i> pages 11-12, 16 <i>Study Guide and Reinforcement</i> page 11
<ul style="list-style-type: none"> electrons, protons, and neutrons. 	SE: pages 102-105 (Chapter 4, Section 1) page 109 (Chapter 4, Section 2) page 194 (Chapter 7, Section 1) TWE: ACT page 102 (Chapter 4, Section 1) D page 103 (Chapter 4, Section 1) MM page 104 (Chapter 4, Section 1) R page 105 (Chapter 4, Section 1) <i>Chapter 4 (Atoms, Elements, and the Periodic Table) Fast File</i> pages 11-12, 16 <i>Science Inquiry Lab Manual</i> pages 39-40 <i>Study Guide and Reinforcement</i> page 11

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<p>2. (Ap) Classify matter based on physical and chemical properties. Example: mass, weight, volume, acidity, density, texture, color, melting point, boiling point</p>	<p>SE: pages 70-76 (Chapter 3, Section 1) pages 80-84 (Chapter 3, Section 2) pages 110-111 (Chapter 4, Section 2) <i>Launch Lab</i> page 69 (Chapter 3) <i>MiniLab</i> page 73 (Chapter 3, Section 1) <i>MiniLab</i> page 84 (Chapter 3, Section 2) *<i>Lab</i> page 87 (Chapter 3, Section 2) <i>Design Your Own Lab</i> pages 88-89 (Chapter 3, Section 2) <i>MiniLab</i> page 261 (Chapter 9, Section 1) <i>Lab</i> pages 278-279 (Chapter 9, Section 3) *<i>Lab</i> page 322 (Chapter 11, Section 1)</p> <p>TWE: D page 75 (Chapter 3, Section 1) ACT page 77 (Chapter 3, Section 1) D page 84 (Chapter 3, Section 2) QD page 110 (Chapter 4, Section 2) CU page 111 (Chapter 4, Section 2) LD page 266 (Chapter 9, Section 2)</p> <p><i>Chapter 9 (Rocks and Minerals) Fast File</i> page 32 <i>Probeware Lab Manual</i> pages 80-83 <i>Science Inquiry Lab Manual</i> pages 21-22, 25-26 <i>Study Guide and Reinforcement</i> pages 9-10 <i>Virtual Labs CD-ROM</i> (physical/chemical properties lab, rock classification lab)</p>
<p>√ Compare and contrast compounds and elements. Examples: sugar, salt, water (as compounds); Au, Fe, Na (as element symbols)</p>	<p>SE: page 106 (Chapter 4, Section 2) pages 113-114 (Chapter 4, Section 3) <i>Lab</i> page 112 (Chapter 4, Section 2) <i>MiniLab</i> page 114 (Chapter 4, Section 3) *<i>Lab</i> pages 118-119 (Chapter 4, Section 3)</p> <p>TWE: TPK page 106 (Chapter 4, Section 2) ACT pages 107, 108 (Chapter 4, Section 2) TPK page 113 (Chapter 4, Section 3) MM page 114 (Chapter 4, Section 3) D page 115 (Chapter 4, Section 3) ACT page 116 (Chapter 4, Section 3)</p> <p><i>Chapter 4 (Atoms, Elements, and the Periodic Table) Fast File</i> pages 9-13, 15, 17-18, 25, 27-28, 41, 45</p> <p><i>Critical Thinking/Problem Solving (Physical Science)</i> page 13 <i>Study Guide and Reinforcement</i> pages 12-13 <i>Virtual Labs CD-ROM</i> (molecular model lab)</p>
<p>√ Use the periodic table as a tool to describe elements. Example: symbols, metals/non-metals, groups/rows, families</p>	<p>SE: pages 107-111 (Chapter 4, Section 2) <i>Lab</i> page 112 (Chapter 4, Section 2)</p> <p>TWE: ACT page 108 (Chapter 4, Section 2) A page 111 (Chapter 4, Section 2) R page 111 (Chapter 4, Section 2)</p> <p><i>Chapter 4 (Atoms, Elements, and the Periodic Table) Fast File</i> pages 24, 27 <i>Study Guide and Reinforcement</i> page 12</p>

SIXTH GRADE STANDARDS	REFERENCES
<p>3. (C) Describe phase changes in matter differentiating between the particle motion in solids, liquids, and gases. Example: (Diagram of Particle Matter in Phase Changes)</p>	<p>SE: pages 73-75 (Chapter 3, Section 1) TWE: MM page 74 (Chapter 3, Section 1) VL page 74 (Chapter 3, Section 1) QD page 75 (Chapter 3, Section 1) CU page 79 (Chapter 3, Section 1) <i>Critical Thinking/Problem Solving (Physical Science)</i> page 10 <i>Science Inquiry Lab Manual</i> pages 37-38</p>
Indicator 2: Analyze forces, their forms, and their effects on motion.	
<p>1. (C) Describe how push/pull forces acting on an object produce motion. Example: (Illustration of see saw, sailboat on water, kite)</p>	<p>SE: pages 136-143 (Chapter 5, Section 2) <i>Lab</i> page 151 (Chapter 5, Section 3) TWE: ACT page 137 (Chapter 5, Section 2) QD page 137 (Chapter 5, Section 2) IL page 141 (Chapter 5, Section 2) <i>Chapter 5 (Motion, Forces, and Simple Machines)</i> <i>Fast File</i> pages 13-14, 17, 20, 26, 29, 43, 45-47 <i>Probeware Lab Manual</i> pages 84-88 <i>Study Guide and Reinforcement</i> page 16</p>
<p>√ Demonstrate how all forces have magnitude and direction.</p>	<p>SE: pages 136-137, 140-143 (Chapter 5, Section 2) pages 144-145 (Chapter 5, Section 3) <i>Lab</i> page 151 (Chapter 5, Section 3) TWE: QD page 137 (Chapter 5, Section 2) IM page 140 (Chapter 5, Section 2) ACT page 149 (Chapter 5, Section 3) <i>Chapter 5 (Motion, Forces, and Simple Machines)</i> <i>Fast File</i> pages 13-14, 26, 29, 45-47 <i>Study Guide and Reinforcement</i> page 16</p>
<p>√ Newton's Laws of Motion.</p>	<p>SE: pages 138-143 (Chapter 5, Section 2) <i>Applying Math</i> page 140 (Chapter 5, Section 2) TWE: LD page 141 (Chapter 5, Section 2) DI page 142 (Chapter 5, Section 2) A page 143 (Chapter 5, Section 2) CU page 143 (Chapter 5, Section 2) R page 143 (Chapter 5, Section 2) <i>Chapter 5 (Motion, Forces, and Simple Machines)</i> <i>Fast File</i> pages 13-14, 18, 26, 29, 45-47 <i>Performance Assessment in the Science Classroom</i> page 36 <i>Study Guide and Reinforcement</i> page 16</p>

SIXTH GRADE STANDARDS	REFERENCES
Indicator 3: Analyze various interactions of energy and matter.	
<p>1. (C) Identify types of energy transformations. Example: mechanical to electrical, chemical to light, kinetic to potential (and vice versa)</p>	<p>SE: pages 163, 167-169 (Chapter 6, Section 1) pages 178-181 (Chapter 6, Section 3) pages 213-214 (Chapter 7, Section 3) <i>Integrate Life Science</i> page 164 (Chapter 6, Section 1) <i>Science Online</i> page 168 (Chapter 6, Section 1) *<i>Lab</i> page 183 (Chapter 6, Section 3) <i>National Geographic</i> page 206 (Chapter 7, Section 2)</p> <p>TWE: A page 161 (Chapter 6) A page 169 (Chapter 6, Section 1) QD page 171 (Chapter 6, Section 2) QD page 179 (Chapter 6, Section 3) ACT page 181 (Chapter 6, Section 3) MM page 203 (Chapter 7, Section 2) <i>Chapter 6 (Energy) Fast File</i> pages 9-15, 45-46 <i>Probeware Lab Manual</i> pages 71-74 <i>Reading and Writing Skill Activities</i> pages 35-36 <i>Study Guide and Reinforcement</i> page 19 <i>Virtual Labs CD-ROM</i> (energy conversion lab)</p>
<p>√ Explain basic principles of electricity and magnetism, including static, current, circuits, magnetic fields.</p>	<p>SE: pages 194-200 (Chapter 7, Section 1) pages 201-208 (Chapter 7, Section 2) pages 209-214 (Chapter 7, Section 3) <i>MiniLab</i> page 197 (Chapter 7, Section 1) <i>MiniLab</i> page 212 (Chapter 7, Section 3) *<i>Lab</i> page 215 (Chapter 7, Section 3) <i>Lab</i> pages 216-217 (Chapter 7, Section 3)</p> <p>TWE: ACT page 196 (Chapter 7, Section 1) LD page 197 (Chapter 7, Section 1) ACT page 202 (Chapter 7, Section 2) QD page 203 (Chapter 7, Section 2) MM page 206 (Chapter 7, Section 2) LD page 207 (Chapter 7, Section 2) ACT page 210 (Chapter 7, Section 3) IL page 211 (Chapter 7, Section 3) A page 214 (Chapter 7, Section 3) <i>Chapter 7 (Electricity and Magnetism) Fast File</i> pages 9-15, 17-20, 25-30, 42-47 <i>Performance Assessment in the Science Classroom</i> page 35 <i>Science Inquiry Lab Manual</i> pages 31-32 <i>Study Guide and Reinforcement</i> pages 23-25 <i>Virtual Labs CD-ROM</i> (voltage/current lab)</p>

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√ Investigate the properties of light (Electromagnetic spectrum).	SE: page 230 (Chapter 8, Section 1) pages 231-235 (Chapter 8, Section 2) pages 237-241 (Chapter 8, Section 3) <i>Science Online</i> page 235 (Chapter 8, Section 2) *Lab page 236 (Chapter 8, Section 2) MiniLab page 238 (Chapter 8, Section 3) TWE: TPK page 237 (Chapter 8, Section 3) QD pages 239, 241 (Chapter 8, Section 3) VL page 239 (Chapter 8, Section 3) A page 243 (Chapter 8, Section 3) IL page 462 (Chapter 15, Section 3) <i>Chapter 6 (Energy) Fast File</i> pages 9-11 <i>Chapter 8 (Waves) Fast File</i> pages 9-14, 19-20, 26-27, 43 <i>Chapter 15 (The Solar System and Beyond) Fast File</i> pages 9-11 <i>Critical Thinking/Problem Solving (Physical Science)</i> page 22 <i>Probeware Lab Manual</i> pages 63-66 <i>Science Inquiry Lab Manual</i> pages 29-30 <i>Study Guide and Reinforcement</i> pages 28-29
√ Illustrate sunlight to chemical (photosynthesis).	SE: page 180 (Chapter 6, Section 3) page 377 (Chapter 13, Section 1) page 481 (Chapter 16, Section 1) <i>Integrate Physics</i> page 634 (Chapter 21, Section 3) TWE: VL page 180 (Chapter 6, Section 3) D page 377 (Chapter 13, Section 1) TPK page 633 (Chapter 21, Section 3) <i>Chapter 6 (Energy) Fast File</i> page 27 <i>Chapter 13 (Oceans) Fast File</i> pages 9-12 <i>Critical Thinking/Problem Solving (Life Science)</i> page 8 <i>Study Guide and Reinforcement</i> page 21 <i>Virtual Labs CD-ROM</i> (energy conversion lab)
Goal 3 – LIFE SCIENCE Students will describe structures and attributes of living things, processes of life, and interaction with each other and the environment.	
Indicator 1: Understand the fundamental structures, functions, classifications, and mechanisms found in living things.	
1. (C) Illustrate the difference between plant and animal cells.	SE: pages 478-481 (Chapter 16, Section 1) MiniLab page 480 (Chapter 16, Section 1) MiniLab page 484 (Chapter 16, Section 2) Lab page 482 (Chapter 16, Section 1) TWE: ACT page 478 (Chapter 16, Section 1) QD page 485 (Chapter 16, Section 2) TPK page 590 (Chapter 20, Section 1) <i>Chapter 16 (Cells–The Units of Life) Fast File</i> page 17, 20, 27, 45-50 <i>Study Guide and Reinforcement</i> page 55 <i>Virtual Labs CD-ROM</i> (cells lab)

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Plant cells have chloroplasts and cell walls. 	SE: pages 479, 481 (Chapter 16, Section 1) <i>Lab</i> page 482 (Chapter 16, Section 1) TWE: ACT page 478 (Chapter 16, Section 1) VL page 484 (Chapter 16, Section 2) TPK page 590 (Chapter 20, Section 1) TPK page 633 (Chapter 21, Section 3) <i>Chapter 16 (Cells–The Units of Life) Fast File</i> pages 9, 20, 27, 45-50 <i>Study Guide and Reinforcement</i> page 55 <i>Virtual Labs CD-ROM</i> (cells lab)
<ul style="list-style-type: none"> Recognize cells as the building blocks of living things. 	SE: pages 476-477 (Chapter 16, Section 1) <i>Chapter Preview</i> page 474 (Chapter 16) * <i>Launch Lab</i> page 475 (Chapter 16) TWE: QD page 477 (Chapter 16, Section 1) <i>Chapter 16 (Cells–The Units of Life) Fast File</i> pages 9, 20, 47 <i>Study Guide and Reinforcement</i> page 55 <i>Virtual Labs CD-ROM</i> (cells lab)
<ul style="list-style-type: none"> Observe cells with a compound microscope. 	SE: <i>Lab</i> page 482 (Chapter 16, Section 1) <i>MiniLab</i> page 484 (Chapter 16, Section 2) <i>MiniLab</i> page 593 (Chapter 20, Section 1) TWE: A page 475 (Chapter 16, Section 1) LD page 502 (Chapter 17, Section 2) LD page 594 (Chapter 20, Section 1) <i>Chapter 16 (Cells–The Units of Life) Fast File</i> pages 13-16 <i>Science Inquiry Lab Manual</i> pages 1-2
2. (C) Explain the importance and scientific use of a classification system.	SE: pages 77-78 (Chapter 3, Section 1) page 500 (Chapter 17, Section 1) pages 530-531 (Chapter 18, Section 1) <i>Launch Lab</i> page 497 (Chapter 17) <i>Section Review</i> page 500 #4 (Chapter 17, Section 1) <i>National Geographic</i> page 533 (Chapter 18, Section 1) TWE: A page 69 (Chapter 3) ACT page 78 (Chapter 3, Section 1) A page 500 (Chapter 17, Section 1) D page 510 (Chapter 17, Section 3) QD page 531 (Chapter 18, Section 1) CU page 534 (Chapter 18, Section 1) <i>Chapter 17 (Invertebrate Animals) Fast File</i> pages 17, 19 <i>Chapter 18 (Vertebrate Animals) Fast File</i> pages 15, 17 <i>Critical Thinking/Problem Solving (Life Science)</i> page 1 <i>Science Inquiry Lab Manual</i> pages 3-4 <i>Virtual Labs CD-ROM</i> (invertebrate animals lab)

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Management of diversity for organization and categorization 	SE: page 500 (Chapter 17, Section 1) pages 530-531 (Chapter 18, Section 1) <i>Launch Lab</i> page 497 (Chapter 17) <i>National Geographic</i> page 533 (Chapter 18, Section 1) TWE: A page 500 (Chapter 17, Section 1) QD page 531 (Chapter 18, Section 1) ACT page 533 (Chapter 18, Section 1) CU page 534 (Chapter 18, Section 1) <i>Study Guide and Reinforcement</i> page 57 <i>Science Inquiry Lab Manual</i> pages 3-4
<ul style="list-style-type: none"> Uniform scientific communication. Example: Identification and classification of newly-discovered organisms 	SE: pages 77-78 (Chapter 3, Section 1) pages 530-531 (Chapter 18, Section 1) <i>Section Review</i> page 500 #4 (Chapter 17, Section 1) <i>Science Online</i> page 513 (Chapter 17, Section 4) TWE: ACT page 78 (Chapter 3, Section 1) D page 510 (Chapter 17, Section 3) CU page 534 (Chapter 18, Section 1) SJ page 542 (Chapter 18, Section 3) <i>Chapter 18 (Vertebrate Animals) Fast File</i> page 48 <i>Critical Thinking/Problem Solving (Life Science)</i> page 1 <i>Virtual Labs CD-ROM</i> (invertebrate animals lab)
<ul style="list-style-type: none"> Kingdom, phylum, class, order, family, genus, species. 	SE: page 500 (Chapter 17, Section 1) pages 530-531 (Chapter 18, Section 1) <i>Reference Handbook</i> pages 726-729 TWE: ACT page 502 (Chapter 17, Section 2) <i>Chapter 18 (Vertebrate Animals) Fast File</i> pages 51-52 <i>Critical Thinking/Problem Solving (Life Science)</i> page 1 <i>Virtual Labs CD-ROM</i> (invertebrate animals lab)
<ul style="list-style-type: none"> Kingdom classification system. (monera, protista, plantae, fungi, animalia) 	SE: page 500 (Chapter 17, Section 1) pages 530-531 (Chapter 18, Section 1) <i>Reference Handbook</i> pages 726-729 <i>Chapter 18 (Vertebrate Animals) Fast File</i> pages 51-52 <i>Critical Thinking/Problem Solving (Life Science)</i> page 1

SIXTH GRADE STANDARDS	REFERENCES
Indicator 2: Analyze various patterns and products of natural and induced biological change.	
✓ Investigate the lineage of organisms to predict traits and features. Example: family genealogy, Mendel's pea plants, Punnett Squares	SE: pages 599-605 (Chapter 20, Section 2) <i>Applying Math</i> page 603 (Chapter 20, Section 2) <i>Use the Internet Lab</i> pages 606-607 (Chapter 20, Section 2) TWE: D page 600 (Chapter 20, Section 2) TFYI page 603 (Chapter 20, Section 2) CU page 605 (Chapter 20, Section 2) AIL page 606 (Chapter 20, Section 2) <i>Chapter 20 (The Role of Genes in Inheritance) Fast File</i> pages 13-14 <i>Virtual Labs CD-ROM</i> (traits lab)
✓ Describe the difference between a hybrid and a purebred trait.	SE: pages 600-602 (Chapter 20, Section 2) <i>Applying Math</i> page 603 (Chapter 20, Section 2) <i>Standardized Test Practice</i> page 613 #23 (Chapter 20) TWE: D page 603 (Chapter 20, Section 2) <i>Chapter 20 (The Role of Genes in Inheritance) Fast File</i> pages 13-14, 19, 26 <i>Study Guide and Reinforcement</i> page 68 <i>Virtual Labs CD-ROM</i> (traits lab)
Indicator 3: Analyze how organisms are linked to one another and the environment.	
✓ Model cycles in ecosystems. Example: water, carbon dioxide/oxygen	SE: pages 346-347 (Chapter 12, Section 1) pages 394-395 (Chapter 13, Section 4) page 635 (Chapter 21, Section 3) TWE: ACT page 346 (Chapter 12, Section 1) CU page 347 (Chapter 12, Section 1) VL page 394 (Chapter 13, Section 4) CU page 395 (Chapter 13, Section 4) DI page 634 (Chapter 21, Section 3) D page 658 (Chapter 22, Section 2) <i>Chapter 13 (Oceans) Fast File</i> pages 30, 51-52 <i>Study Guide and Reinforcement</i> page 46

SIXTH GRADE STANDARDS	REFERENCES
<p>√ Describe the relationship between characteristics of biomes and the organisms that live there.</p>	<p>SE: pages 618-625 (Chapter 21, Section 1) <i>Launch Lab</i> page 617 (Chapter 21) <i>Science Online</i> page 620 (Chapter 21, Section 1) <i>MiniLab</i> 623 (Chapter 21, Section 1) <i>Lab</i> page 626 (Chapter 21, Section 1) <i>Design Your Own Lab</i> pages 636-637 (Chapter 21, Section 3)</p> <p>TWE: VL page 621 (Chapter 21, Section 1) ACT page 624 (Chapter 21, Section 1) QD page 624 (Chapter 21, Section 1) A page 625 (Chapter 21, Section 1) CU page 625 (Chapter 21, Section 1) A page 637 (Chapter 21, Section 3)</p> <p><i>Chapter 21 (Ecology) Fast File</i> pages 23, 40 <i>Critical Thinking/Problem Solving (Life Science)</i> pages 12-13 <i>Critical Thinking/Problem Solving (Earth Science)</i> page 16 <i>Performance Assessment in the Science Classroom</i> pages 55-56 <i>Probeware Lab Manual</i> pages 38-43 <i>Science Inquiry Lab Manual</i> pages 7-8</p>
<p>√ Describe how organisms adapt to biotic and abiotic factors in a biome.</p>	<p>SE: pages 535, 539 (Chapter 18, Section 2) pages 541-542 (Chapter 18, Section 3) page 546 (Chapter 18, Section 4)</p> <p>TWE: DI page 533 (Chapter 18, Section 1) QD page 536 (Chapter 18, Section 2) ACT page 538 (Chapter 18, Section 2) VL page 541 (Chapter 18, Section 3) ACT page 547 (Chapter 18, Section 4) TPK page 618 (Chapter 21, Section 1) CU page 625 (Chapter 21, Section 1)</p> <p><i>Chapter 18 (Vertebrate Animals) Fast File</i> pages 19-20, 25, 30, 32 <i>Chapter 21 (Ecology) Fast File</i> page 26 <i>Science Inquiry Lab Manual</i> pages 11-12 <i>Study Guide and Reinforcement</i> page 69 <i>Virtual Labs CD-ROM</i> (fish adaptations lab)</p>

SIXTH GRADE STANDARDS	REFERENCES
Goal 4 – EARTH/SPACE SCIENCE	
Students will analyze the composition, formative processes, and history of the universe, solar system, and Earth.	
Indicator 1: Understand the various structures and processes of the Earth system.	
<p>1. (C) Describe how the spheres (lithosphere, hydrosphere, atmosphere, and biosphere) of the Earth interact.</p>	<p>SE: pages 323-331 (Chapter 11, Section 2) pages 359-361 (Chapter 12, Section 3) pages 385-388 (Chapter 13, Section 3) pages 389-395 (Chapter 13, Section 4) pages 618-625 (Chapter 21, Section 1) <i>Applying Science</i> page 304 (Chapter 10, Section 2) <i>Launch Lab</i> page 315 (Chapter 11) <i>Science Online</i> page 326 (Chapter 11, Section 2) <i>Design Your Own Lab</i> pages 332-333 (Chapter 11, Section 2) <i>Model and Invent Lab</i> pages 396-397 (Chapter 13, Section 4) <i>Lab</i> page 626 (Chapter 21, Section 1)</p> <p>TWE: MM pages 327, 329 (Chapter 11, Section 2) DI page 361 (Chapter 12, Section 3) CU page 388 (Chapter 13, Section 3) CC page 391 (Chapter 13, Section 4) VL page 621 (Chapter 21, Section 1) ACT page 624 (Chapter 21, Section 1)</p> <p><i>Chapter 11 (Weathering and Erosion) Fast File</i> pages 9-16, 19-22, 27-30, 42 <i>Chapter 13 (Oceans) Fast File</i> pages 13-15, 21, 27, 33, 46 <i>Critical Thinking/Problem Solving (Life Science)</i> pages 10, 12, 13 <i>Critical Thinking/Problem Solving (Earth Science)</i> page 1 <i>Science Inquiry Lab Manual</i> pages 7-8 <i>Study Guide and Reinforcement</i> pages 37-38, 46</p>

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> • Impact of humans and natural events. 	<p>SE: pages 359-361 (Chapter 12, Section 3) page 383 (Chapter 13, Section 2) pages 646-653 (Chapter 22, Section 1) pages 655-662 (Chapter 22, Section 2) <i>MiniLab</i> page 650 (Chapter 22, Section 1) <i>Lab</i> page 654 (Chapter 22, Section 1) <i>Design Your Own Lab</i> pages 668-669 (Chapter 22, Section 3)</p> <p>TWE: CC page 330 (Chapter 11, Section 2) ACT page 346 (Chapter 12, Section 1) DI page 361 (Chapter 12, Section 3) SJ page 649 (Chapter 22, Section 1) CD page 651 (Chapter 22, Section 1) CC page 652 (Chapter 22, Section 1) SJ page 656 (Chapter 22, Section 2) CD page 658 (Chapter 22, Section 2) R page 662 (Chapter 22, Section 2)</p> <p><i>Chapter 11 (Weathering and Erosion) Fast File</i> page 29</p> <p><i>Critical Thinking/Problem Solving (Life Science)</i> page 10</p> <p><i>Critical Thinking/Problem Solving (Earth Science)</i> pages 3, 7, 13</p> <p><i>Critical Thinking/Problem Solving (Physical Science)</i> pages 12, 14, 16</p> <p><i>Reading and Writing Skill Activities</i> pages 19-20, 29-30</p> <p><i>Science Inquiry Lab Manual</i> pages 5-6</p>
<ul style="list-style-type: none"> √ Composition of spheres. 	<p>SE: page 289-291 (Chapter 10, Section 1) pages 342-347 (Chapter 12, Section 1) pages 375-377 (Chapter 13, Section 1) <i>Integrate Chemistry</i> page 290 (Chapter 10, Section 1) <i>Launch Lab</i> page 373 (Chapter 13) <i>Science Online</i> page 377 (Chapter 13, Section 1) *<i>Lab</i> page 379 (Chapter 13, Section 1)</p> <p>TWE: DI page 291 (Chapter 10, Section 1) IM page 343 (Chapter 12, Section 1) UA page 344 (Chapter 12, Section 1) QD page 375 (Chapter 13, Section 1) D page 376 (Chapter 13, Section 1)</p> <p><i>Chapter 10 (Forces Shaping Earth) Fast File</i> pages 9-19, 21-22, 29, 49</p> <p><i>Chapter 12 (The Atmosphere in Motion) Fast File</i> pages 20, 51</p> <p><i>Chapter 13 (Oceans) Fast File</i> pages 19-20, 53</p> <p><i>Critical Thinking/Problem Solving (Earth Science)</i> page 15</p> <p><i>Performance Assessment in the Science Classroom</i> pages 48-49</p> <p><i>Study Guide and Reinforcement</i> page 39</p>

SIXTH GRADE STANDARDS	REFERENCES
<p>2. (Ap) Examine the role of water on the Earth.</p>	<p>SE: pages 326-327 (Chapter 11, Section 2) pages 329-331 (Chapter 11, Section 2) pages 345-347 (Chapter 12, Section 1) pages 350-352 (Chapter 12, Section 2) pages 380-382 (Chapter 13, Section 2) pages 385-388 (Chapter 13, Section 3) <i>Launch Lab</i> page 315 (Chapter 11) <i>Design Your Own Lab</i> pages 332-333 (Chapter 11, Section 2) <i>Model and Invent Lab</i> pages 396-397 (Chapter 13, Section 4) <i>Lab</i> page 654 (Chapter 22, Section 1)</p> <p>TWE: MM page 327, 329 (Chapter 11, Section 2) ACT page 346 (Chapter 12, Section 1) CU page 378 (Chapter 13, Section 1) ACT page 387 (Chapter 13, Section 3)</p> <p><i>Chapter 11 (Weathering and Erosion) Fast File</i> pages 9-11, 21, 27-28, 30 <i>Chapter 13 (Oceans) Fast File</i> page 28 <i>Study Guide and Reinforcement</i> page 43 <i>Probeware Lab Manual</i> pages 49-51 <i>Virtual Labs CD-ROM</i> (oceans lab, glaciers lab)</p>
<ul style="list-style-type: none"> • Surface Examples: waves, glaciers, rivers 	<p>SE: pages 326-327, 329-331 (Chapter 11, Section 2) pages 374-378 (Chapter 13, Section 1) pages 380-384 (Chapter 13, Section 2) pages 385-388 (Chapter 13, Section 3) <i>Applying Science</i> page 304 (Chapter 10, Section 2) <i>Launch Lab</i> page 315 (Chapter 11) <i>Design Your Own Lab</i> pages 332-333 (Chapter 11, Section 2) <i>MiniLab</i> page 383 (Chapter 13, Section 2) <i>MiniLab</i> 386 (Chapter 13, Section 3) <i>Model and Invent Lab</i> pages 396-397 (Chapter 13, Section 4)</p> <p>TWE: MM page 327, 329 (Chapter 11, Section 2) CU page 378 (Chapter 13, Section 1) QD page 384 (Chapter 13, Section 2) ACT page 387 (Chapter 13, Section 3)</p> <p><i>Chapter 11 (Weathering and Erosion) Fast File</i> pages 9-11, 21, 27-28, 30 <i>Chapter 13 (Oceans) Fast File</i> pages 13-15, 29 <i>Reading and Writing Skill Activities</i> pages 19-20, 29-30 <i>Study Guide and Reinforcement</i> pages 43, 45 <i>Virtual Labs CD-ROM</i> (oceans lab, glaciers lab)</p>

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Underground Example: aquifers 	SE: page 347 (Chapter 12, Section 1) page 659 (Chapter 22, Section 2) TWE: VL page 659 (Chapter 22, Section 2) <i>Critical Thinking/Problem Solving (Physical Science)</i> page 12 <i>Probeware Lab Manual</i> pages 49-51
<ul style="list-style-type: none"> Atmosphere Examples: precipitation, humidity 	SE: pages 350-352 (Chapter 12, Section 2) <i>Design Your Own Lab</i> pages 364-365 (Chapter 12, Section 3) TWE: ACT page 350 (Chapter 12, Section 2) D page 351 (Chapter 12, Section 2) DI page 352 (Chapter 12, Section 2) CU page 355 (Chapter 12, Section 2) CU page 362 (Chapter 12, Section 3) D page 658 (Chapter 22, Section 2) <i>Chapter 11 (Weathering and Erosion) Fast File</i> pages 9-11, 47 <i>Chapter 12 (The Atmosphere in Motion) Fast File</i> pages 13-16, 28, 49-50 <i>Reading and Writing Skill Activities</i> pages 3-4, 45-46 <i>Science Inquiry Lab Manual</i> pages 23-24 <i>Study Guide and Reinforcement</i> page 40
3. (C) Explain processes involved in the formation of the Earth's structure. Examples: plate tectonics, volcanoes, earthquakes	SE: pages 292-297 (Chapter 10, Section 1) pages 299-305 (Chapter 10, Section 2) <i>MiniLab</i> page 295 (Chapter 10, Section 1) * <i>Lab</i> page 298 (Chapter 10, Section 1) <i>MiniLab</i> page 301 (Chapter 10, Section 2) <i>Model and Invent Lab</i> pages 306-307 (Chapter 10, Section 2) TWE: ACT page 293 (Chapter 10, Section 1) DI page 295 (Chapter 10, Section 1) D page 296 (Chapter 10, Section 1) QD page 300 (Chapter 10, Section 2) VL page 302 (Chapter 10, Section 2) D page 303 (Chapter 10, Section 2) A page 305 (Chapter 10, Section 2) <i>Chapter 10 (Forces Shaping Earth) Fast File</i> pages 9-17, 22-24, 29-32, 47-49 <i>Critical Thinking/Problem Solving (Earth Science)</i> page 9 <i>Probeware Lab Manual</i> pages 52-56 <i>Science Inquiry Lab Manual</i> pages 13-14 <i>Study Guide and Reinforcement</i> pages 35-36 <i>Virtual Labs CD-ROM</i> (glaciers lab)

SIXTH GRADE STANDARDS	REFERENCES
<p>√ Interpret topographic and digital maps to identify surface features. Example: local, global, regional</p>	<p>SE: page 380 (Chapter 13, Section 2) <i>Science Online</i> page 22 (Chapter 1, Section 3) <i>Science Online</i> page 262 (Chapter 9, Section 1) <i>Science Online</i> page 302 (Chapter 10, Section 2) <i>Science Online</i> page 357 (Chapter 12, Section 3) <i>Lab</i> page 363 (Chapter 12, Section 3)</p> <p>TWE: D page 22 (Chapter 1, Section 3) IL page 289 (Chapter 10, Section 1) CU page 297 (Chapter 10, Section 1) ACT page 302 (Chapter 10, Section 2) CU page 305 (Chapter 10, Section 2) CC page 327 (Chapter 11, Section 2) CC page 360 (Chapter 12, Section 3) CD page 376 (Chapter 13, Section 1)</p> <p><i>Chapter 10 (Forces Shaping Earth) Fast File</i> pages 9-13, 44</p> <p><i>Performance Assessment in the Science Classroom</i> page 52</p>
<p>√ Explain the formation of different rock types and their characteristics.</p>	<p>SE: pages 265-271 (Chapter 9, Section 2) pages 272-276 (Chapter 9, Section 3) <i>*MiniLab</i> page 270 (Chapter 9, Section 2) <i>Lab</i> page 277 (Chapter 9, Section 3) <i>Lab</i> pages 278-279 (Chapter 9, Section 3)</p> <p>TWE: ACT page 266 (Chapter 9, Section 2) SJ page 267 (Chapter 9, Section 2) MM page 269 (Chapter 9, Section 2) A page 271 (Chapter 9, Section 2) TPK page 272 (Chapter 9, Section 3) D page 273 (Chapter 9, Section 3) QD page 274 (Chapter 9, Section 3)</p> <p><i>Chapter 9 (Rocks and Minerals) Fast File</i> pages 13-17, 19, 21, 28-32, 45-49</p> <p><i>Critical Thinking/Problem Solving (Earth Science)</i> page 4</p> <p><i>Science Inquiry Lab Manual</i> pages 21-22</p> <p><i>Study Guide and Reinforcement</i> pages 32-33</p> <p><i>Virtual Labs CD-ROM</i> (rock classification lab)</p>

SIXTH GRADE STANDARDS	REFERENCES
✓ Use geographical technologies to investigate natural phenomena. Example: GPS, GIS, remote sensing	SE: <i>Integrate Physics</i> page 230 (Chapter 8, Section 1) <i>Science Online</i> page 361 (Chapter 12, Section 3) <i>Lab</i> page 363 (Chapter 12, Section 3) <i>Lab</i> page 414 (Chapter 14, Section 1) <i>Use the Internet Lab</i> pages 430-431 (Chapter 14, Section 3) TWE: ACT page 360 (Chapter 12, Section 3) SJ page 411 (Chapter 14, Section 1) ACT page 420 (Chapter 14, Section 2) AIL page 430 (Chapter 14, Section 3) <i>Chapter 10 (Forces Shaping Earth) Fast File</i> page 32 <i>Chapter 12 (The Atmosphere in Motion) Fast File</i> page 32 <i>Critical Thinking/Problem Solving (Earth Science)</i> pages 5, 8 <i>Probeware Lab Manual</i> pages 52-56
Indicator 2: Analyze essential principles and ideas about the composition and structure of the universe.	
1. (K) Identify the organization and relative scale of the solar system.	SE: pages 440-446 (Chapter 15, Section 1) pages 448-449 (Chapter 15, Section 2) <i>MiniLab</i> page 441 (Chapter 15, Section 1) <i>Lab</i> page 447 (Chapter 15, Section 1) <i>Applying Science</i> page 453 (Chapter 15, Section 2) TWE: UA page 443 (Chapter 15, Section 1) MM page 444 (Chapter 15, Section 1) VL page 449 (Chapter 15, Section 2) <i>Chapter 15 (The Solar System and Beyond) Fast File</i> pages 9-17, 19-22, 27-28, 47-49 <i>Mathematics Skill Activities</i> pages 2, 40 <i>Study Guide and Reinforcement</i> pages 51-52 <i>Virtual Labs CD-ROM</i> (solar system lab)

SIXTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Sun, moon, Earth, other planets and their moons, meteors, asteroids, and comets. 	SE: pages 440-446 (Chapter 15, Section 1) pages 448-455 (Chapter 15, Section 2) <i>MiniLab</i> page 441 (Chapter 15, Section 1) <i>Lab</i> page 447 (Chapter 15, Section 1) <i>MiniLab</i> page 450 (Chapter 15, Section 2) * <i>Design Your Own Lab</i> pages 464-465 (Chapter 15, Section 2) TWE: UA page 443 (Chapter 15, Section 1) MM page 444 (Chapter 15, Section 1) ACT pages 450, 452 (Chapter 15, Section 2) CU page 455 (Chapter 15, Section 2) R page 455 (Chapter 15, Section 2) <i>Chapter 15 (The Solar System and Beyond)</i> <i>Fast File</i> pages 13-17, 19-22, 27-28, 31, 45-46, 49 <i>Critical Thinking/Problem Solving (Earth Science)</i> page 8 <i>Critical Thinking/Problem Solving (Physical Science)</i> page 4 <i>Study Guide and Reinforcement</i> page 52 <i>Virtual Labs CD-ROM</i> (solar system lab)
√ Origins and age of the universe.	SE: pages 458-463 (Chapter 15, Section 3) <i>Integrate Physics</i> page 462 (Chapter 15, Section 3) <i>Integrate Astronomy</i> page 466 (Chapter 15, Section 3) TWE: SJ pages 458, 462 (Chapter 15, Section 3) <i>Chapter 15 (The Solar System and Beyond)</i> <i>Fast File</i> pages 29, 46 <i>Study Guide and Reinforcement</i> page 53 <i>Virtual Labs CD-ROM</i> (solar system lab)
√ Explain the association of time measurement with celestial motions. Example: time zones, leap years, international dateline	SE: pages 440-441 (Chapter 15, Section 1) TWE: TPK page 440 (Chapter 15, Section 1) CD page 444 (Chapter 15, Section 1) CU page 446 (Chapter 15, Section 1) <i>Chapter 15 (The Solar System and Beyond)</i> <i>Fast File</i> pages 17, 19, 22, 27, 30, 47-48 <i>Study Guide and Reinforcement</i> page 51

SIXTH GRADE STANDARDS	REFERENCES
Goal 5 – SCIENCE, TECHNOLOGY, ENVIRONMENT AND SOCIETY	
Students will identify and evaluate the relationships and ethical implications of science, upon technology, environment, and society.	
Indicator 1: Analyze various implications/effects of scientific advancement within the environment and society.	
<p>1. (C) Describe how science and technology have helped society to solve problems. Examples: GPS/GIS, prevention and treatment of diseases, vaccinations, water treatment, prosthetics</p>	<p>SE: page 200 (Chapter 7, Section 1) page 243 (Chapter 8, Section 3) page 417 (Chapter 14, Section 2) <i>Science and History</i> page 218 (Chapter 7, Section 3) <i>Integrate Physics</i> page 230 (Chapter 8, Section 1) <i>Science Online</i> page 361 (Chapter 12, Section 3) <i>Lab</i> page 363 (Chapter 12, Section 3) <i>Science and Society</i> page 490 (Chapter 16, Section 2) <i>Integrate Physics</i> page 577 (Chapter 19, Section 2) <i>Science and History</i> page 582 (Chapter 19, Section 2)</p> <p>TWE: SJ page 110 (Chapter 4, Section 2) DI page 138 (Chapter 5, Section 2) CC page 332 (Chapter 11, Section 2) DI page 375 (Chapter 13, Section 1) CC page 425 (Chapter 14, Section 3) D page 442 (Chapter 15, Section 1)</p> <p><i>Critical Thinking/Problem Solving (Earth Science)</i> pages 5, 9, 17 <i>Critical Thinking/Problem Solving (Life Science)</i> pages 6, 18 <i>Critical Thinking/Problem Solving (Physical Science)</i> pages 14-15 <i>Performance Assessment in the Science Classroom</i> page 42</p>

SIXTH GRADE STANDARDS	REFERENCES
Indicator 2: Analyze relationships/interactions among science, technology, environment, and society.	
<p>1. (K) Given a scenario, identify the problem(s) of human activity on the local, regional, or global environment. Example: urban expansion, water treatment</p>	<p>SE: pages 646-650 (Chapter 22, Section 1) pages 655-662 (Chapter 22, Section 2) <i>Science and History</i> page 334 (Chapter 11, Section 2) <i>Integrate Health</i> page 344 (Chapter 12, Section 1) <i>Model and Invent Lab</i> pages 550-551 (Chapter 18, Section 4) <i>Science and Society</i> page 638 (Chapter 21, Section 3) <i>Lab</i> page 654 (Chapter 22, Section 1) <i>Design Your Own Lab</i> pages 668-669 (Chapter 22, Section 3)</p> <p>TWE: SJ page 649 (Chapter 22, Section 1) QD page 656 (Chapter 22, Section 2) SJ page 656 (Chapter 22, Section 2) CD page 658 (Chapter 22, Section 2) A page 662 (Chapter 22, Section 2) R page 662 (Chapter 22, Section 2) <i>Chapter 11 (Weathering and Erosion) Fast File</i> page 29 <i>Chapter 21 (Ecology) Fast File</i> page 27 <i>Critical Thinking/Problem Solving (Physical Science)</i> pages 1, 12 <i>Critical Thinking/Problem Solving (Earth Science)</i> page 13 <i>Critical Thinking/Problem Solving (Life Science)</i> pages 5, 23 <i>Performance Assessment in the Science Classroom</i> page 63 <i>Reading and Writing Skill Activities</i> pages 19-20 <i>Science Inquiry Lab Manual</i> pages 5-6</p>

Codes Used for TWE Pages

A	Assessment
ACT	Activity
AIL	Alternative Inquiry Lab
CC	Curriculum Connection
CD	Cultural Diversity
CU	Check for Understanding
D	Discussion
DI	Differentiated Instruction
HS	Historical Significance
IL	Inquiry Lab
IM	Identifying Misconceptions
LD	Lab Demonstration
MM	Make a Model
QD	Quick Demo
R	Reteach
SJ	Science Journal
TFYI	Teacher FYI
TPK	Tie to Prior Knowledge
UA	Use an Analogy
VL	Visual Learning