

## Strand I Thinking and Practice

**Standard I:** Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

Essential Question: How do we use scientific skills and processes to answer scientific questions?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Process of Investigation <b>SCIENTIFIC METHOD</b></p> <p>Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.</p>	<p>1. Construct appropriate graphs from data and develop qualitative and quantitative statements about the relationships between variables being investigated.</p> <p>2. Examine the reasonableness of data supporting a proposed scientific explanation.</p> <p>3. Justify predictions and conclusions based on data.</p>	<p>Understand that the data you collect can prove or disprove your hypothesis.</p> <p>Vocabulary: Qualitative Quantitative Reasonable</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> Unit A Performance Test p. 169 <b>Assessment Book</b></p>	<p><b>Dewey Decimal</b> 507 for videos and library</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p><a href="http://scienceview.berkeley.edu/showcase/">http://scienceview.berkeley.edu/showcase/</a> Interactive Science Activities</p> <p><a href="http://www.sciserv.org/isef/document/index.asp">http://www.sciserv.org/isef/document/index.asp</a> Rules and Regulations, Student Handbook, Forms to Download for Science Fair</p> <p>Example (for #1): <b>TM</b> p. 52, <b>Activity Book</b> p. 49-50 How do Sunflower Seeds Vary? <b>Workbook</b> page 22 How to Read Science: Sequence <b>Activity DVD</b> Unit A, Chap 3</p> <p>Example (for #2): <b>TM</b> p. 4 How Are Mushrooms Different?</p> <p>Example (for #3): <b>TM</b> p. 4 How are Mushrooms Different?</p> <p>Foss Kit <i>Variables</i></p>

				<a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a> <b>Vocabulary Cards</b> <b>Graphic Organizer Trans</b> <b>Online Student and Teacher Editions</b> <b>Audio Text CDs Eng/Span</b> <b>Mindpoint Quiz Show</b> <b>Science Games</b> <b>Discovery Channel DVDs</b> <b>Online Lesson Planner</b>
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**Standard I:** Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

Essential Question: How do scientists do, review and revise their work?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
Process of Investigation <b>SCIENTIFIC THINKING</b>  <b>Benchmark II:</b> Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge	<p>1. Understand that scientific knowledge is continually reviewed, critiqued, and revised as new data become available.</p> <p>2. Understand that scientific investigations use common processes that include the collection of relevant data and observations, accurate measurements, the identification and control of variables, and logical reasoning to formulate hypotheses and explanations.</p> <p>3. Understand that not all investigations result in defensible scientific explanations.</p>	<p>Understand that new data constantly changes or confirms our knowledge of science.</p> <p>Vocabulary: Relevant Review Revise Variable Precise</p>	<p><b>Success Tracker</b>  <b>Exam View Test Bank CD</b>            Unit A Performance Test            p. 169 <b>Assessment Book</b></p>	<p><b>Dewey Decimal</b> 507.2 for videos or library</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p><a href="http://scienceview.berkeley.edu/showcase/">http://scienceview.berkeley.edu/showcase/</a>            Interactive Science Activities</p> <p>Example (for #1): <b>TM</b> p. 32-33 Cell Theory</p> <p>Example (for #2):  <b>TM</b> p. 4, <b>Activity Book</b> p. 29-30 How Are Mushrooms Different?  <b>Workbook</b> page 2-3 How to Read Science: Compare and Contrast  <b>Activity DVD</b> Unit A, Chap 1</p> <p>Example (for #3): <b>TM</b> p. 220 Continental Drift</p> <p>Foss Kit <i>Variables</i></p> <p><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a>  <b>Vocabulary Cards</b>  <b>Graphic Organizer Trans</b>  <b>Online Student and Teacher Editions</b>  <b>Audio Text CDs Eng/Span</b>  <b>Mindpoint Quiz Show</b>  <b>Science Games</b>  <b>Discovery Channel DVDs</b>  <b>Online Lesson Planner</b></p>

## Strand I Thinking and Practice

**Standard I:** Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

Essential Question: How can you use math to show the results of a scientific experiment and make predictions?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Process of Investigation <b>MATH SKILLS</b></p> <p><b>Benchmark III:</b> Use mathematical ideas, tools, and techniques to understand scientific knowledge</p>	<p>1. Evaluate the usefulness and relevance of data to an investigation.</p> <p>2. Use probabilities, patterns, and relationships to explain data and observations.</p>	<p>Use relevant data to determine patterns that explain your observations.</p> <p>Vocabulary: Probability Pattern Observation Proportion Graph Percent</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Workbook</b> p. 7 for example <b>TM</b> p. 21 for example See <b>Mathematics in Index</b> p. EM18-19 Watch for “<b>Math in Science</b>” questions</p>	<p><b>Dewey Decimal</b> 511 for videos or library</p> <p>See <b>Correlation Pamphlet</b> for specific teachers’ manual page numbers that correlate with each standard.</p> <p><a href="http://nces.ed.gov/nceskids/Graphing/">http://nces.ed.gov/nceskids/Graphing/</a> Create printable graphs and charts</p> <p><a href="http://www.sciencenewsforkids.org/pages/puzzlezone/muse/muse1101.asp">http://www.sciencenewsforkids.org/pages/puzzlezone/muse/muse1101.asp</a> Article about decoding bar codes</p> <p><a href="http://www.aimsedu.org/">http://www.aimsedu.org/</a> AIMS website</p> <p>Example (for #1): <b>TM</b> p. 18, <b>Activity Book</b> p. 31-32 How Can You Identify and Classify Organisms? <b>Activity DVD</b> Unit A, Chap 1</p> <p>Example (for #2) <b>TM</b> p. 52 How Do Sunflower Seeds Vary?</p> <p><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a> <b>Vocabulary Cards</b> <b>Graphic Organizer Trans</b> <b>Online Student and Teacher Editions</b> <b>Audio Text CDs Eng/Span</b> <b>Mindpoint Quiz Show</b> <b>Science Games</b> <b>Discovery Channel DVDs</b> <b>Online Lesson Planner</b></p>

## Strand II – Content of Science

**Standard I):** Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

Essential Question: Choose a substance or a common object from nature. What properties can you describe about it so that someone from another planet would clearly understand what the substance or object is like?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p><b>Strand II:</b> <b>Content of Science</b></p> <p><b>PHYSICAL SCIENCE</b> <b>Forms of Matter</b></p> <p><b>Benchmark I:</b> Know the forms and properties of matter and how matter interacts</p>	<p>1. Understand that substances have characteristic properties and identify the properties of various substances (e.g., density, boiling point, solubility, chemical reactivity).</p> <p>2. Use properties to identify substances (e.g., for minerals: the hardness, streak, color, reactivity to acid, cleavage, fracture).</p> <p>3. Know that there are about 100 known elements that combine to produce compounds in living organisms and nonliving substances.</p> <p>4. Know the differences between chemical and physical properties and how these properties can influence the interactions of matter.</p>	<p>Understand that distinguishing the different properties of a substance helps identify it.</p> <p>Vocabulary: Soluble Boiling point Density Element Property Chemical Property Physical Property Interact</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Assessment Book 77-30</b> <b>Workbook 121-126</b></p>	<p><b>Dewey Decimal</b> 530 to 530.4, 540 to 541.2 for videos or library</p> <p>AIMS Chemistry Matters</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p><a href="http://www.webelements.com">http://www.webelements.com</a> Periodic Table Interactive</p> <p><a href="http://www.quia.com/jg/65539.html">http://www.quia.com/jg/65539.html</a> 40 Elements Match Activity</p> <p><a href="http://www.chem4kids.com/files/elem_families.html">http://www.chem4kids.com/files/elem_families.html</a> Properties of Matter</p> <p>Example (for #1): <b>TM</b> p. 362 Workbook p. 121 How Can Properties of Matter Change? Graphic Organizer Trans 6</p> <p>Example (for #2) <b>TM</b> p. 246-249 What Are Rocks and Minerals?</p> <p>Example (for #3) <b>TM</b> 394-399 How Are Elements Grouped?</p> <p>Example (for #4) <b>TM</b> 370-371 Physical and Chemical Properties of Matter</p> <p><b><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a></b> <b>Vocabulary Cards</b></p>

				<b>Graphic Organizer Trans</b> <b>Online Student and Teacher Editions</b> <b>Audio Text CDs Eng/Span</b> <b>Mindpoint Quiz Show</b> <b>Science Games</b> <b>Discovery Channel DVDs</b> <b>Online Lesson Planner</b>
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## Stand II – Content of Science

**Standard I):** Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

Essential Question: How does energy travel or transfer?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p><b>Strand II:</b> <b>Content of Science</b></p> <p><b>PHYSICAL SCIENCE</b> <b>Properties of Matter</b></p> <p><b>Benchmark II:</b> Explain the physical processes involved in the transfer, change, and conservation of energy</p>	<p>1. Identify various types of energy (e.g., heat, light, mechanical, electrical, chemical, nuclear).</p> <p>2. Understand that heat energy can be transferred through conduction, radiation and convection.</p> <p>3. Know that there are many forms of energy transfer but that the total amount of energy is conserved (i.e., that energy is neither created nor destroyed).</p> <p>4. Understand that some energy travels as waves (e.g., seismic, light, sound), including:</p> <ul style="list-style-type: none"> <li>✓ the sun as source of energy for many processes on Earth</li> <li>✓ different wavelengths of sunlight (e.g., visible, ultraviolet, infrared)</li> <li>✓ vibrations of matter (e.g., sound, earthquakes)</li> <li>✓ different speeds through different materials.</li> </ul>	<p>Understand that energy changes form but is never lost.</p> <p>Conduction Convection Radiation Conservation Heat Light Mechanical Electrical Chemical Nuclear Wave Ultraviolet Infrared visible</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Workbook</b> 165-170 <b>Assessment</b> Book 97-100</p> <p><b>Workbook</b> 157-162 <b>Assessment</b> Book 93-96</p>	<p><b>Dewey Decimal</b> 531 to 539 for videos or library</p> <p>AIMS Chemistry Matters</p> <p><a href="http://education.jlab.org/vo/cabhangman/">http://education.jlab.org/vo/cabhangman/</a> Vocabulary Practice</p> <p><a href="http://www.think-energy.com/ThinkEnergy/11-14/activities/EnergyTrans2.aspx">http://www.think-energy.com/ThinkEnergy/11-14/activities/EnergyTrans2.aspx</a> Energy Transformation</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p>Example (for #1): <b>TM</b> p. 304-305 Sources of Energy; 479-480 How Can Energy Change?; 500 What Can You Observe about Heat and Sunlight? <b>Activity Book</b> 203-204</p> <p>Example (for #2) <b>TM</b> p. 502-509 How Is Thermal Energy Transferred?</p> <p>Example (for #3) <b>TM</b> 480-</p>

				<p>481 Energy Changes</p> <p>Example (for #4) <b>TM</b> 170-171 How Do Organisms Get Energy?; 511 Electromagnetic Spectrum; 228-229 Earthquakes; 512 Absorption of Light; 236 Fishing with Sound</p> <p><b><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a></b>  <b>Vocabulary Cards</b>  <b>Graphic Organizer Trans</b>  <b>Online Student and Teacher Editions</b>  <b>Audio Text CDs</b>  <b>Eng/Span</b>  <b>Mindpoint Quiz Show</b>  <b>Science Games</b>  <b>Discovery Channel DVDs</b>  <b>Online Lesson Planner</b></p>
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## Stand II – Content of Science **PHYSICAL SCIENCE**

**Standard I):** Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

Essential Question: How does gravity affect our planet and our lives?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p><b>Strand II:</b> <b>Content of Science</b></p> <p><b>PHYSICAL SCIENCE</b> <b>Forces of Matter</b></p> <p><b>Benchmark III:</b> Describe and explain forces that produce motion in objects.</p>	<p>1. Know that every object exerts gravitational force on every other object dependent on the masses and distance of separation (e.g., motions of celestial objects, tides).</p> <p>2. Know that gravitational force is hard to detect unless one of the objects (e.g., Earth) has a lot of mass.</p>	<p>Understand that the greater the mass and the closer the mass, the greater the gravitational pull.</p> <p>Mass Gravity Gravitational force Exerts</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Workbook</b> p. 143 <b>Assessment Book</b> p. 87</p>	<p><b>Dewey Decimal</b> 531.14 for videos or library</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p><a href="http://spaceplace.jpl.nasa.gov/en/kids/lisaxword/lisaxword.shtml#">http://spaceplace.jpl.nasa.gov/en/kids/lisaxword/lisaxword.shtml#</a> Gravity Article and Interactive Crossword</p> <p><a href="http://www.sciencetoymaker.org/tightrope/index.html">http://www.sciencetoymaker.org/tightrope/index.html</a> Center of Gravity Toy</p> <p>Example (for #1): <b>TM</b> p. 276 River Systems; 428-431 How Does Gravity Affect Objects?; 538-541 What Are the Effects of ...Earth and Moon?;</p> <p>Example (for #2) <b>TM</b> p. 428-431 How Does Gravity Affect Objects?</p> <p><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a> <b>Vocabulary Cards</b> <b>Graphic Organizer Trans</b> <b>Online Student and Teacher Editions</b> <b>Audio Text CDs Eng/Span</b> <b>Mindpoint Quiz Show</b> <b>Science Games</b> <b>Discovery Channel DVDs</b> <b>Online Lesson Planner</b></p>

## Strand II Content of Science – LIFE SCIENCE

**Standard II (Life Science):** Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.

Essential Question: How do the physical characteristics of a plant or an animal show how the organism has adapted to the environment?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p><b>Strand II:</b> <b>Content of Science</b></p> <p><b>LIFE SCIENCE</b> <b>Forms &amp; Structure</b></p> <p><b>Benchmark I:</b> Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.</p>	<p>1. Understand how organisms interact with their physical environments to meet their needs (i.e., food, water, air) and how the water cycle is essential to most living systems.</p> <p>2. Describe how weather and geologic events (e.g., volcanoes, earthquakes) affect the function of living systems.</p> <p>3. Describe how organisms have adapted to various environmental conditions.</p>	<p>Understand that organisms adapt to changes in their physical environment.</p> <p>Vocabulary: Adaptation Function Environment Interact Geologic</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Assessment Book 1-4</b> <b>Workbook 61-69</b> <b>Workbook 53-56</b> <b>Assessment Book 21-24</b></p>	<p><b>Dewey Decimal</b> 553.7, 571.8, 574.5, 551 to 551.7, 560 for videos or library</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p><a href="http://earthobservatory.nasa.gov/Laboratory/Bio/me/plantindex.html">http://earthobservatory.nasa.gov/Laboratory/Bio/me/plantindex.html</a> Match Plants to Biomes</p> <p><a href="http://sv.berkeley.edu/showcase/flash/fish.html">http://sv.berkeley.edu/showcase/flash/fish.html</a> Adaptation</p> <p>Example (for #1): <b>TM</b> p 6-8 Where on Earth Do Organisms Live? p 185 The Water Cycle <b>Workbook</b> p. 4</p> <p>Example (for #2) <b>TM</b> p148-153 What Are Earth's Biomes? 186-187 How Do Ecosystems Change? 228-231 Earthquakes Volcanoes</p> <p>Example (for #3) <b>TM</b> 8-9 Variety Among Living Things; p. 13 The Six Kingdoms</p> <p><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a> <b>Vocabulary Cards</b> <b>Graphic Organizer Trans</b> <b>Online Student and Teacher Editions</b> <b>Audio Text CDs Eng/Span</b> <b>Mindpoint Quiz Show</b> <b>Science Games</b> <b>Discovery Channel DVDs</b> <b>Online Lesson Planner</b></p>

Essential Question: How can you prove that plants and animals show how that organism has adapted to changing environmental conditions for thousands of years?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p><b>Strand II:</b> <b>Content of Science</b></p> <p><b>LIFE SCIENCE</b> <b>Life Forms in the Environment</b></p> <p><b>Benchmark II;</b> Understand how traits are passed from one generation to the next and how species evolve</p>	<p>1. Understand that the fossil record provides data for how living organisms have evolved.</p> <p>2. Describe how species have responded to changing environmental conditions over time (e.g., extinction, adaptation)..</p>	<p>Understand that fossils show that species have adapted in response to changing environments over time.</p> <p>Vocabulary: Fossil record Extinction evolution</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Workbook</b> p. 64 <b>Assessment Book</b> p 44</p>	<p><b>Dewey Decimal</b> 575.1 to 576.8, 560 for videos or library</p> <p><a href="http://www.windows.ucar.edu/tour/link=/cool_stuff/tour_evolution_3.html">http://www.windows.ucar.edu/tour/link=/cool_stuff/tour_evolution_3.html</a> Fossil Evidence of Evolution</p> <p><a href="http://www.ucmp.berkeley.edu/education/explorations/tours/stories/index.html">http://www.ucmp.berkeley.edu/education/explorations/tours/stories/index.html</a> Stories From Fossil Record</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p>Example (for #1): <b>TM</b> p 253 Fossils, p 258-259 How Can You Make a Geologic Time Line?, p 264 Michael Novacek</p> <p>Example (for #2) <b>TM</b> p. 8-9 Variety Among Living Things, p 167-169 Why Do Adaptations Vary Among Species?</p> <p><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a> <b>Vocabulary Cards</b> <b>Graphic Organizer Trans</b> <b>Online Student and Teacher Editions</b> <b>Audio Text CDs Eng/Span</b> <b>Mindpoint Quiz Show</b> <b>Science Games</b> <b>Discovery Channel DVDs</b> <b>Online Lesson Planner</b></p>

Essential Question: How were fossil fuels formed from animal and plant cells?

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<p><b>Strand II:</b> <b>Content of Science</b></p> <p><b>LIFE SCIENCE</b> <b>Life Forms in the Environment</b></p> <p><b>Benchmark III:</b> Understand the structure of organisms and the function of cells in living systems.</p>	<p>1. Explain how fossil fuels were formed from animal and plant cells.</p> <p>2. Describe the differences between substances that were produced by living organisms (e.g., fossil fuels) and substances that result from nonliving processes (e.g., igneous rocks).</p>	<p>Understand that fossil fuels are created from living cells that were transformed by geological forces.</p> <p>Vocabulary:</p> <p>Fossil fuel Transform Trait Living Nonliving</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Workbook</b> 104-106 <b>Assessment Book</b> 56-57</p>	<p><b>Dewey Decimal</b> 621 and 622, 552, 662.6 for videos or library</p> <p><a href="http://aspen.laschools.net/zygmunt/Fossil%20Fuel%20site/index.html">http://aspen.laschools.net/zygmunt/Fossil%20Fuel%20site/index.html</a> Fossil Fuels Resource</p> <p><a href="http://www.windows.ucar.edu/tour/link=/earth/geology/geology.html">http://www.windows.ucar.edu/tour/link=/earth/geology/geology.html</a> Composition of Rocks</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p>Example (for #1): <b>TM</b> p 306-309 How Are Fossil Fuels Formed and Used? <b>Workbook</b> p 106</p> <p>Example (for #2) <b>TM</b> p. 13 The Six Kingdoms, p. 306-309 How Are Fossil Fuels Formed and Used?, p. 250-251 Rocks</p> <p><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a> <b>Vocabulary Cards</b> <b>Graphic Organizer Trans</b> <b>Online Student and Teacher Editions</b> <b>Audio Text CDs Eng/Span</b> <b>Mindpoint Quiz Show</b> <b>Science Games</b> <b>Discovery Channel DVDs</b> <b>Online Lesson Planner</b></p>

## Strand II Content of Science – EARTH AND SPACE SCIENCE

**Standard III (Earth and Space Science):** Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

Essential Question: How do planets, moons, stars and galaxies all behave in similar ways?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p><b>Strand II:</b> <b>Content of Science</b></p> <p><b>EARTH &amp; SPACE SCIENCE</b> <b>Universe/Solar System</b></p> <p><b>Benchmark I:</b> Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures</p>	<p><b>Universe</b> 1. Describe the objects in the universe, including:</p> <ul style="list-style-type: none"> <li>✓ billions of galaxies, each containing billions of stars</li> <li>✓ different sizes, temperatures, and colors of stars in the Milky Way galaxy.</li> </ul> <p><b>Solar System</b> 1. Locate the solar system in the Milky Way galaxy. 2. Identify the components of the solar system, and describe their defining characteristics and motions in space, including:</p> <ul style="list-style-type: none"> <li>✓ sun as a medium sized star</li> <li>✓ sun's composition (i.e., hydrogen, helium) &amp; energy production.</li> <li>✓ nine planets, their moons, asteroids.</li> </ul> <p>3. Know that the regular and predictable motions of the Earth-moon-sun system explain phenomena on Earth, including:</p> <ul style="list-style-type: none"> <li>✓ Earth's motion in relation to a year, a day, the seasons, the phases of the moon, eclipses, tides, and shadows</li> </ul> <p>moon's orbit around Earth once in 28 days in relation to the phases of the moon.</p>	<p>Identify the characteristics and motions of objects in the universe and their effects on Earth.</p> <p>Vocabulary: Eclipse Tide Shadow Orbit Phase of moon Composition</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Workbook</b> 173-178 <b>Assessment Book</b> 115-118</p>	<p><b>Dewey Decimal</b> 520 to 525.5 for videos or library</p> <p><a href="http://www.windows.ucar.edu">http://www.windows.ucar.edu</a> Our Solar System Astronomy and the Universe</p> <p><a href="http://spaceplace.jpl.nasa.gov/en/kids/cool_subjects.shtml">http://spaceplace.jpl.nasa.gov/en/kids/cool_subjects.shtml</a> Cool Space Topics</p> <p><a href="http://www.exploratorium.edu/chaco/flash.html">http://www.exploratorium.edu/chaco/flash.html</a> Seasons and Alignments at Chaco Canyon (Sun Dagger)</p> <p><a href="http://www.nsta.org/awsdays">http://www.nsta.org/awsdays</a> Astronomy With a Stick- Daytime Astronomy Activities</p> <p>The Universe At Your Fingertips by A. Fraknoi (big white binder-part of sixth grade science materials)</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p>Example (for Universe): <b>TM</b> p. 559 The Universe, 564-567 What Do We Know About Stars?</p>

				<p>Example (for Solar System #1) <b>TM</b> p. 554-562 What is Earth's Place in Universe?</p> <p>Example (for Solar System #2) Chapter 19, Earth, Sun, Moon and Chapter 20 The Universe</p> <p>Example (for Solar System #3 TM p 538-543 What Are the Effects of the Movements of Earth and Moon?</p> <p><b><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a></b>  <b>Vocabulary Cards</b>  <b>Graphic Organizer Trans</b>  <b>Online Student and</b>  <b>Teacher Editions</b>  <b>Audio Text CDs Eng/Span</b>  <b>Mindpoint Quiz Show</b>  <b>Science Games</b>  <b>Discovery Channel DVDs</b>  <b>Online Lesson Planner</b></p>
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## Strand II Content of Science – EARTH AND SPACE SCIENCE

**Standard III (Earth and Space Science):** Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

Essential Question: How is the surface of the Earth continually being changed?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p><b>Strand II:</b> <b>Content of Science</b></p> <p><b>EARTH &amp; SPACE SCIENCE</b> <b>Earth</b></p> <p><b>Benchmark II:</b> Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.</p>	<p><b>Structure of Earth</b></p> <ol style="list-style-type: none"> <li>1. Know that Earth is composed of layers that include a crust, mantle, and core.</li> <li>2. Know that Earth's crust is divided into plates that move very slowly, in response to movements in the mantle.</li> <li>3. Know that sedimentary, igneous, and metamorphic rocks contain evidence of the materials, temperatures, and forces that created them.</li> </ol> <p><b>Weather and Climate</b></p> <ol style="list-style-type: none"> <li>1. Describe the composition (i.e., nitrogen, oxygen, water vapor) and strata of Earth's atmosphere, and differences between the atmosphere of Earth and those of other planets.</li> <li>2. Understand factors that create and influence weather and climate, including: <ul style="list-style-type: none"> <li>✓ heat, air movement, pressure, humidity, oceans</li> <li>✓ how clouds form by condensation of water vapor</li> <li>✓ how weather patterns are related to atmospheric pressure</li> <li>✓ global patterns of atmospheric movement</li> </ul> </li> </ol>	<p>Understand the composition of Earth's atmosphere, the factors that create and influence weather, the factors that create and change landforms, and how layers of sedimentary rock give us information about Earth's history.</p> <p>Vocabulary: Atmosphere Crust Mantle Core Sedimentary Igneous Metamorphic Tectonic plate Strata Nitrogen Oxygen Weather Climate Air pressure Humidity Condensation Global El Nino Barometric pressure Wind speed Landform Weathering Erosion</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> Unit B Test <b>Assessment Book</b> p 63-66 Performance Test Collecting Weather Data <b>Assessment Book</b> p 75-76</p>	<p><b>Dewey Decimal</b> 550 to 551.3, 552, 551.5 to 551.6 for videos or library</p> <p>AIMS Weather Sense</p> <p><a href="http://www.windows.ucar.edu/">http://www.windows.ucar.edu/</a> Our Planet</p> <p><a href="http://www.scotese.com/earth.htm">http://www.scotese.com/earth.htm</a> What Earth Looked Like Precambrian through Future</p> <p><a href="http://www.oar.noaa.gov/k12/html/forecasting2.html">http://www.oar.noaa.gov/k12/html/forecasting2.html</a> Interactive Forecasting Weather</p> <p><a href="http://www.fourmilab.ch/cgi-bin/uncgi/Earth/action?opt=-p">http://www.fourmilab.ch/cgi-bin/uncgi/Earth/action?opt=-p</a> Real Time View of Earth From Space</p> <p><a href="http://www.rgs.edu.sg/events/geotrip/bay.html">http://www.rgs.edu.sg/events/geotrip/bay.html</a> Formation of Headlands and Bays (Changes in Earth)</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p>Example (for Earth #1): <b>TM</b> p 212-217 What Are Earth's Layers Made Of? Workbook p 73 Activity Book p 101-102</p>

	<p>(e.g., El Niño)</p> <ul style="list-style-type: none"> <li>✓ factors that can impact Earth's climate (e.g., volcanic eruptions, impacts of asteroids, glaciers).</li> </ul> <p>3. Understand how to use weather maps and data (e.g., barometric pressure, wind speeds, humidity) to predict weather.</p> <p><b>Changes to Earth</b></p> <p>1. Know that landforms are created and change through a combination of constructive and destructive forces, including:</p> <ul style="list-style-type: none"> <li>✓ weathering of rock and soil, transportation, deposition of sediment, and tectonic activity</li> <li>✓ similarities and differences between current and past processes on Earth's surface (e.g., erosion, plate tectonics, changes in atmospheric composition)</li> <li>✓ impact of volcanoes and faults on New Mexico geology.</li> </ul> <p>2. Understand the history of Earth and how information about it comes from layers of sedimentary rock, including:</p> <ul style="list-style-type: none"> <li>✓ sediments and fossils as a record of a very slowly changing world</li> <li>✓ evidence of asteroid impact, volcanic and glacial activity.</li> </ul>	<p>Deposition Fault asteroid</p>	<p>Workbook p 74-75 How to Read Science: Draw Conclusions</p> <p>Example (for Earth #2) <b>TM</b> p. 218-223 Earth's Plates Workbook p 77</p> <p>Example (for Earth #3) TM 250-253 Rocks</p> <p>Example (for Weather #1) TM 327-329 What is Earth's Atmosphere? Workbook p 114</p> <p>Example (for Weather #2) Chapter 12 Climate and Weather 322-352</p> <p>Example (for Weather #3) TM 336-347 What Causes Weather and Climate?</p> <p>Example (for Changes #1) TM 224-227 How Do Scientists Explain Earth's Features? Chapter 10 p 266-288 Reshaping Earth's Surface, Chapter 8 Plate Tectonics p 210-240</p> <p>Example (for Changes #2) TM 252-253 Clues to the Past, p 230-231 Volcanoes,</p> <p><b><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a></b>  <b>Vocabulary Cards</b>  <b>Graphic Organizer Trans</b>  <b>Online Student and Teacher Editions</b>  <b>Audio Text CDs Eng/Span</b>  <b>Mindpoint Quiz Show</b>  <b>Science Games</b>  <b>Discovery Channel DVDs</b>  <b>Online Lesson Planner</b></p>
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**Strand III Science & Society – DISCOVER / INVENT Scientific Influence**

**Standard I:** Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.

Essential Question: How had technology changed your family's life from your grandparent's time to yours?

Category	Sixth Grade	End Learning Mastery	Assessment(s)	Resources
<p><b>Strand III: Science and Society</b></p> <p><b>Discover / Invent Scientific Influence</b></p> <p><b>Benchmark I:</b> Explain how scientific discoveries and inventions have changed individuals and societies</p>	<p>1. Examine the role of scientific knowledge in decisions (e.g., space exploration, what to eat, preventive medicine and medical treatment).</p> <p>2. Describe the technologies responsible for revolutionizing information processing and communications (e.g., computers, cellular phones, Internet).</p>	<p>Understand how science helps us understand current issues and how technology has affected people's lives.</p>	<p><b>Success Tracker</b> <b>Exam View Test Bank CD</b> <b>Workbook</b> 189-192 <b>Assessment Book</b> 123-126</p>	<p><b>Dewey Decimal</b> 500, 540.9, 608 to 610 for videos or library</p> <p>See <b>Correlation Pamphlet</b> for specific teachers' manual page numbers that correlate with each standard.</p> <p><a href="http://www.nasaexplores.com/show2_5_8a.php?id=01-022&amp;gl=58">http://www.nasaexplores.com/show2_5_8a.php?id=01-022&amp;gl=58</a> No Pizza in Space? Article and Design a menu</p> <p><a href="http://smithsonianeducation.org/students/idealabs/walking_on_the_moon.html">http://smithsonianeducation.org/students/idealabs/walking_on_the_moon.html</a> Apollo Mission Movie</p> <p><a href="http://ksnn.larc.nasa.gov/21Century/p3.html">http://ksnn.larc.nasa.gov/21Century/p3.html</a> How Would Your Body Change in Space? Article</p> <p><a href="http://www.tryscience.com/experiments/experiments_begin.html?robot">http://www.tryscience.com/experiments/experiments_begin.html?robot</a> Amazing Robot-Program It to Pick Up Toxic Waste</p> <p><a href="http://faculty.washington.edu/chudler/neurok.html">http://faculty.washington.edu/chudler/neurok.html</a> Neuroscience for Kids</p> <p>Example (for #1): <b>TM</b> p 102-105 How Do</p>

				<p>Systems Keep the Body Healthy? Workbook p 38</p> <p>Example (for #2) <b>TM</b> p 583-585 What Is a Robot?</p> <p><b><a href="http://sfsuccessnet.com">http://sfsuccessnet.com</a></b>  <b>Vocabulary Cards</b>  <b>Graphic Organizer Trans</b>  <b>Online Student and Teacher Editions</b>  <b>Audio Text CDs Eng/Span</b>  <b>Mindpoint Quiz Show</b>  <b>Science Games</b>  <b>Discovery Channel DVDs</b>  <b>Online Lesson Planner</b></p>
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## BIBLIOGRAPHY

### Scott Foresman Materials:

Name of Resource:	Abbreviated or Referenced as:	Uses:
Correlation Scott Foresman Science New Mexico Science Grade 6 Teacher's Editions New Mexico ExamView Test Generator CD ROM New Mexico Standards-Based Assessment for Science Teacher's Guide New Mexico Success Tracker Online Package Bulletin Board Kits Vocabulary Cards Leveled Readers Blackline Masters and NM Teacher's Guide Science Content Transparencies Quick Activity Transparencies Assessment Book Every Student Learns Teacher's Guide Quick Study Intervention Teacher's Guide Workbook and WB Answer Key Activity Book Blackline Master and Teacher's Guide Audio Text CD's Science Games by Knowledge Box CDjROM MindPoint Quiz Show CDROM Teacher and Student Online Edition Access Pack	Correlation Pamphlet TM Exam View  Success Tracker  Vocabulary Cards   Assessment Book   Workbook  Activity Book  Science Games Mindpoint Quiz Show Online Student and Teacher Editions	Lists page numbers for each standard 2 volumes per grade level Create, print or grade tests online Practice for NMSBA  Tracks data by student, class, etc Premade Kit for Physical, Earth, etc. Picture/vocab on front, definition on back  Reinforces Leveled Reader content Color transparencies for each chapter Quick engage activity for each lesson Chapter, Unit Tests, intervention, writing Activate knowledge, access content, extend Lesson Summaries for review or absences Vocab,Read,Math, content support  Recording sheets for activities, process skill Audio Text in Eng and Span Interactive software video,games,puzzles Review content in game-show format For studentsLink to all book pages, success Tracker, Online leveled readers, online resources For teacher, access to online teacher and student edition, printable worksheets, answer keys, online resources
Leveled Readers Online Access Pack		Link to searchable database for all leveled readers, teacher guides, worksheets Visual guide to activities, prep, manage Videos to enhance content
Activity DVD's Discovery Channel School Student DVD Discovery Channel Professional Development DVD Package and Teacher's Edition	Discovery Channel DVDs  1 per building	Prep for teaching concepts

**Online Resources (listed in order of standards):**

**Website**

**Standard**

<http://scienceview.berkeley.edu/showcase/>

Interactive Science Activities

**Scientific Thinking and Practice**

<http://www.sciserv.org/isef/document/index.asp>

Rules and Regulations, Student Handbook, Forms to Download for Science Fair

<http://nces.ed.gov/nceskids/Graphing/>

Create printable graphs and charts

<http://www.sciencenewsforkids.org/pages/puzzlezone/muse/muse1101.asp>

Article about decoding bar codes

<http://www.aimsedu.org/>

AIMS website

<http://www.webelements.com>

Periodic Table Interactive

**Physical Science**

<http://www.quia.com/jg/65539.html>

40 Elements Match Activity

[http://www.chem4kids.com/files/eleme\\_families.html](http://www.chem4kids.com/files/eleme_families.html)

Properties of Matter

<http://education.jlab.org/vocabhangman/>

Vocabulary Practice

<http://www.think-energy.com/ThinkEnergy/11-14/activities/EnergyTrans2.aspx>

Energy Transformation

<http://spaceplace.jpl.nasa.gov/en/kids/lisaxword/lisaxword.shtml#>

Gravity Article and Interactive Crossword

<http://www.sciencetoymaker.org/tightrope/index.html>

Center of Gravity Toy

<http://earthobservatory.nasa.gov/Laboratory/Biome/plantindex.html>

Match Plants to Biomes

**Life Science**

<http://sv.berkeley.edu/showcase/flash/fish.html>

Adaptation

[http://www.windows.ucar.edu/tour/link=/cool\\_stuff/tour\\_evolution\\_3.html](http://www.windows.ucar.edu/tour/link=/cool_stuff/tour_evolution_3.html)

Fossil Evidence of Evolution

<http://www.ucmp.berkeley.edu/education/explorations/tours/stories/index.html>

Stories From Fossil Record

<http://aspen.laschools.net/zygmunt/Fossil%20Fuel%20site/index.html>

Fossil Fuels Resource

<http://www.windows.ucar.edu/tour/link=/earth/geology/geology.html>

Composition of Rocks

<http://www.windows.ucar.edu>

Our Solar System

Astronomy and the Universe

[http://spaceplace.jpl.nasa.gov/en/kids/cool\\_subjects.shtml](http://spaceplace.jpl.nasa.gov/en/kids/cool_subjects.shtml)

Cool Space Topics

<http://www.exploratorium.edu/chaco/flash.html>

Seasons and Alignments at Chaco Canyon (Sun Dagger)

<http://www.nsta.org/awsday>

Astronomy With a Stick-Daytime Astronomy Activities

<http://www.windows.ucar.edu/>

Our Planet

<http://www.scotese.com/earth.htm>

What Earth Looked Like Precambrian through Future

<http://www.oar.noaa.gov/k12/html/forecasting2.html>

Interactive Forecasting Weather

<http://www.fourmilab.ch/cgi-bin/uncgi/Earth/action?opt=-p>

Real Time View of Earth From Space

<http://www.rgs.edu.sg/events/geotrip/bay.html>

Formation of Headlands and Bays (Changes in Earth)

[http://www.nasaexplores.com/show2\\_5\\_8a.php?id=01-022&gl=58](http://www.nasaexplores.com/show2_5_8a.php?id=01-022&gl=58)

No Pizza in Space? Article and Design a menu

## Earth and Space Science

[http://smithsonianeducation.org/students/idealabs/walking\\_on\\_the\\_moon.html](http://smithsonianeducation.org/students/idealabs/walking_on_the_moon.html)

Apollo Mission Movie

<http://ksnn.larc.nasa.gov/21Century/p3.html>

How Would Your Body Change in Space? Article

[http://www.tryscience.com/experiments/experiments\\_begin.html?robot](http://www.tryscience.com/experiments/experiments_begin.html?robot)

Amazing Robot-Program It to Pick Up Toxic Waste

<http://faculty.washington.edu/chudler/neurok.html>

Neuroscience for Kids

### Other Resources:

AIMS Weather Sense

in school libraries—there are two volumes

AIMS Chemistry Matters

in school libraries or grade levels

The Universe At Your Fingertips

issued as curriculum material at last science adoption

Foss Kit Variables

issued as curriculum material at last science adoption

Dewey Decimal Numbers

Look up videos in the CMC video catalog (ask your librarian)

Look up books in the library

Science Fair:

<http://www.sciserv.org/isef/document/index.asp>

Rules and Regulations, Student Handbook, Forms to Download