



SCIENCE

A CLOSER LOOK

Grade 5

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STANDARDS	PAGE REFERENCES
<p>Standard 5.2 (Science and Society) All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.</p> <p><i>Cultural Contributions</i></p>	<p>Student Edition: 4-11, 126-127, 252, 442-443, 452, 490, 495, 588-589 <i>Careers in Science</i> 472 <i>Explore</i> 3 <i>Reading in Science</i> 44-45, 176-177, 500-501, 580-581, 674-675</p> <p>Teacher Wraparound Edition: CE 589; SB 22, 34</p>
<p><i>Historical Perspectives</i></p> <p>Hear, read, write and talk about scientists and inventors in historical context.</p>	<p>Student Edition: 126-127, 252, 442-443, 452, 490, 495, 588-589 <i>Reading in Science</i> 500-501, 580-581</p> <p>Teacher Wraparound Edition: DIF 443, 491; 34; HA 452; SB 22, 490</p>

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<p>Standard 5.4 (Nature and Process of Technology) All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.</p>	
<p><i>Technological Design</i></p>	
<p>Identify and define the basic components of a technological system:</p> <ul style="list-style-type: none"> input process output feedback 	<p>The following pages can be used to meet this standard.</p> <p>Student Edition: 75, 80, 332-333 <i>Human Body Systems</i> R17, R20 <i>Reading in Science</i> 352-353</p> <p>Teacher Wraparound Edition: DIF 75, 333; IR 353</p>
<p>Standard 5.5 (Characteristics of Life) All students will gain an understanding of structure, characteristics and basic needs of organisms and will investigate the diversity of Life.</p>	
<p><i>Matter, Energy, and Organization in Living Systems</i></p>	
<p>Describe the basic structures and functions of the major systems of the human body including, but not limited to:</p> <ul style="list-style-type: none"> Digestive System Circulatory System Respiratory System Nervous System Skeletal System Muscular System Reproductive System 	<p>Student Edition: 74-80 <i>Be a Scientist</i> 82-83 <i>Explore</i> 73 <i>Human Body Systems</i> R10-R20 <i>Quick Lab</i> 77</p> <p>Teacher Wraparound Edition: DIF R10; ELLS 78</p>
<p>Explain how systems of the human body are interrelated and regulate the body's internal environment.</p>	<p>Student Edition: 74-80 <i>Be a Scientist</i> 82-83 <i>Human Body Systems</i> R10-R20</p> <p>Teacher Wraparound Edition: DIF 75; FA 81; SB 77</p>
<p><i>Diversity and Biological Evolution</i></p>	
<p>Describe and give examples of the major categories of organisms and of the characteristics shared by organisms.</p>	<p>Student Edition: 22-23, 34-41 <i>Explore</i> 33</p> <p>Teacher Wraparound Edition: DIF 23, 35, 36</p>

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Reproduction and Heredity	
Describe and illustrate the life cycle of humans.	The following pages can be used to meet this standard. Student Edition: 90, 116, 117-118 Teacher Wraparound Edition: DI 91
Standard 5.6 (Physical Science - Chemistry) All students will gain an understanding of the structure and behavior of matter.	
Structure and Properties of Matter	
Recognize that about 100 different elements have been identified and most materials on Earth are made of a few of them.	Student Edition: 302, 490-491, 494-497 Teacher Wraparound Edition: DIF 491, 496; HA 498; TR23; WU 488
Observe and demonstrate that equal volumes of different substances usually have different masses .	Student Edition: 480-481, 482 <i>Explore</i> 479 Teacher Wraparound Edition: AE 478; DIF 481
Describe the properties of mixtures and solutions .	Student Edition: 530-536 <i>Be a Scientist</i> 538-539 <i>Explore</i> 529 <i>Quick Lab</i> 533 Teacher Wraparound Edition: DIF 534; ELLS 530
Chemical Reactions	
Combine two or more materials and show that the new material may have properties that are different from the original material.	Student Edition: 544-548 <i>Explore</i> 541 <i>Math in Science</i> 551 <i>Quick Lab</i> 547 Teacher Wraparound Edition: AE 541; ELLS 547

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Standard 5.7 (Physical Science – Physics) All students will gain an understanding of natural laws as they apply to motion, forces and energy transformations.	
<i>Motion and Forces</i>	
Recognize that an object in motion can have its speed decreased or stopped by a force such as friction .	Student Edition: 585, 586-589 <i>Focus On Skills</i> 594-595 Teacher Wraparound Edition: DIF 588; ELLS 586
Identify the factors that determine the friction force between two surfaces.	Student Edition: 587 Teacher Wraparound Edition: DIF 587, 588; ELLS 586
Recognize that friction such as air resistance is a factor that affects motion of falling objects.	Student Edition: 587, 588 <i>Explore</i> 583 Teacher Wraparound Edition: DIF 588
<i>Energy Transformation</i>	
Identify sound as a form of energy caused by the vibration of various materials.	Student Edition: 638-646 <i>Be a Scientist</i> 648-649 <i>Explore</i> 637 <i>Quick Lab</i> 641 Teacher Wraparound Edition: AE 637; DIF 639, 640; WU 636
Demonstrate vibrations transferring energy from one place to another.	Student Edition: <i>Explore</i> 637 <i>Quick Lab</i> 641 Teacher Wraparound Edition: AE 637; DIF 641
Explain how circuits allow electricity to flow through a closed circuit and not through an open circuit .	Student Edition: 668-671 <i>Explore</i> 665 <i>Quick Lab</i> 669 Teacher Wraparound Edition: DIF 669, 671; ELLS 668, 670

STANDARDS	PAGE REFERENCES
Compare and contrast a series circuit and a parallel circuit .	Student Edition: 671 Teacher Wraparound Edition: ELLS 670; UV 671
Standard 5.8 (Earth Science) All students will gain an understanding of the structure, dynamics, and geophysical systems of the earth.	
<i>Atmosphere and Water</i>	
Describe and illustrate the water cycle.	Student Edition: 184-185 <i>Explore</i> 183 Teacher Wraparound Edition: AE 183; DIF 185
<i>Processes that Shape the Earth</i>	
Describe the rock cycle, the forces that change rocks and the changes that occur.	Student Edition: 306-307 Teacher Wraparound Edition: DIF 307; ELLS 306; IW 280; UV 307
<i>How We Study the Earth</i>	
Utilize various tools such as map projections and topographical maps to interpret features of the Earth's surface.	Student Edition: 208-214, 244-245 <i>Careers in Science</i> 356 <i>Focus On Skills</i> 248-249 <i>Quick Lab</i> 243 Teacher Wraparound Edition: DIF 244; HA 246; TR18, TR19
Standard 5.10 (Environmental Studies) All students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.	
<i>Natural Systems and Interactions</i>	
Explain how organisms interact with other components of an ecosystem .	Student Edition: 142-150, 156-162 <i>Explore</i> 155 <i>Quick Lab</i> 157 <i>Writing in Science</i> 152 Teacher Wraparound Edition: AE 155; DIF 143; ELLS 160

STANDARDS	PAGE REFERENCES
<i>Human Interactions and Impact</i>	
Describe the effect of human activities on various ecosystems .	<p>Student Edition: 197, 348-349 <i>Focus on Skills</i> 204-205 <i>Quick Lab</i> 198 <i>Writing in Science</i> 228</p> <p>Teacher Wraparound Edition: HA 350; SB 188; TR46</p>