



Science

LEVEL RED

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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>Cultural Contributions</p>	
<p>Describe how people from different cultures have made and continue to make contributions to science and technology.</p>	<p>Student Edition: <i>Science and History</i> 34, 90, 218, 582 <i>National Geographic</i> 108 <i>Integrate Career</i> 442 Teacher Wraparound Edition: CD 75, 145, 149, 166, 238, 479; DI 205; TFYI 172; UP 253</p>
<p>Historical Perspectives</p>	
<p>Hear, read, write and talk about scientists and inventors in historical context.</p>	<p>Student Edition: 99-105 <i>Science and History</i> 34, 90, 120 <i>Integrate History</i> 99, 174, 198 <i>Science Online</i> 140 Teacher Wraparound Edition: CC 15, 47, 99; DI 110; DIS 604; V 108; VL 103</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 a technological problem and describe the criteria and constraints that are addressed in solving the problem.</p>	<p>Student Edition: <i>Use the Internet Lab</i> 152-153, 430-431 <i>Lab</i> 414 <i>Design Your Own Lab</i> 464-465, 668-669 <i>Model and Invent Lab</i> 550-551 <i>Applying Science</i> 665 Teacher Wraparound Edition: A 414; ACT 432; IL 263, 353; MM 542; UP 127, 405, 615</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>Identify and describe the structure and function of cells and cell parts.</p>	<p>Student Edition: 476-481, 483-487 <i>Launch Lab</i> 475 <i>MiniLAB</i> 480, 484 <i>Lab</i> 482 Teacher Wraparound Edition: A 484; ACT 478; CFU 487; DI 479, 485; MM 478; QD 477; SCB 474E-F; UAA 479</p>
<p><i>Diversity and Biological Evolution</i></p>	
<p>Compare and contrast acquired and inherited characteristics in humans and other species.</p>	<p>Student Edition: 535-539, 541-544, 545-549, 599-605 <i>MiniLAB</i> 546 Teacher Wraparound Edition: A 534; CFU 511, 539, 544, 549; DI 533; QD 536, 547; TPK 535; VL 541</p>
<p><i>Reproduction and Heredity</i></p>	
<p>Summarize and illustrate the life cycle of humans.</p>	<p>Student Edition: 574-579, 585 #23 <i>MiniLAB</i> 578 Teacher Wraparound Edition: A 578, 579; ACT 577; CFU 579; DI 578; MM 578</p>

STANDARDS	PAGE REFERENCES
Describe life cycles of organisms other than humans.	Student Edition: 503, 513, 537 <i>Science Online</i> 513 <i>Communicating Your Data</i> 519 <i>Lab</i> 519, 540 Teacher Wraparound Edition: A 519; ACT 537; DI 621; IL 513; VL 513
Standard 5.6 (Physical Science - Chemistry) All students will gain an understanding of the structure and behavior of matter.	
<i>Structure and Properties of Matter</i>	
Describe the properties of mixtures and solutions, including concentration and saturation .	Student Edition: 115-117 <i>Applying Science</i> 115 <i>Science Online</i> 116 <i>Applying Skills</i> 117 <i>Integrate Earth Science</i> 117 <i>Lab</i> 118-119 Teacher Wraparound Edition: A 117; ACT 116; CC 116; CFU 117; DI 115, 116; QD 116; R 117; USW 116
Describe typical physical properties of matter e.g., boiling point , melting point and solubility . Observe and recognize that a property is independent of the amount of sample.	Student Edition: 70-79 <i>Launch Lab</i> 69 <i>Science Online</i> 72 <i>MiniLAB</i> 73 <i>Lab</i> 87 Teacher Wraparound Edition: A 79; ACT 77; DI 78; LD 72; QD 75; R 79; SCB 68E; VL 76
<i>Chemical Reactions</i>	
Observe and recognize evidence of a chemical change .	Student Edition: 80-86 <i>MiniLAB</i> 84 <i>Applying Science</i> 85 <i>Design Your Own Lab</i> 88-89 Teacher Wraparound Edition: A 86, 89; ACT 83; DI 83; DIS 84; IL 85; QD 82; R 86; SCB 68E; SJ 83; UAA 82

STANDARDS	PAGE REFERENCES
<p>Standard 5.7 (Physical Science – Physics) All students will gain an understanding of natural laws as they apply to motion, forces and energy transformations.</p>	
<p><i>Motion and Forces</i></p>	
<p>State and apply Newton’s First Law of Motion, the Law of Inertia.</p>	<p>Student Edition: 138-139, 159 #18, 159 #21 <i>National Geographic</i> 142 <i>Section Review</i> 143 <i>Lab</i> 151 Teacher Wraparound Edition: A 143; CFU 143; DI 142; IL 141; IM 128F; LD 141; SCB 128E</p>
<p>State and apply Newton’s Second Law of Motion explaining how friction and mass are related to acceleration.</p>	<p>Student Edition: 140-141, 159 #25 <i>Applying Math</i> 140, 143 <i>National Geographic</i> 142 <i>Science Review</i> 143 Teacher Wraparound Edition: A 143; DI 142; IL 141; LD 141; SCB 128E</p>
<p>State and apply Newton’s Third Law of Motion (action and reaction).</p>	<p>Student Edition: 141-143, 159 #24 <i>National Geographic</i> 142 Teacher Wraparound Edition: A 143; CFU 143; DI 142; DIS 141; SCB 128E; TFYI 142; V 142</p>
<p>Recognize that every object exerts a gravitational force on every other object, depending on their mass and distance from each other.</p>	<p>Student Edition: 323, 417 <i>Launch Lab</i> 5 Teacher Wraparound Edition: DIS 134; ML 421</p>
<p><i>Energy Transformation</i></p>	
<p>Recognize heat as a form of energy that moves from warmer objects to cooler objects.</p>	<p>Student Edition: 173-177, 189 #21, 191 #23 Teacher Wraparound Edition: A 177; AIL 184; CD 176; LD 174; TFYI 175; VL 173</p>
<p>Describe how conduction, convection, and radiation transfer heat from one place to another.</p>	<p>Student Edition: 174-177, 191 #21, 230 Teacher Wraparound Edition: A 177; QD 175; R 177</p>

STANDARDS	PAGE REFERENCES
Explain sound as a form of energy that travels through matter as waves .	Student Edition: 226-230, 231-235, 237-243, 251 #19 Teacher Wraparound Edition: CB 246; DIS 227
Explain how the speed of sound changes in different materials.	Student Edition: <i>Science Online</i> 235 Teacher Wraparound Edition: ACT 243
Explain how frequency and pitch are related.	Student Edition: 233-235 Teacher Wraparound Edition: A 235; DI 233, 234; DIS 233; QD 234
Explain how circuits allow electricity to flow through a closed circuit and not through an open circuit .	Student Edition: 201-208, 223 #12, #16 Teacher Wraparound Edition: CFU 208; IM 204; QD 203
Compare and contrast a series circuit and a parallel circuit .	Student Edition: 208, 223 #11 <i>Lab</i> 215 Teacher Wraparound Edition: A 215; ACT 202; CYD 215; DI 202; LD 207
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 the composition, circulation, and distribution of the world's oceans, estuaries and marine environments .	Student Edition: 374-378, 380-384 <i>Launch Lab</i> 373 <i>Science Online</i> 377, 381 <i>MiniLAB</i> 383 <i>Science Stats</i> 391 <i>Applying Math</i> 401 Teacher Wraparound Edition: DI 346; IM 372F; LD 382; QD 375; SCB 372E; TFYI 381

STANDARDS	PAGE REFERENCES
<p>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.</p>	
<p><i>Natural Systems and Interactions</i></p>	
<p>Describe the natural process that occurs over time in places where direct human impact is minimal.</p>	<p>Student Edition: 389-395* <i>Science Online</i> 181, 620 <i>National Geographic</i> 621</p> <p>Teacher Wraparound Edition: ACT 391; CC 391; CFU 625; DI 324; V 621 * These references discuss different natural processes that occur in remote environments without mentioning succession.</p>
<p><i>Human Interactions and Impact</i></p>	
<p>Evaluate the impact of personal activities on the local environment.</p>	<p>Student Edition: 655-662, 663-667 <i>MiniLAB</i> 664 <i>Applying Science</i> 665 <i>Science and Society</i> 670</p> <p>Teacher Wraparound Edition: A 662; ACT 657, 660; CC 661; DI 657; IL 659; QD 661, 666; R 667; SJ 670</p>