



SCIENCE

A CLOSER LOOK

Grade 2

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| STANDARDS | PAGE REFERENCES |
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| <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>Describe how science and technology contribute to solving problems.</p> | <p>Student Edition: 44-45, 242-243 <i>Careers in Science</i> 354, 434 <i>Talk About It</i> 243</p> <p>Teacher Wraparound Edition: BR 44; DR 44; ELLS 44, 242; ER 243; IW 354; TAI 243, 434; WAI 434</p> |
| <p><i>Historical Perspectives</i></p> | |
| <p>Identify scientists and inventors throughout history.</p> | <p>Contemporary scientists are discussed on the following pages:</p> <p>Student Edition: 66-67, 82, 110-111, 126-127, 374-375</p> <p>Teacher Wraparound Edition: AR 111, 127; BR 66, 126; DR 66, 110, 126; LAI 82, SB 368; TAI 82</p> |

| STANDARDS | PAGE REFERENCES |
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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>Nature of Technology</i></p> | |
| <p>Select materials and use simple tools to complete a task.</p> | <p>Student Edition: 304-305, 380-381 <i>Explore</i> 385, 421 <i>Quick Lab</i> 304, 380, 403, 407</p> <p>Teacher Wraparound Edition: BS 389A-389B; DI 311, R3; E 385, 421; ELLS R2; IW 389A; QL 304, 380, 403, 407</p> |
| <p><i>Technological Design</i></p> | |
| <p>Formulate a plan to solve a problem.</p> | <p>Student Edition: 4-5, 13, 315 <i>Explore</i> 405, 421 <i>Math in Science</i> 75, 383 <i>Quick Lab</i> 380 <i>Solve a Problem</i> 37 <i>Think, Talk, and Write</i> 389</p> <p>Teacher Wraparound Edition: DMI 4; E 405, 421; ELLS 12; LAI 37, 75; MIS 383; QL 380; TAI 37; TI 365B; UV 5</p> |
| <p>Describe a familiar object as a system with parts that work together.</p> | <p>Student Edition: 380-381, 426-427 <i>Talk About It</i> 427 <i>Think, Talk, and Write</i> 381</p> <p>Teacher Wraparound Edition: AR 427; BR 426; DR 426; ER 427; ES 426; TAI 427</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>Compare and contrast essential characteristics that distinguish living things from non-living things.</p> | <p>Student Edition: <i>Look and Wonder</i> 22</p> <p>Teacher Wraparound Edition: LW 22</p> |

| STANDARDS | PAGE REFERENCES |
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| Identify the basic needs of humans and other organisms. | Student Edition: 24-27, 56, 77 <i>Explore</i> 23 Teacher Wraparound Edition: E 23; ELLS 24; DI 25; DMI 24, 56; WLTN TR56 |
| Distinguish between plant and animal . | Student Edition: 27 <i>Think, Talk, and Write</i> 27 Teacher Wraparound Edition: SB 24; URS 27 |
| Diversity and Biological Evolution | |
| Recognize that different types of plants and animals live in different parts of the world and that camouflage relates to survival. | Student Edition: 68-69, 71, 78-79 <i>Explore</i> 69 <i>Look and Wonder</i> 68 <i>Read a Photo</i> 71 Teacher Wraparound Edition: AE 69; DMI 70; DV 71; E 69; ELLS 70; LW 68; RAP 71; WU 68 |
| Identify and describe some organisms that once lived on Earth that have completely disappeared: extinct organisms . | Student Edition: 109 <i>Think, Talk, and Write</i> 109 #3 Teacher Wraparound Edition: DV108 |
| Reproduction and Heredity | |
| Recognize that humans and other organisms resemble their parents and give descriptions of the resemblance. | Student Edition: 40-41, 78 <i>Math in Science</i> 75 Teacher Wraparound Edition: AE 61; DMI 40; DV 41; E 61; ELLS 40; FA 43; MIS 75 |
| Standard 5.6 (Physical Science - Chemistry) All students will gain an understanding of the structure and behavior of matter. | |
| Structure and Properties of Matter | |
| Use magnifiers to observe materials, and describe what can be seen more clearly. | Student Edition: <i>Explore</i> 135, 171, 187, 195 <i>Quick Lab</i> 191 Teacher Wraparound Edition: E 135, 171, 187, 195; QL 190; SI 109A |

| STANDARDS | PAGE REFERENCES |
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| <p>Observe that water can be a liquid or a solid and can change from one form to the other.</p> | <p>Student Edition: 314, 327, 333-335 <i>Explore</i> 309, 399 <i>Read a Diagram</i> 333 <i>Think, Talk, and Write</i> 335 #3 Teacher Wraparound Edition: AE 399; E 309, 399; IW 314; QL 334; RAD 333; UV 327; WU 330</p> |
| <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>Recognize and demonstrate how objects are moved or not moved by a force.</p> | <p>Student Edition: 368-369, 370-372, 390 Teacher Wraparound Edition: DI 372; DMI 370, 372; DV 369</p> |
| <p>Recognize and demonstrate that moving an object depends on the amount of force applied.</p> | <p>Student Edition: <i>Explore</i> 367 <i>Look and Wonder</i> 366 <i>Science Skills and Ideas</i> 395 #11 <i>Think, Talk, and Write</i> 373 #1 Teacher Wraparound Edition: AE 367; E 367; LW 366; SSI 395 #11; WU 366</p> |
| <p>Recognize and demonstrate how a push and/or a pull can change the position and direction, and motion of a moving object.</p> | <p>Student Edition: 368-369, 372-373 <i>Read a Diagram</i> 373 <i>Social Studies Link</i> 373 Teacher Wraparound Edition: DI 369; DMI 368; ELLS 368; RAD 372; UV 369</p> |
| <p>Identify the invisible force of gravity.</p> | <p>Student Edition: 370, 374, 391 <i>Science Skills and Ideas</i> 395 #9 <i>Talk About It</i> 375 Teacher Wraparound Edition: AR 375; BR 374; DMI 370; DR 374; DV 371, 372; SSI 395 #9; TAI 375; UV 370</p> |

| STANDARDS | PAGE REFERENCES |
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| Energy Transformation | |
| Recognize that energy can exist in the form of sound . | Student Edition: 406-407, 429 Teacher Wraparound Edition: DMI 406; DV 407; SB 406 |
| Demonstrate how sound can be produced by vibrating objects. | Student Edition: 356-357, 408-409 <i>Explore</i> 405 <i>Look and Wonder</i> 404 <i>Read a Diagram</i> 407 <i>Talk About It</i> 357 Teacher Wraparound Edition: AE 405; DI 408; DMI 408; DR 356; E 405; LW 404; RD 407; TAI 357; UV 408 |
| Standard 5.8 (Earth Science) All students will gain an understanding of the structure, dynamics, and geophysical systems of the Earth. | |
| Earth's Properties and Materials | |
| Describe rock, soil, sand and clay . Identify the materials that make up the Earth including rocks, minerals and soil. | Student Edition: 188-189, 190-191, 192, 196-197, 210-211 <i>Explore</i> 187, 195 <i>Look and Wonder</i> 194 Teacher Wraparound Edition: AE 187; DMI 188, 190, 196; DV 190; E 187, 195; LW 194; SB 188, 196; TAI 192 |
| Analyze the composition of soil as being made up of both living and non-living materials. | Student Edition: 198-199 <i>Quick Lab</i> 199 <i>Think, Talk, and Write</i> 199 Teacher Wraparound Edition: DMI 198; QL 198 |
| Atmosphere and Water | |
| Explain heat, evaporation, water vapor, condensation, solid, liquid and gas . | Student Edition: 232-233, 234-235, 244-247, 400 <i>Explore</i> 231 <i>Quick Lab</i> 234 <i>Think, Talk, and Write</i> 235 Teacher Wraparound Edition: AE 231; DI 233; DMI 232; E 231; QL 234; UV 233; WU 230 |

| STANDARDS | PAGE REFERENCES |
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| Identify various sources and uses of water. | Student Edition: 165, 166-167, 179, 181, 244 <i>Explore</i> 163 <i>Look and Wonder</i> 162, 230 <i>Think, Talk, and Write</i> 167 Teacher Wraparound Edition: AE 163; E 163; ELLS 164; LW 162, 230; UV 165 |
| Standard 5.9 (Astronomy and Space Science) All students will gain an understanding of the origin, evolution, and structure of the universe. | |
| <i>Earth, Moon and Sun Systems</i> | |
| Describe how rotation of the Earth causes day and night. | Student Edition: 254-255, 256 <i>Read a Diagram</i> 255 Teacher Wraparound Edition: DI 255; DMI 256; DV 255; RAD 255; SB 254 |
| Observe the movement of shadows on the Earth during the course of the day. | Student Edition: 256-257 <i>Think, Talk, and Write</i> 257 Teacher Wraparound Edition: TI 257B; UV 256 |
| <i>Solar System</i> | |
| Recognize that the Earth is one of many planets that orbit the Sun, and it is third from the Sun. | Student Edition: 276-277 <i>Explore</i> 275 <i>Read a Diagram</i> 277 Teacher Wraparound Edition: DMI 276; E 275; RD 277 |
| <i>Stars</i> | |
| Observe the position of the stars as unchanging and describe major constellations e.g., Big and Little Dipper. | Student Edition: 280-281 Teacher Wraparound Edition: AR 281; BR 280; DR 280; ELLS 280 |

| STANDARDS | PAGE REFERENCES |
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| <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>Show how organisms' basic needs are met within their surroundings.</p> | <p>Student Edition: 26-27, 90, 93</p> <p>Teacher Wraparound Edition: DI 25; DMI 26, 90; SB 96; UV 91</p> |
| <p><i>Human Interactions and Impact</i></p> | |
| <p>Identify various needs of humans that are supplied by the natural or constructed environment.</p> | <p>Student Edition: 24-25, 92-93, 100, 105</p> <p><i>Art Link</i> 93</p> <p>Teacher Wraparound Edition: AL 93; DMI 24; ELLS 24; IW 100; LAI 100; TAI 100; URS 93</p> |