



OHIO
Academic Content Standards – Science Grade 6
***Science Level Green* © 2008**

OBJECTIVES	PAGE REFERENCES
Earth and Space Sciences	
<i>Earth Systems</i>	
1. Describe the rock cycle and explain that there are sedimentary, igneous and metamorphic rocks that have distinct properties (e.g., color, texture) and are formed in different ways.	SE: 58-61, 62-66, 67-70, 71-77, 791 <i>Section Review</i> 61 #2, #3, #6 <i>Chapter Review</i> 83 #20, #24, #25, #26 TWE: 56 E, F TFYI 61, 69 RT 61 DI 64 CU 65 UA 68 ACT 69, 74 DISC 73 MM 77
2. Explain that rocks are made of one or more minerals.	SE: 58 <i>Section Review</i> 61 #1 TWE: DI 59 FF 63
3. Identify minerals by their characteristic properties.	SE: 36-40, 41-47, 792-793 <i>MiniLab</i> 31, 40, 72 <i>Section Review</i> 40 #1, #2, #3, #4, #5, #6 <i>LAB</i> 48-49, 78-79 <i>Chapter Review</i> 53 #1-10, #11, #13, #16, #17, #21, #22, #23, #25 TWE: TPK 36 DISC 37 CC 37 VL 38 UA 39 QD 39 AIL 48

OBJECTIVES	PAGE REFERENCES
Life Sciences	
<i>Characteristics and Structure of Life</i>	
1. Explain that many of the basic functions of organisms are carried out by or within cells and are similar in all organisms.	SE: 214-217, 221, 224-229, 262-265 <i>MiniLab</i> 222 <i>Section Review</i> 230 #2, #3, #5 <i>LAB</i> 231 <i>Chapter Review</i> 241 #28, #29 TWE: 212F BR 221 FF 221 QD 221, 264 ACT 221 DISC 224 IQL 226 VL 227 UA 262 SJ 262
2. Explain that multicellular organisms have a variety of specialized cells, tissues, organs and organ systems that perform specialized functions.	SE: 230, 255-258, 366-367, 373, 403, 413, 420-421, 434, 440, 444, 450, 454, 456, 470-471, 474-476, 503, 512, 515 <i>Section Review</i> 230 #5 <i>National Geographic Visualizing</i> 259 <i>LAB</i> 266-267 <i>Chapter Review</i> 241 #26 TWE: AS 230 QD 256, 367, 502 TFYI 257 LD 503
3. Identify how plant cells differ from animal cells (e.g., cell wall and chloroplasts).	SE: 224, 226, 227, 262-263, 265, 500-505 <i>Section Review</i> 230 #1, 505 #3 <i>Chapter Review</i> 241 #29 TWE: CC 224 ACT 224 VL 227, 501 CU 230 QD 502 LD 503
<i>Heredity</i>	
4. Recognize that an individual organism does not live forever; therefore reproduction is necessary for the continuation of every species and traits are passed on to the next generation through reproduction.	SE: 216, 276, 280-282, 306, 473 <i>Chapter Preview</i> 304 TWE: 274 E, F SJ 277
5. Describe that in asexual reproduction all the inherited traits come from a single parent.	SE: 281-282 <i>MiniLab</i> 281 <i>LAB</i> 283 <i>Section Review</i> 289 #4 <i>Chapter Review</i> 301 #27 TWE: 274 E, F LD 280 VL 281

OBJECTIVES	PAGE REFERENCES
6. Describe that in sexual reproduction an egg and sperm unite and some traits come from each parent, so the offspring is never identical to either of its parents.	SE: 284-289, 310-312, 314-316 <i>Section Review 289 #1</i> TWE: 274 E, F CC 285
7. Recognize that likenesses between parents and offspring (e.g., eye color, flower color) are inherited. Other likenesses, such as table manners are learned.	SE: 306, 310 <i>Launch Lab 305</i> <i>National Geographic Visualizing 309</i> TWE: DISC 286 304 E, F TPK 306, 314
<i>Diversity and Interdependence of Life</i>	
8. Describe how organisms may interact with one another.	SE: 530, 531, 532, 535-536, 539-543, 544-546 <i>MiniLab 542</i> <i>Section Review 542 #4, #6</i> <i>Applying Science 546</i> TWE: AP 530 AS 531 SJ 542 USW 542
Physical Sciences	
<i>Nature of Matter</i>	
1. Explain that equal volumes of different substances usually have different masses.	SE: 696 TWE: QD 696 Volume and mass are discussed in Glencoe's <i>Physical Science</i> © 2005.
2. Describe that in a chemical change new substances are formed with different properties than the original substance (e.g., rusting, burning).	SE: 602-607 <i>MiniLab 603</i> <i>Science Online 603</i> <i>National Geographic Visualizing 608</i> <i>Chapter Review 614-615 #5, #6, #7, #14, #15, #17, #19, #20, #26</i> TWE: VL 602 TFYI 605 QD 605 IM 607 CU 609 AS 609
3. Describe that in a physical change (e.g., state, shape and size) the chemical properties of a substance remain unchanged.	SE: 600-601 <i>Chapter Review 614-615 #3, #12, #13, #16, #17, #19, #20, #21, #24, #26</i> TWE: USW 601 MM 601 IQL 604 TFYI 604 IM 605

OBJECTIVES	PAGE REFERENCES
4. Describe that chemical and physical changes occur all around us (e.g., in the human body, cooking and industry).	SE: 400-403, 600-601, 603 <i>Reading Check</i> 602 <i>Science Online</i> 603 TWE: QD 401 FF 602 DISC 603 TFYI 605 UA 607
<i>Nature of Energy</i>	
5. Explain that the energy found in nonrenewable resources such as fossil fuels (e.g., oil, coal and natural gas) originally came from the sun and may renew slowly over millions of years.	SE: 216, 544, 560-561, 729-730 TWE: UA 561, 730 IM 561
6. Explain that energy derived from renewable resources such as wind and water is assumed to be available indefinitely.	SE: 101, 548, 560-561, 563-566 <i>Integrate Social Studies</i> 563 <i>Section Review</i> 566 #2 <i>National Geographic Visualizing</i> 567 <i>Chapter Review</i> 587 #24 TWE: DI 563, 565 TFYI 563, 565 MM 564 DISC 564 USW 565
7. Describe how electric energy can be produced from a variety of sources (e.g., sun, wind and coal).	SE: 563-566, 720, 725, 726-727, 732- 733 <i>Science Online</i> 732 TWE: VL 563 FF 563 ACT 726 AS 727
8. Describe how renewable and nonrenewable energy resources can be managed (e.g., fossil fuels, trees and water).	SE: 165, 560, 562, 578-581 <i>Science Online</i> 519 TWE: 558 E DI 565
Science and Technology	
<i>Understanding Technology</i>	
1. Explain how technology influences the quality of life.	SE: 9, 130, 134-136 <i>LAB</i> 19 TWE: QD 9 SJ 130
2. Explain how decisions about the use of products and systems can result in desirable or undesirable consequences (e.g., social and environmental).	SE: <i>LAB</i> 19, 98 TWE: AS 98
3. Describe how automation (e.g., robots) has changed manufacturing including manual labor being replaced by highly-skilled jobs.	See Glencoe's <i>Science Level Red</i> © 2005 SE: <i>National Geographic</i> 126-127
4. Explain how the usefulness of manufactured parts of an object depend on how well their properties allow them to fit and interact with other materials.	SE: 578-581 TWE: DISC 579 QD 579

OBJECTIVES	PAGE REFERENCES
<i>Abilities To Do Technological Design</i>	
5. Design and build a product or create a solution to a problem given one constraint (e.g., limits of cost and time for design and production, supply of materials and environmental effects).	SE: 19, 98 <i>LAB Model and Invent</i> 138-139, 582-583 <i>LAB Design Your Own</i> 610-611 <i>Extra Try at Home Labs</i> 760 #1 TWE: SCB 4E TFYI 13 DI 18 ACT 60 IQL 69 AS 583
Scientific Inquiry	
<i>Doing Scientific Inquiry</i>	
1. Explain that there are not fixed procedures for guiding scientific investigations; however, the nature of an investigation determines the procedures needed.	SE: 6-18 <i>Science Online</i> 16 TWE: 4 E, F DI 15 IQL 16
2. Choose the appropriate tools or instruments and use relevant safety procedures to complete scientific investigations.	SE: <i>LAB</i> 20-21, 48-49 <i>LAB Design Your Own</i> 108-109, 236-237, 354-355, 390-391, 610-611, 674-675 <i>Science Skill Handbook</i> 757-759
3. Distinguish between observation and inference.	SE: <i>MiniLab</i> 14 <i>LAB</i> 19 <i>Science Skill Handbook</i> 752-755, 756
4. Explain that a single example can never prove that something is always correct, but sometimes a single example can disprove something.	SE: 18 <i>Science Skill Handbook</i> 753
Scientific Ways of Knowing	
<i>Nature of Science</i>	
1. Identify that hypotheses are valuable even when they are not supported.	SE: 14 <i>National Geographic Visualizing</i> 15 <i>Section Review</i> 18 #5 <i>Science Skill Handbook</i> 756 TWE: ACT 15 DISC 16, 18
<i>Ethical Practices</i>	
2. Describe why it is important to keep clear, thorough and accurate records.	SE: 17-18 <i>Section Review</i> 18 #2 <i>Chapter Review</i> 25 #21 <i>Science Skill Handbook</i> 752-753 TWE: VL 17
<i>Science and Society</i>	
3. Identify ways scientific thinking is helpful in a variety of everyday settings.	SE: <i>MiniLab</i> 14 <i>Science and Language</i> 22 TWE: CU 18 RT 18

OBJECTIVES	PAGE REFERENCES
4. Describe how the pursuit of scientific knowledge is beneficial for any career and for daily life.	SE: 74, 161, 196, 263, 277, 317, 480, 534, 631
5. Research how men and women of all countries and cultures have contributed to the development of science.	SE: 6-11, 88, 110 <i>TIME</i> 80 TWE: CD 42, 74, 96, 124, 157, 182, 188, 226, 257, 264, 278, 322, 352, 408, 414, 442, 456, 547, 571, 602, 638, 672, 698, 734 AP 88 DI 228 SJ 228

Codes Used for TWE Pages

ACT	Activity
AIL	Additional Inquiry Lab
AP	About the Photo
AS	Assessment
BR	Bellringer
CC	Curriculum Connection
CD	Cultural Diversity
CU	Check for Understanding
DI	Differentiated Instruction
DISC	Discussion
FF	Fun Fact
IM	Identifying Misconceptions
IQL	Inquiry Lab
LD	Lab Demonstration
MM	Make a Model
QD	Quick Demo
RT	Reteach
SCB	Science Content Background
SJ	Science Journal
TFYI	Teacher FYI
TPK	Tie to Prior Knowledge
UA	Use an Analogy
USW	Use Science Words
VL	Visual Learning