

GLENCOE CORRELATION

LIFE'S STRUCTURE AND FUNCTION (A)
FROM BACTERIA TO PLANTS (B)
ANIMAL DIVERSITY (C)
HUMAN BODY SYSTEMS (D)
ECOLOGY (E)

EARTH MATERIALS AND PROCESSES (F)
THE CHANGING SURFACE OF EARTH (G)
THE WATER PLANET (H)
THE AIR AROUND YOU (I)
ASTRONOMY (J)

THE NATURE OF MATTER (K)
CHEMISTRY (L)
MOTION, FORCES, AND ENERGY (M)
ELECTRICITY AND MAGNETISM (N)
WAVES, SOUND, AND LIGHT (O)

SOUTH DAKOTA
 Science Standards, Grades 6-8

STANDARDS	PAGE REFERENCES		
	<i>LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)</i>	<i>EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)</i>	<i>PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)</i>
SIXTH GRADE NATURE OF SCIENCE STANDARDS			
STUDENTS WILL:			
1. explain how scientific knowledge and processes have evolved over time.	These standards are covered throughout the 15-book series in the following features: <ul style="list-style-type: none"> • Lab Safety Videos • Design Your Own Labs • Skills Handbook • Oops: Accidents in Science • TIME: Science and Society • Lab Activities • Lab Management and Safety in the Science classroom manual • Science Skills Handbook • Interactive CD-ROM with Presentation Builder 		
2. base conclusions on scientific evidence obtained from a variety of sources.			
3. understand the need for continual re-evaluation of scientific knowledge.			
4. discuss the limitations of scientific study.			
5. examine the scientific contributions of various cultures.			
6. describe the limits of accuracy inherent in a particular measuring device or measurement procedure.			
7. manipulate one variable over time with many repeated trials to test an hypothesis.			

8. construct and interpret graphs from data to make predictions.	(continued from the previous cell)		
9. use research methods to investigate practical and/or personal scientific problems and questions.	<ul style="list-style-type: none"> Virtual Labs 		
10. use appropriate scientific equipment for investigations.	<ul style="list-style-type: none"> Throughout the text and in Teacher Classroom Resources 		
11. use proper safety procedures in all investigations.			
SIXTH GRADE PHYSICAL SCIENCE STANDARDS			
STUDENTS WILL:			
1. understand that all matter is made up of atoms containing electrons, protons, and neutrons.	<i>Life's Structure and Function (A)</i> SE: 68	<i>The Water Planet (H)</i> SE: 8-9 <i>Science Online</i> <i>Section Assessment 14 #5</i> <i>Astronomy (J)</i> SE: 115-116, 118-119 <i>Physics Integration 115</i> TWE: MA 116 US 116	<i>The Nature of Matter (K)</i> SE: 14-17 <i>MiniLAB 15</i> TWE: E 16 <i>Chemistry (L)</i> SE: 8-10 <i>Design Your Own Experiment 26-27</i> TWE: VL 10
2. classify materials as elements, compounds, or mixtures.	<i>Life's Structure and Function (A)</i> SE: 69-71 TWE: A 69 QD 70, 71 D 70 MM 74	<i>Earth Materials and Processes (F)</i> SE: 12, 23-25 <i>Explore Activity 7, 35</i> <i>Section Assessment 12 #5-7</i> <i>Chemistry Integration 23</i> TWE: E 12 <i>Astronomy (J)</i> TWE: TF 116	<i>The Nature of Matter (K)</i> SE: 18, 25-29 <i>Activity 30-31</i> TWE: TPK 18 D 27 E 27 <i>Chemistry (L)</i> SE: 64-66 TWE: MM 65 QD 66

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
3. analyze the relationship among mass, weight, volume, and density.	<i>Life's Structure and Function (A)</i> SE: 199-200 TWE: QD 14	<i>The Water Planet (H)</i> SE: 11, 107-108 <i>Minilab 11</i> <i>Try at Home Minilab 107</i> <i>Math Skills Activity 108</i> <i>Section Assessment 109</i> #3, 6, 7 <i>Design Your Own Experiment 118-119</i> TWE: AR 11 <i>Earth Materials and Processes (F)</i> SE: 16	<i>Motion, Forces, and Energy (M)</i> SE: 43-44, 78-80 TWE: D 43, 79 UA 78
4. compare and contrast mixtures, compounds, and elements.	<i>Life's Structure and Function (A)</i> SE: 69-71 TWE: A 69 QD 70, 71 D 70 MM 74	<i>Earth Materials and Processes (F)</i> SE: 12, 23-25 <i>Explore Activity 7</i> <i>Section Assessment 12</i> #5-7; 25 #2,4,5,7 <i>Chemistry Integration 23</i> TWE: E 12 CH 25	<i>The Nature of Matter (K)</i> SE: 18, 25-29 <i>Activity 24, 30-31</i> <i>MiniLAB 26</i> TWE: CC 28 <i>Chemistry (L)</i> SE: 64-66 TWE: MM 65 QD 66
5. investigate and describe how matter can change.		<i>Earth Materials and Processes (F)</i> SE: <i>Physics Integration 11</i> <i>Section Assessment 12 #2;</i> 39 #6,7 <i>Activity 13</i> TWE: AS 13 <i>The Water Planet (H)</i> SE: <i>Section Assessment 14</i> #6,7 <i>Activity 15</i> TWE: IS 9	<i>The Nature of Matter (K)</i> SE: 47-52, 79-85 <i>National Geographic 48</i> <i>MiniLAB 50, 81</i> TWE: TPK 40 LD 43 R 52 QD 80

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
6. describe how push/pull forces acting on objects can either reinforce, oppose, or have no effect on each other.		<i>Earth Materials and Processes (F)</i> SE: 102-104, 106-108, 128-129 <i>National Geographic Society Visualizing</i> 109 <i>Physics Integration</i> 114 TWE: MA 112 QD 128 VL 128 <i>Astronomy (J)</i> SE: <i>Figure 8</i> 17 TWE: QD 16	<i>Motion, Forces, and Energy (M)</i> SE: 36-37 TWE: CC 37 QD 38
7. demonstrate how all forces have magnitude and direction.		<i>The Changing Surface of Earth (G)</i> SE: <i>Minilab</i> 65 TWE: E 67 <i>Astronomy (J)</i> SE: 15-16 <i>Figure 8</i> 17 <i>Physics Integration</i> 72 TWE: CD 16 CC 17 QD 16, 42	<i>Motion, Forces, and Energy (M)</i> SE: 36-37, 44-46 <i>Design Your Own Experiment</i> 56-57 TWE: VL 37 IM 44 R 48
8. describe and graphically represent motion of objects in terms of direction and/or position in relation to time.		<i>Astronomy (J)</i> SE: 100 #19 <i>Use the Internet</i> 30-31 <i>Activity</i> 75, 113 TWE: AS 55, 93	<i>Motion, Forces, and Energy (M)</i> SE: 8-13, 14-18 <i>Skill Builder Activities</i> 18 TWE: CC 12 A 12 E 12 C 13, 18

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
9. investigate and describe types and sources of energy. (example: potential/kinetic, mechanical, heat, electrical/nuclear)		<i>Earth Materials and Processes (F)</i> SE: <i>Science Online 71</i> <i>Section Assessment 75</i> #1-7; 81 #1-7 TWE: TP 66 IS 67 CD 68 E 69 MA 69 AR 73	<i>Motion, Forces, and Energy (M)</i> SE: 126-130, 139-147 <i>Activity 148-149</i> TWE: QD 127, 129 R 130, 147 C 130
10. identify types of energy transformations. (example: mechanical to electrical, chemical to light)		<i>Earth Materials and Processes (F)</i> SE: 76-81 <i>Physics Integration 77</i> <i>Science Online 79</i> TWE: TP 76 QD 77 LD 78 MA 78 <i>The Water Planet (H)</i> SE: 135-137	<i>Motion, Forces, and Energy (M)</i> SE: 131-137, 139-147 <i>MiniLAB 133</i> <i>National Geographic 134</i> <i>Activity 138</i> TWE: LD 132 D 135, 146 MM 146 <i>Electricity and Magnetism (N)</i> SE: 48 <i>Activity 56-57</i>
11. explain basic concepts of electricity. (example: sources, relationship to magnetism, types of current and circuits, and ways to measure electricity)		<i>The Air Around You (I)</i> SE: 48 <i>Science Online 48</i>	<i>Electricity and Magnetism (N)</i> SE: 8-11, 20-23, 45-48, 50-51 <i>Activity 27, 28-29</i> <i>MiniLAB 46</i> <i>National Geographic 47</i> TWE: IM 23 A 47 E 47 QD 48

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
12. explain how electric circuits are a means of transferring energy.			<i>Electricity and Magnetism (N)</i> SE: 15-16, 20-23 <i>Activity 27, 28-29</i> TWE: R 19 MM 21, 24 IM 23
SIXTH GRADE LIFE SCIENCE STANDARDS			
STUDENTS WILL:			
1. describe basic cell structures and related functions.	<i>Life's Structure and Function (A)</i> SE: 40-47 <i>MiniLAB 42</i> <i>Math Skills Activity 46</i> <i>Activity 48</i> TWE: A 41 UA 43 D 41 MM 45 R 47 C 47	<i>The Water Planet (H)</i> SE: 137 TWE: TF 136	
2. describe structure and function of the human skeletal, muscular, digestive, respiratory, circulatory, and reproductive systems.	<i>Human Body Systems (D)</i> SE: 8-13, 14-19, 47-53, 64-72, 74-79, 92-100, 151-155, 157-161 <i>Math Skills Activity 11</i> <i>National Geographic 16, 70, 97</i> <i>MiniLAB 18, 52, 65, 76, 96, 154, 160</i> <i>Activity 54-55, 73, 156</i> <i>Design Your Own Experiment 82-83</i>	<i>The Air Around You (I)</i> SE: 105-106 <i>Health Integration 105</i> TWE: TF 105	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
3. identify basic parts of plant and animal cells. (example: nucleus, cytoplasm, chloroplast, cell membrane, cell wall)	<i>Life's Structure and Function (A)</i> SE: 40-46 MiniLAB 42 Activity 48 TWE: A 41 MM 45 R 47 C 47		
4. understand that cells are the building blocks of living things.	<i>Life's Structure and Function (A)</i> SE: 16, 47, 64 #10, #16	<i>The Water Planet (H)</i> SE: 16	
5. identify the basic life processes that occur in cells. (example: growth, energy, reproduction, waste elimination)	<i>Life's Structure and Function (A)</i> SE: 76-80, 83-87, 98-104 MiniLAB 77, 103 National Geographic 81 Activity 82, 88-89, 105 TWE: QD 87	<i>The Water Planet (H)</i> SE: 16, 135, 137 TWE: TF 17, 136 IM 137	
6. describe the difference between a hybrid and a purebred organism.	<i>Life's Structure and Function (A)</i> SE: 130		
7. describe the reproduction process for various organisms and its importance to the survival of given species.	<i>Life's Structure and Function (A)</i> SE: 103-104 MiniLAB 103 TWE: A 104 <i>From Bacteria to Plants (B)</i> SE: 10, 45, 94-97, 98-101 MiniLAB 95 TWE: D 99	<i>The Water Planet (H)</i> SE: 137 TWE: CH 142	
8. investigate how variation in each species is due to the exchange and interaction of genetic information as it is passed from parent to offspring.	<i>Life's Structure and Function (A)</i> SE: 116-117, 128-142 MiniLAB 130, 138 National Geographic 131 Math Skills Activity 133 Activity 135 TWE: C 117, 134, 142	<i>The Changing Surface of Earth (G)</i> SE: 156-158 Activity 169 TWE: CD 158	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
9. investigate how the fossil record that has occurred over time provides evidence of changes in the kinds of plants and animals in the environment.	<i>Life's Structure and Function (A)</i> SE: 165-169 <i>Science Online</i> 167 <i>National Geographic</i> 168 <i>Earth Science Integration</i> 169 TWE: MM 167 A 167, 169 <i>From Bacteria to Plants (B)</i> SE: 63	<i>The Changing Surface of Earth (G)</i> SE: 162-164, 166, 168 <i>Chemistry Integration</i> 163 <i>National Geographic Society Visualizing</i> 165 TWE: TF 164 AC 165 E 165, 171 SJ 167	
10. investigate the process of energy transformation in photosynthesis.	<i>Life's Structure and Function (A)</i> SE: 84 TWE: SJ 84 <i>From Bacteria to Plants (B)</i> SE: 127-129 <i>MiniLAB</i> 127 TWE: QD 128 D 129	<i>The Water Planet (H)</i> SE: 135-136 <i>Section Assessment</i> 142 #6,7 TWE: TF 136 D 137	<i>Chemistry (L)</i> TWE: D 44
11. analyze how organisms depend on other organisms and on the nonliving components of the environment.	<i>Ecology (E)</i> SE: 12-19, 20-24, 36-42 <i>MiniLAB</i> 13, 17, 38 <i>Problem-Solving Activity</i> 15 <i>National Geographic</i> 18 <i>Science Online</i> 41 TWE: R 42	<i>The Changing Surface of Earth (G)</i> TWE: D 163 <i>The Water Planet (H)</i> SE: 135, 140, 142 <i>National Geographic Society Visualizing</i> 141 <i>Section Assessment</i> 142 #5-7 TWE: TP 135 IS 140 AS 142 D 52, 142	

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	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
12. describe the roles of producers, consumers, and decomposers in a system.	<i>Ecology (E)</i> SE: 20-21 TWE: D 21	<i>The Water Planet (H)</i> SE: 46, 135-137 <i>Life Science Integration 47</i> <i>Section Assessment 142</i> #2,6 TWE: TF 136 R 142	
13. analyze energy use in food webs and food pyramids.	<i>Ecology (E)</i> SE: 51-53 TWE: MM 52 UA 52 R 53 C 53	<i>The Water Planet (H)</i> SE: 135-136 <i>Life Science Integration</i> 136 <i>Section Assessment 142</i> #7 TWE: TP 135 AR 136 MA 136	
14. model cycles in ecosystems. (example: water, carbon dioxide/oxygen, nitrogen)	<i>Ecology (E)</i> SE: 44-49 <i>MiniLAB 47</i> <i>National Geographic 48</i> TWE: A 48 E 48 VCC 48 R 49 C 49	<i>The Water Planet (H)</i> SE: <i>Section Assessment 25</i> #5,7; 103 #4 TWE: CC 24 UA 24 CH 25 VL 25	

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	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
SIXTH GRADE EARTH/SPACE SCIENCE STANDARDS			
STUDENTS WILL:			
1. describe the spheres of Earth and their composition. (example: lithosphere, hydrosphere, atmosphere)	<i>Ecology (E)</i> SE: 37	<i>Earth Materials and Processes (F)</i> SE: 106, 113, 135 TWE: CC 113 AS 115 <i>The Air Around You (I)</i> SE: <i>Science Online 10</i> <i>Problem-Solving Activity 12</i> <i>Section Assessment 15</i> #1-3,6,7 TWE: VL 9	
2. explain how the resources of Earth support a variety of life.	<i>Ecology (E)</i> SE: 68-83 <i>MiniLAB 72, 78</i> <i>Use the Internet 84-85</i> <i>Activity 76</i> <i>Math Skills Activity 80</i> TWE: R 75	<i>The Water Planet (H)</i> SE: <i>Section Assessment 49</i> #3,6,7 <i>National Geographic Society Visualizing 141</i> TWE: E 46, 141 AC 140, 141 CC 140 <i>The Air Around You (I)</i> TWE: CH 69 MA 72	
3. analyze the role of water in all three states in shaping Earth.		<i>The Changing Surface of Earth (G)</i> SE: <i>Activity 75</i> <i>Physics Integration 93</i> TWE: QD 71 D 71 CC 73 SJ 95 <i>The Water Planet (H)</i> SE: 22-24 TWE: CC 24	States of freshwater on Earth: <i>The Nature of Matter (K)</i> SE: <i>Earth Science Integration 42</i>

STANDARDS	PAGE REFERENCES		
	<i>LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)</i>	<i>EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)</i>	<i>PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)</i>
4. investigate and describe major geologic processes that have shaped the South Dakota landscape.	This objective can be met during teacher/class discussion.	This objective can be met during teacher/class discussion.	This objective can be met during teacher/class discussion.
5. understand the organization of the solar system and the relationships among the various bodies that comprise it. (example: sun, moon, Earth, other planets and their moons, meteors, asteroids, and comets)		<i>Astronomy (J)</i> SE: <i>Science Online</i> 49 <i>Section Assessment</i> 59 #7 <i>Figure</i> 1 70-71 <i>Table</i> 3 88-89 TWE: IM 48 MA 71 VL 71 SJ 72 AC 88 D 91	History of the Moon: <i>The Nature of Matter (K)</i> SE: <i>Earth Science Integration</i> 75 Satellite motion: <i>Motion, Forces, and Energy (M)</i> SE: 47
6. describe how Earth's motions and tilt on its axis lead to daily and seasonal changes.	<i>Ecology (E)</i> SE: 39 <i>Explore Activity</i> 35 TWE: QD 69	<i>Astronomy (J)</i> SE: 41, 43-45 <i>Life Science Integration</i> 41 <i>Science Online</i> 45 <i>Section Assessment</i> 45 #2,4,6 <i>Activity</i> 60-61 TWE: VL 43 D 44 QD 44	
7. analyze the mechanics of day and night and the phases of the moon.		<i>Astronomy (J)</i> SE: 41, 47-48 <i>Life Science Integration</i> 41 <i>Section Assessment</i> 54 #1 <i>Activity</i> 55 TWE: CD 41 US 48	

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	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
8. relate the lunar orbit to the phases of the moon and to the gravitational effects it produces on Earth.		<i>The Water Planet (H)</i> SE: 113-116 <i>Science Online 113</i> <i>Section Assessment</i> 116 #3 <i>Astronomy (J)</i> SE: 46-48 <i>Section Assessment 54 #1</i> <i>Activity 55</i> TWE: US 48	
9. compare revolution and rotation of other planets to Earth's.		<i>Astronomy (J)</i> SE: 74, 87, 100 #16 <i>Section Assessment 74</i> #4,5,7 <i>Activity 75</i> <i>Test Practice 101</i>	
SIXTH GRADE SCIENCE, TECHNOLOGY, ENVIRONMENT, AND SOCIETY STANDARDS			
STUDENTS WILL:			
1. discuss science issues. (example: cloning, aging, farming, mining, timber)	These standards are covered throughout the 15-book series in the following features: <ul style="list-style-type: none"> • Skills Handbook • Oops: Accidents in Science • TIME: Science and Society • TIME: Science and History • Cultural Diversity • Environmental Issues in the Science classroom 		
2. determine how science helps drive research and provides knowledge for better understanding.			
3. investigate how cultural backgrounds and beliefs of different groups can affect scientific thinking.			
4. explain how society and need can affect the direction taken by science.			

5. determine scientific advancements that have had an impact on the environment.	(continued from the previous cell) <ul style="list-style-type: none"> Throughout the text and in Teacher Classroom Resources
6. determine the importance of public access to scientific discoveries.	
7. identify ways that medical technologies have affected life. (example: X-rays, vaccines, stethoscopes)	
8. investigate the possible consequences of various alternative decisions for technological-related issues.	
9. discuss a solution for a problem or a need.	
10. describe the role of technology in developing natural resources.	
SEVENTH GRADE NATURE OF SCIENCE STANDARDS STUDENTS WILL:	
1. analyze societal response to major scientific findings or theories. (example: Einstein's, Galileo's, Madame Curie's)	These standards are covered throughout the 15-book series in the following features: <ul style="list-style-type: none"> Lab Safety Videos Design Your Own Labs Skills Handbook Oops: Accidents in Science TIME: Science and Society Lab Activities Lab Management and Safety in the Science classroom manual
2. understand the need for continual re-evaluation of scientific knowledge.	
3. describe the limitations of scientific study.	
4. investigate uses of hypotheses in science. (example: evaluating relevance of data, determining data to be obtained, interpreting old and new data directly, identifying the need for new information)	

5. evaluate the conclusions to scientific investigations.	(continued from the previous cell) <ul style="list-style-type: none"> • Science Skills Handbook • Interactive CD-ROM with Presentation Builder • Virtual Labs • Throughout the text and in Teacher Classroom Resources 		
6. determine the limits of accuracy inherent in a particular measuring device or procedure.			
7. control variables to test hypotheses by repeated trials.			
8. identify sources of experimental error.			
9. interpret to make predictions and/or justify conclusions.			
10. use research methods to investigate practical and/or personal scientific problems and questions.			
11. demonstrate appropriate use of apparatus and technologies for investigations.			
12. use proper safety procedures in all investigations.			
SEVENTH GRADE PHYSICAL SCIENCE STANDARDS			
STUDENTS WILL:			
1. describe how the particle theory of matter aids in understanding the structure of matter.		<i>Earth Materials and Processes (F)</i> SE: 8-9, 73-75 National Geographic Society Visualizing 10 TWE: TF 74 US 74	<i>The Nature of Matter (K)</i> SE: 14-17, 21-22 TWE: LD 21 VL 21 <i>Chemistry (L)</i> SE: 8-13 <i>Design Your Own Experiment 26-27</i> TWE: TPK 8 R 15

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	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
2. classify matter based on observable properties.		<i>Earth Materials and Processes (F)</i> SE: 14-18 <i>Problem-Solving Activity</i> 16 <i>Design Your Own Experiment</i> 26-27 TWE: TP 14 AC 15 VL 16 UA 17	<i>The Nature of Matter (K)</i> SE: 72-76 <i>MiniLAB</i> 74 <i>Activity</i> 77 TWE: MM 73 R 76 C 76
3. investigate how to use the periodic table of elements as a tool to describe elements.		<i>Earth Materials and Processes (F)</i> SE: Section Assessment 12 #6	<i>The Nature of Matter (K)</i> SE: 19-23, 98-104 <i>Problem-Solving Activity</i> 103 TWE: A 20 E 100 SJ 101 R 104 <i>Chemistry (L)</i> SE: 10-13 <i>Problem-Solving Activity</i> 13 TWE: UA 11
4. analyze the differences in particle motion in solids, liquids, and gases. (example: intermolecular bonds in solids restrict the molecules to vibratory motion)		<i>Earth Materials and Processes (F)</i> SE: 40-41, 71, 74 <i>Chemistry Integration</i> 43 <i>Science Online</i> 71 <i>Section Assessment</i> 75 #4 <i>The Water Planet (H)</i> SE: 9-10 TWE: VL 9	<i>The Nature of Matter (K)</i> SE: 40-44, 45-52 <i>National Geographic</i> 48 TWE: TFYI 49 C 52

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	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
5. apply the Law of Conservation of Matter and Energy to investigate and understand changes in matter.		<i>Earth Materials and Processes (F)</i> SE: 39 <i>National Geographic Society Visualizing 38</i> <i>Section Assessment 39 #4</i> TWE: AS 39 <i>The Water Planet (H)</i> SE: 135 TWE: TP 135	<i>The Nature of Matter (K)</i> SE: 87 <i>Section Assessment (5) 87</i> <i>Chemistry (L)</i> SE: 40-45 <i>Math Skills Activity 42</i> TWE: VL 40 IS 41 A 41
6. understand that the differentiation between homogeneous mixtures (solutions) and heterogeneous mixtures is a matter of scale.		<i>Earth Materials and Processes (F)</i> SE: <i>Explore Activity 35</i> <i>The Air Around You (I)</i> SE: 8-9	<i>The Nature of Matter (K)</i> SE: 29 TWE: TFYI 28 <i>Chemistry (L)</i> SE: 65-69 TWE: VL 65 C 69
7. describe the physical effects of heat transfer, chemical reaction, and mechanical energy on matter.		<i>Earth Materials and Processes (F)</i> SE: 40-42, 45-46, 73-74 <i>Chemistry Integration 43</i> <i>Science Online 46</i> TWE: SJ 56	<i>The Nature of Matter (K)</i> SE: 45-52 <i>National Geographic 48</i> <i>MiniLAB 50</i> TWE: SJ 46 <i>Chemistry (L)</i> SE: 16-21 TWE: LD 20 D 21 QD 21

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	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
8. investigate and describe scientific principles and technological applications of work, force, and motion.		<i>Astronomy (J)</i> SE: 15-18, 20-22, 23-24 <i>Minilab 21</i> TWE: CC 16 CD 16 AR 17 E 17 CO 33	<i>Motion, Forces, and Energy (M)</i> SE: 98-102 <i>Math Skills Activity 100, 101</i> <i>MiniLAB 102</i> <i>Activity 103</i> TWE: TPK 98 VL 99 D 101 R 102 C 102
9. describe mechanical advantage in relation to work, force, and motion.			<i>Motion, Forces, and Energy (M)</i> SE: 104-108 <i>Math Skills Activity 105</i> <i>Design Your Own Experiment 116-117</i> TWE: TFYI 105 QD 106 C 108
10. differentiate between distance, displacement, speed, velocity, and acceleration.		<i>Astronomy (J)</i> SE: 9, 15, 17, 74 <i>Figure 1 70-71</i> <i>Model and Invent 94-95</i>	<i>Motion, Forces, and Energy (M)</i> SE: 9-13, 14-18 <i>Math Skills Activity 10, 16</i> <i>MiniLAB 11, 17</i> TWE: QD 9 VL 11 A 12 D 13 R 18

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	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
11. identify Newton's Laws of Motion.			<i>Motion, Forces, and Energy (M)</i> SE: 38, 42-48, 49-54 <i>Math Skills Activity 45</i> <i>National Geographic 51</i> <i>Activity 55</i> TWE: A 45, 50 D 46 LD 53
12. compare and contrast the fundamental forces. (example: gravity, electrical, magnetic, nuclear)		<i>Earth Materials and Processes (F)</i> SE: 73-75 <i>The Changing Surface of Earth (G)</i> SE: 64-65, 93 <i>Section Assessment 68 #1</i> <i>Physics Integration 93</i>	<i>Motion, Forces, and Energy (M)</i> SE: 43 TWE: D 43 <i>Electricity and Magnitism (N)</i> SE: 11-13, 38-40 TWE: E 11 D 13, 41 C 14 CC 39
13. describe methods of heat transfer. (example: conduction, radiation, convection)		<i>Earth Materials and Processes (F)</i> SE: 111 Minilab 111 Section Assessment 115 #4 TWE: AR 111 <i>The Air Around You (I)</i> SE: 17-19 <i>Try at Home Minilab 19</i> TWE: UA 18 US 18	<i>Motion, Forces, and Energy (M)</i> SE: 162-165 <i>MiniLAB 165</i> TWE: D 164 E 164 LD 166 C 167

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
14. relate waves to the transfer of energy. (example: earthquake waves, sound waves, water waves, and electromagnetic waves)		<i>Earth Materials and Processes (F)</i> SE: 130-131 <i>Physics Integration</i> 131 <i>National Geographic Society Visualizing</i> 132, 142 TWE: TP 130 E 132 <i>The Water Planet (H)</i> SE: 110-111 <i>National Geographic Society Visualizing</i> 112 TWE: 112	<i>Waves, Sound, and Light (O)</i> SE: 8-12, 13-17, 36, 66, 96 <i>Activity</i> 18 TWE: VL 14 LD 38 TFYI 39
15. explain the physical interactions of light and matter. (example: transmission, refraction, reflection, polarization)		<i>Earth Materials and Processes (F)</i> SE: 16 <i>Minilab</i> 18 <i>Astronomy (J)</i> SE: 8-13 <i>Activity</i> 14 TWE: AS 13 IS 10 QD 10	<i>Waves, Sound, and Light (O)</i> SE: 19-21, 96-98, 101-102, 108-111 <i>MiniLAB</i> 20 <i>Activity</i> 107 TWE: QD 20 IM 97 E 99 R 106 LD 110
16. explain basic principles of electricity and magnetism including static, current, circuits, magnetic fields, and electromagnetism.		<i>Earth Materials and Processes (F)</i> SE: 103-104 <i>Chemistry Integration</i> 103 <i>Section Assessment</i> 104 #1,6 <i>Activity</i> 105 <i>Astronomy (J)</i> SE: 42 <i>Try at Home Minilab</i> 42 TWE: QD 42	<i>Electricity and Magnetism (N)</i> SE: 8-11, 20-23, 45-48, 50-51 <i>Activity</i> 27, 28-29 <i>MiniLAB</i> 46 <i>National Geographic</i> 47 TWE: IM 23 A 47 E 47 QD 48

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
17. describe characteristics of sound waves. (example: wave length, frequency, amplitude, intensity, loudness)		<i>Earth Materials and Processes (F)</i> SE: <i>Physics Integration</i> 131 <i>Astronomy (J)</i> SE: 9	<i>Waves, Sound, and Light (O)</i> SE: 36-44 <i>Activity 46</i> <i>Design Your Own Experiment</i> 56-57 TWE: A 39 TFYI 39 VL 40 IM 42 E 44
SEVENTH GRADE LIFE SCIENCE STANDARDS			
STUDENTS WILL:			
1. relate types of cells to their specialized structure and function. (example: nerve cells, muscle cells)	<i>Life's Structure and Function (A)</i> SE: 47 <i>Activity 48</i> <i>Human Body Systems (D)</i> SE: 9-10, 17, 20-21, 75, 119-121 <i>Science Online 75</i> <i>National Geographic 12</i> TWE: MM 75		
2. demonstrate how structures and functions of cells, tissues, organs, and body systems relate to each other.	<i>Life's Structure and Function (A)</i> SE: 40-47 TFYI 44 C 47 <i>Human Body Systems (D)</i> SE: 9-10, 17, 20-21, 75, 119-121 <i>Science Online 75</i> <i>National Geographic 12</i>		

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
3. compare and contrast plant and animal cells.	<i>Life's Structure and Function (A)</i> SE: 40-46 Activity 48 MiniLAB 42 Communicating Your Data 48 TWE: A 41 VL 43 R 47		
4. recognize the need for organized classification systems in the study of plant and animal life.	<i>Life's Structure and Function (A)</i> SE: 24-28 MiniLAB 27 Activity 29 TWE: TPK 24 QD 25 UA 25 E 26 A 28 R 28	<i>The Changing Surface of Earth (G)</i> SE: Field Guide 188-191 <i>The Water Planet (H)</i> SE: Field Guide 160-163	
5. describe factors that determine species. (example: reproductive viability, physical characteristics, genetic code)	<i>Life's Structure and Function (A)</i> SE: 25, 156	<i>The Changing Surface of Earth (G)</i> SE: 156-160 Section Assessment 161 #6 TWE: SJ 156 IS 156 D 157,158	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
6. compare and contrast sexual and asexual reproduction in plants and animals.	Sexual and asexual reproduction are discussed in: <i>Life's Structure and Function (A)</i> SE: 103-104, 106-107 MiniLAB 103 <i>From Bacteria to Plants (B)</i> SE: 94-96 MiniLAB 95 TWE: QD 95 C 97		
7. identify limiting factors that impact animal and plant populations.	<i>Ecology (E)</i> SE: 14-16 <i>Problem-Solving Activity 15</i> <i>National Geographic 18</i> <i>Design Your Own Experiment 26-27</i> TWE: VPG 18 TPK 12	<i>The Changing Surface of Earth (G)</i> SE: 161, 168 <i>Section Assessment 161</i> #2,5; 171 #3 TWE: VL 166 SJ 167 E 171	
8. identify population disturbances and various other factors that threaten or enhance species survival.	<i>Ecology (E)</i> SE: 12-19 MiniLAB 13, 17 <i>Problem-Solving Activity 15</i> <i>National Geographic 18</i> TWE: TPK 12 E 14, 18 A 15 C 19	<i>The Changing Surface of Earth (G)</i> SE: 160-161, 163, 168 <i>Section Assessment 161</i> #2,5 TWE: D 158, 163, 168 VL 166 SJ 167 E 171	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
9. describe processes by which matter and energy flow through an ecosystem.	<i>Ecology (E)</i> SE: 44-49, 50-53 <i>National Geographic</i> 48 <i>MiniLAB</i> 47 TWE: R 49 MM 52 UA 52 R 53	<i>The Water Planet (H)</i> SE: <i>Life Science Integration</i> 136 TWE: TP 135 CC 136 D 136, 137 TF 136	
10. explain the effects of environmental changes on dynamic equilibrium in physical and biological systems.	<i>Ecology (E)</i> SE: 102-110 <i>MiniLAB</i> 96, 103 <i>Activity</i> 111 TWE: QD 107, 109 A 107, 108, 109 R 110	<i>The Changing Surface of Earth (G)</i> SE: 156 <i>Section Assessment</i> 161 #2,5,6 TWE: SJ 156 D 157, 158 AC 158 CH 161	<i>The Nature of Matter (K)</i> TWE: CC 47
11. explain different relationships among living organisms. (example: competition, symbiosis, producer/consumer/ decomposer, predator/prey)	<i>Ecology (E)</i> SE: 12, 20-24 TWE: A 22 R 24	<i>The Water Planet (H)</i> SE: 135-137 <i>Life Science Integration</i> 136 TWE: TP 135 TF 136 IS 140	
12. investigate interactions among populations in a biological community. (example: relationships among producers, consumers, and decomposers in food chains and food webs)	<i>Ecology (E)</i> SE: 12, 20-24, 51-52 TWE: A 22 R 24, 53 VL 52 C 53	<i>The Water Planet (H)</i> SE: 46, 135-137 <i>Life Science Integration</i> 47 <i>Section Assessment</i> 142 #2,6 TWE: CC 136 TF 136 R 142	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
13. model cycles in ecosystems. (example: water, carbon dioxide/oxygen, nitrogen)	<i>Ecology (E)</i> SE: 44-49 <i>National Geographic</i> 48 <i>MiniLAB</i> 47 TWE: R 49 C 49 A 48 E 48	<i>The Water Planet (H)</i> SE: <i>Section Assessment</i> 25 #5,7; 103 #4 TWE: CC 24 UA 24 CH 25 VL 25	
SEVENTH GRADE EARTH/SPACE SCIENCE STANDARDS			
STUDENTS WILL:			
1. investigate the origin and evolution of the atmosphere.		<i>The Changing Surface of Earth (G)</i> SE: 163 <i>Chemistry Integration</i> 163 <i>Section Assessment</i> 168 #5 TWE: D 163 <i>The Air Around You (I)</i> SE: 8-9, 14-15 <i>Life Science Integration</i> 14 <i>Section Assessment</i> 15 #1	
2. describe how the interrelationship of geologic processes, biologic processes, and human activity affects the atmosphere.	The effect of human activity on the atmosphere is found in: <i>Ecology (E)</i> SE: 102-105 <i>MiniLAB</i> 103 <i>Science Online</i> 104 TWE: TFYI 104, 105	<i>The Water Planet (H)</i> TWE: CH 25 <i>The Air Around You (I)</i> SE: 8-9, 14-15, 66-69, 78-81 <i>Life Science Integration</i> 14 <i>Problem-Solving Activity</i> 68 TWE: MA 14 CC 97 AR 101	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
3. describe the effects of pollution on watersheds, river systems, and oceans.	<i>Ecology (E)</i> SE: 79, 107-108 TWE: QD 107 A 107, 108	<i>The Water Planet (H)</i> SE: 54-57, 143-147 <i>Chemistry Integration</i> 56 <i>Section Assessment</i> 147 #2,5,6 TWE: CD 144 AC 145 CC 146	
4. analyze how freshwater resources are influenced by geologic processes and by human activities.	The influence of human activities on freshwater ecosystems is found in: <i>Ecology (E)</i> SE: 78-79, 107-108 TWE: QD 107	<i>The Water Planet (H)</i> SE: 44-45 <i>Section Assessment</i> 43 #5 <i>Science Online</i> 45 TWE: E 41 IM 41 AS 43 D 45	
5. compare and contrast characteristics of the sun, planets, their moons, comets, meteors, and asteroids.		<i>Astronomy (J)</i> SE: <i>Section Assessment</i> 74 #3-5; 87 #1-5; 93 #3,5-7 TWE: IS 72 AS 74 AC 77 QD 78 D 78	
6. describe the role of gravity in the solar system.		<i>Astronomy (J)</i> SE: 72 <i>Section Assessment</i> 54 #7 <i>Physics Integration</i> 72 <i>Minilab</i> 79 TWE: NGS 73	Satellite motion and gravity <i>Motion, Forces, and Energy (M)</i> SE: 47

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
7. compare masses within the solar system using composition, size, and orbital motion.		Astronomy (J) SE: Section Assessment 74 #4,5,7; 87 #7 Table 3 88-89 TWE: AC 77 QD 78	
SEVENTH GRADE SCIENCE, TECHNOLOGY, ENVIRONMENT, AND SOCIETY STANDARDS			
STUDENTS WILL:			
1. discuss science issues. (example: cloning, aging, farming, mining, timber)	<p>These standards are covered throughout the 15-book series in the following features:</p> <ul style="list-style-type: none"> • Skills Handbook • Oops: Accidents in Science • TIME: Science and Society • TIME: Science and History • Cultural Diversity • Environmental Issues in the Science classroom • Throughout the text and in Teacher Classroom Resources 		
2. investigate how science helps drive research and provides knowledge for better understanding.			
3. describe how cultural backgrounds and beliefs of different groups can affect scientific thinking.			
4. describe how society and need can affect the direction taken by science.			
5. describe scientific advancements that have had an impact on the environment.			
6. explain the importance of public access to scientific discoveries.			
7. analyze health recommendations concerning nutrition and drugs.			
8. determine the risks associated with natural and biological hazards.			

9. describe the possible consequences of various alternative decisions for technological-related issues.	(continued from the previous cell)
10. design a solution or product for a problem or a need considering constraints. (example: cost, time, materials, environmental/ societal trade-off)	
EIGHTH GRADE NATURE OF SCIENCE STANDARDS	
STUDENTS WILL:	
1. explain how scientific theory, hypothesis generation, and experimentation are interrelated.	<p>These standards are covered throughout the 15-book series in the following features:</p> <ul style="list-style-type: none"> • Lab Safety Videos • Design Your Own Labs • Skills Handbook • Oops: Accidents in Science • TIME: Science and Society • Lab Activities • Lab Management and Safety in the Science classroom manual • Science Skills Handbook • Interactive CD-ROM with Presentation Builder • Virtual Labs • Throughout the text and in Teacher Classroom Resources
2. analyze the scientific contributions of various men and women within specific fields of science.	
3. describe how scientific knowledge and processes have evolved and will continue to evolve over time	
4. analyze the limitations of scientific study.	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
5. analyze uses of hypotheses in scientific investigations. (example: evaluating relevance of data, determining data to be obtained, and interpreting old and new data, identifying the need for further information)	<i>Life's Structure and Function (A)</i> SE: 10, 196-197 <i>Design Your Own Experiment</i> 30-31, 146-147, 176-177 TWE: QD 10 FH 146, 176 TYH 146	<i>Earth Materials and Processes (F)</i> SE: <i>Activity</i> 82 TWE: AS 82, 117 CY 117 <i>The Changing Surface of Earth (G)</i> SE: <i>Activity</i> 114-115 TWE: AS 115	<i>The Nature of Matter (K)</i> SE: 138-139 <i>Activity</i> 30-31 <i>Chemistry (L)</i> SE: <i>Design Your Own Experiment</i> 26-27 TWE: TYH 26 <i>Motion, Forces, and Energy (M)</i> SE: <i>Design Your Own Experiment</i> 56-57, 174-175 TWE: TYH 56, 174
6. understand the limits of accuracy inherent in a particular measuring device or procedure.	Measuring is discussed in: <i>Life's Structure and Function (A)</i> SE: 14, 199-200 <i>Design Your Own Experiment</i> 30-31 <i>Activity</i> 88-89	<i>The Changing Surface of Earth (G)</i> SE: <i>Model and Invent</i> 26-27 TWE: CY 27 EA 115 <i>The Water Planet (H)</i> SE: <i>Activity</i> 134 TWE: EA 119	<i>The Nature of Matter (K)</i> TWE: EA 31 <i>Electricity and Magnetism (N)</i> SE: 107-108, 121 <i>Activity</i> 28-29 TWE: QD 68
7. control variables to test hypotheses by repeated trials, and by identifying sources of experimental error.	<i>Life's Structure and Function (A)</i> SE: <i>Design Your Own Experiment</i> 30-31 TWE: EA 31 <i>Human Body Systems (D)</i> SE: <i>Design Your Own Experiment</i> 82-83, 196-197 TWE: EA 83, 197 <i>Ecology (E)</i> SE: <i>Design Your Own Experiment</i> 26-27 TWE: EA 27 EO 27	<i>The Changing Surface of Earth (G)</i> TWE: EA 55, 83, 115 <i>The Water Planet (H)</i> TWE: EA 27, 91	<i>The Nature of Matter (K)</i> SE: 139 <i>Design Your Own Experiment</i> 88-89 TWE: EA 31, 89 <i>Chemistry (L)</i> SE: <i>Design Your Own Experiment</i> 54-55 TWE: EA 55, 87 <i>Electricity and Magnetism (N)</i> TWE: EA 29, 57

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
8. interpret data to justify predictions or conclusions.	<i>Human Body Systems (D)</i> SE: <i>Design Your Own Experiment 82-83, 136-137, 196-197</i> <i>Ecology (E)</i> SE: <i>176-177 Design Your Own Experiment 26-27</i>	<i>Earth Materials and Processes (F)</i> SE: <i>Use the Internet 116-117</i> <i>The Changing Surface of Earth (G)</i> SE: <i>Design Your Own Experiment 54-55, 82-83</i> <i>The Air Around You (I)</i> SE: <i>Design Your Own Experiment 26-27 Model and Invent 56-57 Activity 86-87 Use the Internet 116-117</i>	<i>Chemistry (L)</i> SE: <i>Activity 53, 86-87</i> <i>Motion, Forces, and Energy (M)</i> SE: <i>206-207 Activity 168</i> <i>Electricity and Magnetism (N)</i> SE: <i>Activity 44</i>
9. use research methods to investigate practical and/or personal scientific problems and questions.	<i>Life's Structure and Function (A)</i> SE: <i>8-11, 13, 196-197 MiniLAB 11 Problem-Solving Activity 13</i>	<i>Earth Materials and Processes (F)</i> SE: <i>Model and Invent 88-89</i> TWE: <i>IS 89</i> <i>The Water Planet (H)</i> SE: <i>Design Your Own Experiment 26-27</i> TWE: <i>AS 27, 91 CY 27</i>	<i>The Nature of Matter (K)</i> SE: <i>Design Your Own Experiment 62-63 Use the Internet 118-119</i> <i>Chemistry (L)</i> SE: <i>Problem-Solving Activity 112</i> <i>Motion, Forces, and Energy (M)</i> SE: <i>Design Your Own Experiment 116-117</i> TWE: <i>D 177</i>
10. select appropriate scientific equipment and technologies for investigations and experiments.	<i>Life's Structure and Function (A)</i> SE: <i>Design Your Own Experiment 30-31, 58-59, 176-177</i> <i>Ecology (E)</i> SE: <i>Use the Internet 84-85 Model and Invent 116-117 Design Your Own Experiment 26-27</i>	<i>The Changing Surface of Earth (G)</i> SE: <i>Design Your Own Experiment 54-55 Activity 114-115 Use the Internet 176-177</i> <i>The Water Planet (H)</i> SE: <i>Design Your Own Experiment 118-119 Use the Internet 148-149</i>	<i>The Nature of Matter (K)</i> SE: <i>Activity 53 Use the Internet 118-119</i> <i>Chemistry (L)</i> SE: <i>Design Your Own Experiment 54-55</i> <i>Motion, Forces, and Energy (M)</i> SE: <i>Use the Internet 88-89</i> TWE: <i>CYD 168</i>

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
11. use proper safety procedures in all investigations.	<i>Life's Structure and Function (A)</i> SE: 15, 217 TWE: SP 58, 176 <i>Ecology (E)</i> TWE: SP 26, 111, 116	<i>The Changing Surface of Earth (G)</i> SE: <i>Design Your Own Experiment</i> 54-55, 82-83 <i>Activity 75</i> <i>The Air Around You (I)</i> SE: <i>Design Your Own Experiment</i> 26-27 <i>Activity 85</i>	<i>The Nature of Matter (K)</i> SE: 159-160 TWE: SP 30 <i>Chemistry (L)</i> TWE: SP 53, 86, 107
EIGHTH GRADE PHYSICAL SCIENCE STANDARDS			
STUDENTS WILL:			
1. analyze the characteristics of types of matter based on physical and chemical properties. (example: elements, compounds, mixtures, acids, bases, salts, organic, inorganic, solids, liquids, and gases)	<i>Life's Structure and Function (A)</i> SE: 68-75 <i>MiniLAB 73</i> <i>Math Skills Activity 74</i> TWE: QD 70, 71, 74 R 75	<i>Earth Materials and Processes (F)</i> SE: <i>Problem-Solving Activity 16</i> <i>Minilab 18</i> <i>Design Your Own Experiment 26-27</i> <i>Explore Activity 35</i> TWE: AC 15, 21 VL 16 UA 17	<i>The Nature of Matter (K)</i> SE: 18-22, 25-27, 40-44, 72-76 <i>MiniLAB 26, 74</i> <i>Activity 77</i> TWE: A 20 UA 42 SJ 75 R 76
2. describe the relationship between the organization and the predictive nature of the periodic table.			<i>The Nature of Matter (K)</i> SE: 98-102, 105-111, 112-114 <i>Problem-Solving Activity 103</i> TWE: E 100 R 111, 116 TFYI 113 C 116 <i>Chemistry (L)</i> SE: 10-13 <i>Problem-Solving Activity 13</i> TWE: UA 11

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
3. investigate various models of atomic structure including Lewis, Bohr and electron-cloud (quantum) models.			<i>The Nature of Matter (K)</i> SE: 8-17 <i>MiniLAB 15</i> TWE: A 14 SJ 14 E 16 R 17
4. classify types of elements using atomic electron configuration.			<i>The Nature of Matter (K)</i> TWE: E 100 TFYI 113 <i>Chemistry (L)</i> SE: 8-15 <i>Problem-Solving Activity 13</i> TWE: TPK 8 UA 11 CA 15
5. create equations which describe chemical reactions.			<i>Chemistry (L)</i> SE: 38-45 <i>Math Skills Activity 42</i> TWE: CC 40 A 41 IS 41 R 45 C 45
6. observe and describe factors that affect the rates of reactions. (example: temperature, nature of reactants, catalysts, and surface area)		<i>The Changing Surface of Earth (G)</i> SE: 39-41 <i>Science Online 39</i> <i>Section Assessment 41</i> #4,5 <i>Design Your Own</i> <i>Experiment 54-55</i>	<i>Chemistry (L)</i> SE: 46-52 <i>MiniLAB 50</i> TWE: D 48 QD 49 A 49 LD 51 C 52 CA 52

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
7. relate the Law of Conservation of Matter and Energy to atomic theory.		<i>Earth Materials and Processes (F)</i> SE: 73-75 <i>The Air Around You (I)</i> SE: 14 TWE: MA 14	Conservation of mass and energy changes in chemical reactions <i>Chemistry (L)</i> SE: 40-45 <i>Math Skills Activity 42</i> TWE: VL 40 IS 41 A 41
8. explain how Newton's laws of motion apply to the way the world works. (example: inertia, acceleration, gravitation, and action/reaction)		<i>The Changing Surface of Earth (G)</i> SE: 64-67 <i>Minilab 65</i> TWE: E 67 <i>Astronomy (J)</i> SE: 15-17 TWE: CC 16 CD 16	<i>Motion, Forces, and Energy (M)</i> SE: 38, 42-48, 49-54 <i>Math Skills Activity 45</i> <i>National Geographic 51</i> <i>Activity 55</i> TWE: A 45, 50 D 46 LD 53
9. relate change of speed and direction to unbalanced forces acting on an object.		<i>Earth Materials and Processes (F)</i> SE: 102-103, 107-108, 110-114, 128-129, 158 <i>Physics Integration 114</i> <i>Section Assessment 129</i> #3,4,7	<i>Motion, Forces, and Energy (M)</i> SE: 42-48 <i>Skill Builder Activities 48</i> <i>Design Your Own Experiment 56-57</i> TWE: IM 44 VL 44 D 46 SJ 47
10. relate force to pressure in fluids.		<i>The Water Planet (H)</i> TWE: AC 138 <i>The Air Around You (I)</i> SE: 12, 37, 45-48, 50-51 TWE: QD 12 US 45	<i>Motion, Forces, and Energy (M)</i> SE: 66-71, 74-76, 82-87 <i>MiniLAB 85</i> TWE: IM 84 QD 84 C 87

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
11. relate variables to the speed of sound waves. (example: wavelength, frequency, density and state of medium)		P-wave speed change with change of density of medium discussed in: <i>Earth Materials and Processes (F)</i> SE: 136-137	<i>Waves, Sound, and Light (O)</i> SE: 13-17, 36-38 <i>Design Your Own Experiment 26-27</i> <i>MiniLAB 38</i> TWE: IM 37
12. investigate and understand states and forms of energy using temperature scales and heat transfer.		<i>The Water Planet (H)</i> SE: Activity 15 TWE: AS 15 <i>The Air Around You (I)</i> SE: <i>Physics Integration 18</i> <i>Try at Home Minilab 19</i> <i>Design Your Own Experiment 26-27</i>	<i>Motion, Forces, and Energy (M)</i> SE: 158-161, 162-165 <i>Math Skills Activity 160</i> <i>MiniLAB 164</i> <i>Activity 168</i> TWE: C 161
13. describe states and forms of energy. (example: mechanical, chemical, electrical)		<i>Earth Materials and Processes (F)</i> SE: 76-81 <i>Physics Integration 77</i> <i>Section Assessment 81 #3</i> <i>Activity 82</i> TWE: TC 64 IS 67 TP 76	<i>Motion, Forces, and Energy (M)</i> SE: 126-130 <i>Use the Internet 148-149</i> TWE: E 129 QD 129 R 130
14. describe ways energy is transferred by means of heat flow, light, and sound.		<i>The Air Around You (I)</i> SE: 17-19 <i>Try at Home Minilab 19</i> <i>Section Assessment 20</i> #1,3,5,6 <i>Astronomy (J)</i> SE: 8-9	<i>Motion, Forces, and Energy (M)</i> SE: 162-165 <i>MiniLAB 165</i> TWE: LD 166 <i>Waves, Sound, and Light (O)</i> SE: 8, 13, 36, 96-97 TWE: D 9 TPK 36 LD 38 TFYI 39

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
15. differentiate among reflection, refraction, and diffraction of water, light, and sound waves.		<i>Astronomy (J)</i> SE: 10-12 <i>Section Assessment 13 #3</i> <i>Activity 14</i> TWE: IS 10 QD 10 R 13	<i>Waves, Sound, and Light (O)</i> SE: 19-22, 41-44, 101-106, 109-112 <i>MiniLAB 20</i> <i>National Geographic 43</i> <i>Activity 46, 107</i> TWE: QD 21 D 44 E 44 MM 102 LD 110
EIGHTH GRADE LIFE SCIENCE STANDARDS			
STUDENTS WILL:			
1. relate structures and functions of cells, tissues, organs, and body systems to each other.	<i>Life's Structure and Function (A)</i> SE: 40-47 TWE: TFYI 44 C 47 <i>Human Body Systems (D)</i> SE: 9-10, 17, 20-21, 75, 119-121 <i>Science Online 75</i> <i>National Geographic 12</i>	<i>The Air Around You (I)</i> SE: 104-105 <i>Health Integration 105</i>	
2. model the process of cell division and reproduction. (example: mitosis and meiosis)	<i>Life's Structure and Function (A)</i> SE: 98-104, 106-111 <i>MiniLAB 103</i> <i>Activity 105</i> <i>National Geographic 110</i> <i>Problem-Solving Activity 109</i> TWE: R 104, 111 CYD 105 MM 109		

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
3. analyze the workings of the immune system as it protects the human body from foreign organisms. (example: viruses, bacteria, fungi)	<i>Human Body Systems (D)</i> SE: 176-180 <i>Science Online</i> 178 <i>MiniLAB</i> 179 <i>Design Your Own Experiment</i> 196-197 TWE: D 177, 180 E 178 TFYI 178 R 180 C 180		
4. compare the complexity of human systems to those of other organisms. (example: frogs, earthworms)	<i>Human Body Systems (D)</i> SE: <i>Use the Internet</i> 26-27 <i>Communicating Your Data</i> 27 TWE: CYD 27		
5. describe structure and function of the human immune system.	<i>Human Body Systems (D)</i> SE: 176-180, 181-188 <i>Activity</i> 189 <i>Design Your Own Experiment</i> 196-197 <i>Science Online</i> 178 <i>MiniLAB</i> 179, 184 <i>National Geographic</i> 183 <i>Problem-Solving Activity</i> 185 TWE: R 180	<i>The Air Around You (I)</i> SE: <i>Health Integration</i> 105	
6. investigate the lineage of organisms for traits and features. (example: family genealogy, bloodline of a registered pet)	<i>Life's Structure and Function (A)</i> SE: 141-142 TWE: E 141 TPK 128	<i>The Changing Surface of Earth (G)</i> SE: <i>Activity</i> 169 <i>Use the Internet</i> 176-177 TWE: IS 156 CD 158	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
7. investigate the role of probability in the study of heredity.	<i>Life's Structure and Function (A)</i> SE: 132-133 <i>Math Skills Activity 133</i> <i>Activity 135</i> TWE: UA 132 E 132		
8. investigate the role of DNA in the transmission of traits and characteristics in organisms.	<i>Life's Structure and Function (A)</i> SE: 112-117 <i>MiniLAB 113</i> <i>Science Online 115, 117</i> TWE: UA 114 D 114 TFYI 114	<i>The Water Planet (H)</i> TWE: TF 71	
9. recognize the impact of selective breeding, natural selection, genetic defects, and environmental adaptations on the development and survival of species.	<i>Life's Structure and Function (A)</i> SE: 159-161 <i>Problem-Solving Activity 159</i> <i>MiniLAB 161</i> TWE: D 159 QD 159 A 160 R 163 C 163	<i>The Changing Surface of Earth (G)</i> SE: 156-161 <i>Section Assessment 161</i> <i>#2,3,6</i> TWE: D 157, 158 AC 158 CD 158 AS 161	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
10. investigate how organisms adapt to biotic and abiotic factors in a biome.	<i>Ecology (E)</i> SE: 68-75 <i>MiniLAB 72</i> TWE: R 75	<i>The Water Planet (H)</i> SE: <i>National Geographic Society Visualizing 141</i> TWE: AC 141 <i>The Air Around You (I)</i> SE: 70-73 <i>Section Assessment 73 #3-5</i> TWE: E 71 UA 71 US 71 MA 72 CH 73	
11. describe the physical and chemical processes of photosynthesis and its importance to plant and animal life.	<i>Life's Structure and Function (A)</i> SE: 84 <i>Activity 88-89</i> TWE: UA 84 <i>From Bacteria to Plants (B)</i> SE: 124-129 <i>MiniLAB 127</i> TWE: QD 128 D 129	<i>The Changing Surface of Earth (G)</i> SE: 163 <i>Chemistry Integration 163</i> <i>Section Assessment 168 #5</i> <i>The Water Planet (H)</i> SE: 135, 138 <i>Minilab 139</i> <i>Section Assessment 142 #1,6</i> TWE: TF 136 D 137 IM 137	
12. describe interactions that exist among members of a biological population. (example: competition, cooperation, social hierarchy, territorial imperative)	<i>Ecology (E)</i> SE: 12, 20-24 <i>National Geographic 18</i> TWE: A 22 R 24 VPG 18 E 18	<i>The Changing Surface of Earth (G)</i> SE: 157-158 <i>The Water Planet (H)</i> TWE: IS 140	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
13. describe ways in which organisms within an ecosystem are dependent on one another and on nonliving components of the environment. (example: energy flow in food chains, food webs, and food pyramids)	<i>Ecology (E)</i> SE: 20-24, 50-53 TWE: A 22, 51 R 24, 53 C 53	<i>The Changing Surface of Earth (G)</i> TWE: D 163 <i>The Water Planet (H)</i> SE: 135, 140, 142 <i>National Geographic Society Visualizing 141 Section Assessment 142 #5-7</i> TWE: TP 135 IS 140 AS 142 D 52, 142	
14. analyze the relationships among ecosystem dynamics and human activity. (example: change in habitat size, quality, structure)	<i>Ecology (E)</i> SE: 78-79, 102-110 <i>Science and Society 86-87</i> <i>MiniLAB 96, 103</i> <i>Activity 111</i> TWE: R 110 QD 109 A 109	<i>The Air Around You (I)</i> SE: 83, 97-102, 104-110 <i>Science Online 83</i> TWE: D 83, 108 TF 83 IS 107 VL 99, 109	
15. investigate the complex relationships in terrestrial and freshwater ecosystems to predict changes within the systems.	<i>Ecology (E)</i> SE: 64-67, 68-75, 77-83 <i>National Geographic 66</i> <i>MiniLAB 72, 78</i> <i>Activity 76</i> <i>Math Skills Activity 80</i> <i>Use the Internet 84-85</i>	<i>The Water Planet (H)</i> SE: <i>National Geographic Society Visualizing 48</i> TWE: SJ 47 AC 48 E 48 TF 48	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
<u>EIGHTH GRADE EARTH/SPACE SCIENCE STANDARDS</u>			
STUDENTS WILL:			
1. analyze the role of plate tectonics in shaping Earth.		<i>Earth Materials and Processes (F)</i> SE: 107-108, 110, 112-114 <i>National Geographic Society Visualizing 109</i> <i>Use the Internet 116-117</i> TWE: AC 109 CC 110, 113	
2. investigate and understand that many aspects of Earth's history can be inferred by studying rocks and fossils.	<i>Life's Structure and Function (A)</i> SE: 165-167 <i>Earth Science Integration 166</i> <i>Science Online 167</i> <i>National Geographic 168</i> TWE: MM 167	<i>Earth Materials and Processes (F)</i> SE: <i>Section Assessment 101 #3-6</i> <i>The Changing Surface of Earth (G)</i> SE: 124-131, 136-137 <i>Section Assessment 131 #3,5; 143 #1,2</i> <i>Model and Invent 144-145</i> TWE: CD 128 E 129 VL 130 IS 130	
3. analyze the effects of density differences and energy transfer on the activities of the atmosphere, oceans, and Earth's interior.		<i>The Water Planet (H)</i> SE: 104-109 <i>Science Online 105</i> <i>Section Assessment 109 #1,3-7</i> TWE: AR 105 LD 108 CH 109 <i>The Air Around You (I)</i> SE: 36-37, 44-46	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
4. analyze how energy transfer between the sun, Earth, and Earth's atmosphere drives weather and climate on Earth.	<i>Ecology (E)</i> SE: 41-42 <i>Science Online</i> 41 TWE: QD 41	<i>The Air Around You (I)</i> SE: 36-37, 44-46, 66-69, 74, 79-80 <i>Environmental Science Integration</i> 50 <i>Section Assessment</i> 69 #1,2,4 <i>National Geographic Society Visualizing</i> 141 TWE: CB 77	
5. predict the potential impact of human activities on long-range changes in the surface and climate of Earth. (example: rain forest, clear cutting, El Nino)	<i>Ecology (E)</i> SE: 73, 104-105, 109 <i>MiniLAB</i> 96 <i>Science Online</i> 104 <i>Activity</i> 111 TWE: TFYI 104, 105	<i>The Air Around You (I)</i> SE: 81-84 <i>Science Online</i> 81, 83 <i>Section Assessment</i> 84 #2-7 TWE: LD 82 D 83 TF 83 CH 84 R 84	
6. investigate theories related to the origin and evolution of the solar system, a galaxy, and the universe.		<i>Astronomy (J)</i> SE: 72, 122-123, 125 <i>National Geographic Society Visualizing</i> 73, 124 <i>Section Assessment</i> 74 #2; 125 #6,7 TWE: UA 72 AC 73 AS 125	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
7. describe the origin of stars and of stellar systems.		<i>Astronomy (J)</i> SE: 115-119 <i>Science Online</i> 116 <i>Section Assessment</i> 119 #3,4,6 TWE: E 117, 118 TF 117 D 119	
8. describe the components of the universe.		<i>Astronomy (J)</i> SE: 120-121 <i>Section Assessment</i> 125 #1,2,4 TWE: IS 72 E 73 AC 77, 88 VL 121 CH 125	
9. relate the discovery of the speed of light to how distance is measured in the universe.		<i>Astronomy (J)</i> SE: 8-9 <i>Model and Invent</i> 94-95 <i>Minilab</i> 122 TWE: AS 95 CY 95	

STANDARDS	PAGE REFERENCES		
	LIFE SCIENCE CUSTOM CURRICULUM SERIES (A-E)	EARTH SCIENCE CUSTOM CURRICULUM SERIES (F-J)	PHYSICAL SCIENCE CUSTOM CURRICULUM SERIES (K-O)
10. investigate apparent relationships among various components of the universe.		<i>Astronomy (J)</i> SE: <i>National Geographic Society Visualizing 73</i> <i>Minilab 79</i> <i>Physics Integration 86</i> <i>Section Assessment 125</i> #5 TWE: MA 71 TF 71 VL 71 IS 115 E 117 AS 119	

EIGHTH GRADE SCIENCE, TECHNOLOGY, ENVIRONMENT, AND SOCIETY STANDARDS

STUDENTS WILL:

1. analyze science issues. (example: cloning, aging, farming, mining, timber)	These standards are covered throughout the 15-book series in the following features: <ul style="list-style-type: none"> • Skills Handbook • Oops: Accidents in Science • TIME: Science and Society • TIME: Science and History • Cultural Diversity • Environmental Issues in the Science classroom • Throughout the text and in Teacher Classroom Resources
2. explain how science helps drive research and provides knowledge for better understanding.	
3. determine how cultural backgrounds and beliefs of different groups can affect scientific thinking.	
4. analyze how society and need can affect the direction taken by science.	
5. analyze scientific advancements that have had an impact on the environment.	

6. analyze the importance of public access to scientific discoveries.	(continued from previous cell)
7. explain the importance of testing technology and products of technology in a controlled setting before submission to the general public.	
8. analyze the possible consequences of various alternative decisions for technological-related issues.	
9. investigate and discuss public policy decisions relating to the environment.	

Codes Used for TWE Pages

LIFE'S STRUCTURE AND FUNCTION (A)
FROM BACTERIA TO PLANTS (B)
ANIMAL DIVERSITY (C)
HUMAN BODY SYSTEMS (D)
ECOLOGY (E)

EARTH MATERIALS AND PROCESSES (F)
THE CHANGING SURFACE OF EARTH (G)
THE WATER PLANET (H)
THE AIR AROUND YOU (I)
ASTRONOMY (J)

THE NATURE OF MATTER (K)
CHEMISTRY (L)
MOTION, FORCES, AND ENERGY (M)
ELECTRICITY AND MAGNETISM (N)
WAVES, SOUND, AND LIGHT (O)

A Activity
 C Challenge
 CYD Communicating Your Data
 D Discussion
 E Extension
 EA Error Analysis
 EO Expected Outcome
 FH Form a Hypothesis
 MM Make a Model
 QD Quick Demo
 R Reteach
 SJ Science Journal
 SP Safety Precautions
 TFYI Teacher FYI
 TPK Tie to Prior Knowledge
 TYH Text Your Hypothesis
 UA Use an Analogy
 VCC Visualizing the Carbon Cycle
 VL Visual Learning
 VPG Visualizing Population Growth

AC Activity
 AR Active Reading
 AS Assessment
 CB Content Background
 CC Curriculum Connection
 CD Cultural Diversity
 CH Challenge
 CO Connections
 CY Communicating Your Data
 D Discussion
 E Extension
 EA Error Analysis
 IM Identifying Misconceptions
 IS Inclusion Strategies
 LD Lab Demonstration
 MA Make A Model
 NGS National Geographic Society
 Visualizing
 QD Quick Demo
 R Reteach
 SJ Science Journal
 TC Theme Connection
 TF Teacher FYI
 TP Tie to Prior Knowledge
 UA Use An Analogy
 US Using Science Words
 VL Visual Learning

A Activity
 C Challenge
 CA Check Assessment
 CC Curriculum Connection
 CYD Communicating Your Data
 D Discussion
 E Extension
 EA Error Analysis
 IM Identifying Misconceptions
 IS Inclusion Strategies
 LD Lab Demonstration
 MM Make a Model
 QD Quick Demo
 R Reteach
 SJ Science Journal
 SP Safety Precautions
 TFYI Teacher FYI
 TPK Tie to Prior Knowledge
 TYH Test Your Hypothesis
 UA Use an Analogy
 VL Visual Learning