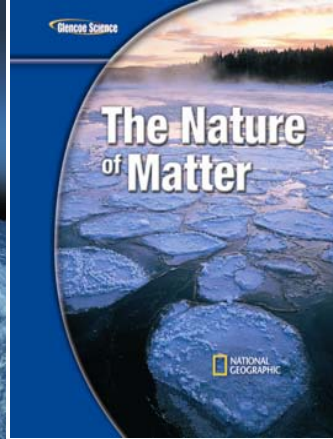


*Life's
Structure
and Function A*
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*The Air
Around You I*
© 2008



*The Nature of
Matter K*
© 2008



Chemistry L
© 2008



*Waves,
Sound,
and Light O*
© 2008

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
Grade 7			
Inquiry Process			
<i>K-7 Standard S.IP: Develop an understanding that scientific inquiry and reasoning involves observing, questioning, investigating, recording, and developing solutions to problems.</i>			
S.IP.M.1 Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.			
S.IP.07.11 Generate scientific questions based on observations, investigations, and research.	Student Edition: (A) 189-190 <i>Applying Science</i> 13, 109, 159 <i>Design Your Own Lab</i> 30-31 <i>Lab</i> 82 <i>Mini Lab</i> 11 Teacher Wraparound Edition: (A) D 11; LD 10; QD 10	Teacher Wraparound Edition: (I) AIL 86; AR 9; IL 46, 108	Student Edition: (K) <i>Design Your Own Lab</i> 62-63, 88-89 <i>Lab</i> 77, 117, 118-119 <i>Mini Lab</i> 57, 81, 99 (L) <i>Communicating Your Data</i> 117 <i>Lab</i> 25, 26-27, 86-87 (O) <i>Design Your Own Lab</i> 26-27, 56-57, 86-87 Teacher Wraparound Edition: (K) AIL 118; As 57, 77; IL 82 (L) AIL 87; CYD 117 (O) AIL 86; As 27, 57

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.IP.07.12 Design and conduct scientific investigations.	<p>Student Edition: (A) <i>Design Your Own Lab</i> 30-31, 58-59, 146-147, 176-177</p> <p>Teacher Wraparound Edition: (A) <i>AI</i> 31, 58, 146, 177</p>	<p>Student Edition: (I) 31 #26 <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 85, 103</p>	<p>Student Edition: (K) <i>Design Your Own Lab</i> 62-63, 88-89 (L) <i>Design Your Own Lab</i> 54-55 (O) <i>Design Your Own Lab</i> 26-27, 56-57, 86-87</p> <p>Teacher Wraparound Edition: (K) <i>AIL</i> 89 (L) <i>AIL</i> 54; <i>As</i> 55 (O) <i>AIL</i> 26, 86</p>
S.IP.07.13 Use tools and equipment appropriate to scientific investigations.	<p>Student Edition: (A) 14-15, 201-202 <i>Lab</i> 48, 82, 89-90, 105 <i>Use the Internet Lab</i> 118-119</p> <p>Teacher Wraparound Edition: (A) 222</p>	<p>Student Edition: (I) <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 86-87, 103</p>	<p>Student Edition: (K) <i>Lab</i> 53, 77 <i>Launch Lab</i> 39 (L) <i>Design Your Own Lab</i> 54-55 <i>Lab</i> 53, 77, 116-117 <i>Mini Lab</i> 40 (O) <i>Design Your Own Lab</i> 86-87 <i>Lab</i> 18</p> <p>Teacher Wraparound Edition: (L) <i>AIL</i> 116; <i>As</i> 55 (O) <i>AIL</i> 86</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.IP.07.14 Use metric measurement devices in an investigation.	Student Edition: (A) 14, 215 <i>Design Your Own Lab</i> 30-31, 176-177 Lab 88 Teacher Wraparound Edition: (A) TFYI 14	Student Edition: (I) <i>Design Your Own Lab</i> 26-27 <i>Model and Invent Lab</i> 56-57 Lab 86-87	Student Edition: (K) Lab 53, 77 (L) <i>Design Your Own Lab</i> 54-55 Lab 53 Mini Lab 40
S.IP.07.15 Construct charts and graphs from data and observations.	Student Edition: (A) 186-187 <i>Applying Math</i> 40 <i>Communicating Your Data</i> 119 <i>Design Your Own Lab</i> 30-31, 176-177 Lab 29 <i>Use the Internet Lab</i> 118-119	Student Edition: (I) Lab 16, 86-87 <i>Design Your Own Lab</i> 26-27 <i>Use the Internet Lab</i> 116-117	Student Edition: (K) <i>Communicating Your Data</i> 77 Lab 53 Mini Lab 99 Teacher Wraparound Edition: (K) CYD 77 (L) CYD 55

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.IP.07.16 Identify patterns in data.	Student Edition: (A) 186-187 <i>Applying Math</i> 40 <i>Communicating Your Data</i> 119 <i>Design Your Own Lab</i> 30-31, 176-177 <i>Lab</i> 29 <i>Use the Internet Lab</i> 118-119	Student Edition: (I) <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 55, 85, 86-87 <i>Use the Internet Lab</i> 116-117	Student Edition: (K) <i>Lab</i> 30-31, 53, 77, 117 <i>Launch Lab</i> 97 <i>Mini Lab</i> 99 (L) <i>Communicating Your Data</i> 87 <i>Design Your Own Lab</i> 54-55, 86-87 Teacher Wraparound Edition: (K) As 31, 99; CYD 53 (L) CYD 55

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
Inquiry Analysis and Communication			
<i>K-7 Standard S.IA: Develop an understanding that scientific inquiry and investigations require analysis and communication of findings, using appropriate technology.</i>			
S.IA.M.1 Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.			
S.IA.07.11 Analyze information from data tables and graphs to answer scientific questions.	Student Edition: (A) 186-187 <i>Applying Math</i> 40 <i>Communicating Your Data</i> 119 <i>Design Your Own Lab</i> 30-31, 176-177 <i>Lab</i> 29 <i>Use the Internet Lab</i> 118-119	Student Edition: (I) <i>Lab</i> 16, 86-87 <i>Design Your Own Lab</i> 26-27 <i>Use the Internet Lab</i> 116-117	Student Edition: (K) <i>Communicating Your Data</i> 53, 63 <i>Design Your Own Lab</i> 62-63 <i>Lab</i> 30-31, 53, 117 (L) <i>Design Your Own Lab</i> 54-55, 86-87 (O) <i>Communicating Your Data</i> 27 <i>Design Your Own Lab</i> 26-27 Teacher Wraparound Edition: (K) As 31; CYD 53, 63 (L) AIL 87; As 55

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.IA.07.12 Evaluate data, claims, and personal knowledge through collaborative science discourse.	Student Edition: (A) 11-13, 186, 193-194 Teacher Wraparound Edition: (A) CYD 82; EA 31, 147, 177	Student Edition: (I) Lab 16 <i>Design Your Own Lab</i> 26-27 <i>Model and Invent Lab</i> 56-57	Student Edition: (K) <i>Research</i> 32 (O) 5 Teacher Wraparound Edition: (K) R 32
S.IA.17.13 Communicate and defend findings of observations and investigations using evidence.	Student Edition: (A) <i>Science Online</i> 32 <i>Science and Society</i> 32 Teacher Wraparound Edition: (A) D 32; EA 31, 177; II 32; RR 32	Student Edition: (I) <i>Design Your Own Lab</i> 26-27 <i>Communicating Your Data</i> 57, 85 <i>Use the Internet Lab</i> 116-117 Teacher Wraparound Edition: (I) A 117	Student Edition: (K) <i>Design Your Own Lab</i> 30-31, 88-89 <i>Lab</i> 24, 77, 117 (L) <i>Design Your Own Lab</i> 54-55 <i>Lab</i> 53, 86-87, 116-117 (O) <i>Design Your Own Lab</i> 56-57 Teacher Wraparound Edition: (K) As 26, 31, 89 (L) As 55, 117 (O) As 57

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.IA.07.14 Draw conclusions from sets of data from multiple trials of a scientific investigation to draw conclusions.	Student Edition: (A) 10-12, 193-194 <i>Lab 135</i> <i>Mini Lab 11</i> Teacher Wraparound Edition: (A) LD 10	Student Edition: (I) <i>Design Your Own Lab</i> 26-27 <i>Lab 85</i> <i>Use the Internet Lab</i> 116-117	Student Edition: (K) <i>Communicating Your Data</i> 63, 89 (L) <i>Communicating Your Data</i> 117 <i>Lab 53</i> (O) <i>Lab 18</i> Teacher Wraparound Edition: (K) CYD 63 (L) As 53; EA 117
S.IA.07.15 Use multiple sources of information to evaluate strengths and weaknesses of claims, arguments, or data.	Student Edition: (A) <i>Communicating Your Data</i> 119 <i>Science Online</i> 32 <i>Science and Society</i> 32 <i>Use the Internet</i> 118-119 Teacher Wraparound Edition: (A) CYD 119; II 32; RR 32	Student Edition: (I) <i>Lab 16</i>	Student Edition: (K) <i>Lab 118-119</i>

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
Reflection and Social Implications			
<i>K-7 Standard S.RS: Develop an understanding that claims and evidence for their scientific merit should be analyzed. Understand how scientists decide what constitutes scientific knowledge. Develop an understanding of the importance of reflection on scientific knowledge and its application to new situations to better understand the role of science in society and technology.</i>			
S.RS.M.1 Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.			
S.RS.07.11 Evaluate the strengths and weaknesses of claims, arguments, and data.	Student Edition: (A) 11-13, 186, 193-194 Teacher Wraparound Edition: (A) CYD 82; EA 31, 147, 177	Student Edition: (I) Lab 16 <i>Design Your Own Lab</i> 26-27 <i>Model and Invent Lab</i> 56-57	Student Edition: (K) Research 32 (O) 5 Teacher Wraparound Edition: (K) R 32
S.RS.07.12 Describe limitations in personal and scientific knowledge.	Student Edition: (A) 11-13, 194 Teacher Wraparound Edition: (A) D 60	Student Edition: (I) <i>Get Ready to Read</i> 36A <i>Science and Society</i> 58 Teacher Wraparound Edition: (I) CB 77; IM 6F	Student Edition: (L) 5 (O) Figure 7 5 Teacher Wraparound Edition: (K) D 32 (O) D 88; VL 5
S.RS.07.13 Identify the need for evidence in making scientific decisions.	Student Edition: (A) 8-13, 189-194 Teacher Wraparound Edition: (A) D 11; IM 12; TFYI 12	Student Edition: (I) <i>The Nature of Science</i> 2-5 <i>Use the Internet Lab</i> 116-117	Student Edition: (O) <i>You Do It</i> 5 Teacher Wraparound Edition: (O) YDI 5

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.RS.07.14 Evaluate scientific explanations based on current evidence and scientific principles.	Student Edition: (A) 11-13 <i>Applying Science</i> 13, 109, 159 <i>Design Your Own Lab</i> 30-31, 176-177 <i>Mini Lab</i> 11 <i>Science and Society</i> 32 Teacher Wraparound Edition: (A) II 32; RR 32	Student Edition: (I) 82	Student Edition: (K) 4 <i>Lab</i> 118-119 (O) <i>Time Science and Society</i> 58 Teacher Wraparound Edition: (O) A 58; CB 58; RR 58

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.RS.07.15 Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.	<p>Student Edition: (A) 194, 201-204 <i>Communicating Your Data</i> 31, 59, 89, 105, 135, 164</p> <p>Teacher Wraparound Edition: (A) A 13; CYD 31, 105, 135; DI 13</p>	<p>Student Edition: (I) <i>Model and Invent Lab</i> 56-57</p> <p>Teacher Wraparound Edition: (I) A 15; IL 12, 46, 79</p>	<p>Student Edition: (K) 129-131 <i>Design Your Own Lab</i> 62-63 <i>Lab 24</i> <i>Launch Lab 7</i> <i>Mini Lab 15</i></p> <p>(L) <i>Lab 25</i> <i>Launch Lab 7, 35, 63, 95</i> <i>Mini Lab 14, 19, 40, 100</i></p> <p>(O) <i>Launch Lab 7, 65</i> <i>Mini Lab 11, 20, 97</i></p> <p>Teacher Wraparound Edition: (K) A 58; As 15, 24; LD 21, 43, 74, 103; MM 73, 79; QD 11, 28, 44, 79</p> <p>(L) As 7, 14, 25, 63, 95, 100; LD 20, 51, 84;</p> <p>(O) A 49, 74, 98, 111; IL 104; LD 38, 110; MM 51, 68, 116; QD 16,</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.RS.07.16 Design solutions to problems using technology.	Student Edition: (A) 8-13 <i>Design Your Own Lab</i> 30-31 <i>Science and History</i> 60, 178 Teacher Wraparound Edition: (A) AIL 30; CB 60, 178; D 60, 178	See the Life Science books to meet this standard.	Student Edition: (L) <i>Investigate</i> 118 <i>National Geographic</i> 80 Teacher Wraparound Edition: (L) A 80; DI 80; I 118
S.RS.07.17 Describe the effect humans and other organisms have on the balance of the natural world.	See the Physical Science books to meet this standard.	Student Edition: (I) 82-84, 96-102, 107-110 Teacher Wraparound Edition: (I) A 15; R 110	Student Edition: (L) <i>Integrate Life Science</i> 82 <i>Integrate Physics</i> 28 <i>National Geographic</i> 80 Teacher Wraparound Edition: (K) AIL 118 (L) A 80; ILS 82; IP 28; NG 80
S.RS.07.18 Describe what science and technology can and cannot reasonably contribute to society.	Student Edition: (A) <i>Science and Society</i> 32 <i>Science and History</i> 60, 178 Teacher Wraparound Edition: (A) D 60, 178; HS 60, 178; II 32	Student Edition: (I) <i>Science and Society</i> 58 Teacher Wraparound Edition: (I) R 84; TBI 94	Student Edition: (L) 5 <i>You Do It</i> 5 Teacher Wraparound Edition: (L) E 5; YDI 5

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
S.RS.07.19 Describe how science and technology have advanced because of the contributions of many people throughout history and across cultures.	<p>Student Edition: (A) 21-23, 24-25, 49, 53, 129, 157 <i>National Geographic</i> 22 <i>Science and History</i> 60, 178</p> <p>Teacher Wraparound Edition: (A) A 22; CD 44; VOL 22</p>	<p>Student Edition: (I) <i>The Nature of Science</i> 2-5 <i>Accidents in Science</i> 118</p> <p>Teacher Wraparound Edition: (I) CC 48</p>	<p>Student Edition: (K) 8-10, 12, 98-99 <i>Time Science and History</i> 32 (L) 2-4 <i>Integrate Career</i> 11 <i>Investigate</i> 118 <i>Time Science and Society</i> 118 (O) 2-3 <i>Accidents in Science</i> 120 <i>Science Stats</i> 28 <i>Time Science and Society</i> 88</p> <p>Teacher Wraparound Edition: (K) CD 10, 80, 107; D 32; SJ 14; TFYI 15, 20, 50 (L) CB 3; CC 43; I 118; (O) CB 3; CC 3, 76; D 88; TFYI 74; VL 5</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
PHYSICAL SCIENCE			
Energy			
<i>K-7 Standard P.EN: Develop an understanding that there are many forms of energy (such as heat, light, sound, and electrical) and that energy is transferable by convection, conduction, or radiation. Understand energy can be in motion, called kinetic; or it can be stored, called potential. Develop an understanding that as temperature increases, more energy is added to a system. Understand nuclear reactions in the sun produce light and heat for the Earth.</i>			
P.EN.M.3 Waves and Energy-Waves have energy and transfer energy when they interact with matter. Examples of waves include sound waves, seismic waves, waves on water, and light waves.			
P.EN.07.31 Identify examples of waves, including sound waves, seismic waves, and waves on water.	See the Physical Science books to meet this standard.	See the Physical Science books to meet this standard.	Student Edition: (K) <i>Integrate Physics</i> 16 (O) 8-12, 36, 66, 96 <i>Launch Lab</i> 7 Teacher Wraparound Edition: (O) AP 6; BI 6; SCB 6E; TPK 36, 66, 96
P.EN.07.32 Describe how waves are produced by vibrations in matter.	See the Physical Science books to meet this standard.	See the Physical Science books to meet this standard.	Student Edition: (O) 9-11, 48, 54-55 <i>Integrate Social Studies</i> 48 Teacher Wraparound Edition: (O) D 9, 37; MM 9; QD 37

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
P.EN.07.33 Demonstrate how waves transfer energy when they interact with matter (for example: tuning fork in water, waves hitting a beach, earthquake knocking over buildings).	See the Physical Science books to meet this standard.	See the Physical Science books to meet this standard.	Student Edition: (O) 19-22, 97-98 <i>Lab</i> 118-119 <i>Mini Lab</i> 20 <i>Section 3 Review</i> 25 Teacher Wraparound Edition: (O) As 20, 25, 80, 119; DI 21, 111; IL 104; LD 22; QD 21, 23; TPK 19
P.EN.M.4 Energy Transfer- Energy is transferred from a source to a receiver by radiation, conduction, and convection. When energy is transferred from a source to a receiver, the quantity of energy before the transfer is equal to the quantity of energy after the transfer.			
P.EN.07.43 Explain how light energy is transferred to chemical energy through the process of photosynthesis.	Student Edition: (A) 84 <i>Lab</i> 88-89 Teacher Wraparound Edition: (A) SJ 84	See the Life Science books to meet this standard.	See the Life Science books to meet this standard.
P.EN.M.6 Solar Energy Effects- Nuclear reactions take place in the sun producing heat and light. Only a tiny fraction of the light energy from the sun reaches Earth, providing energy to heat the Earth.			
P.EN.07.61 Identify that nuclear reactions take place in the sun, producing heat and light.	See the Physical Science books to meet this standard.	See the Physical Science books to meet this standard.	Teacher Wraparound Edition: (L) D 43

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
P.EN.07.62 Explain how only a tiny fraction of light energy from the sun is transformed to heat energy on Earth.	See the Earth Science books to meet this standard.	Student Edition: (I) 13, 17-20, 81 <i>MiniLAB</i> 19 <i>Section Review</i> 20 Teacher Wraparound Edition: (I) CFU 20; DIS 18; IM 6F; SCB 6E; TPK 17	Student Edition: (O) 12
Properties of Matter <i>K-7 Standard P.PM: Develop an understanding that all matter has observable attributes with physical and chemical properties that are described, measured, and compared. Understand that states of matter exist as solid, liquid, or gas; and have physical and chemical properties. Understand all matter is composed of combinations of elements, which are organized by common attributes and characteristics on the Periodic Table. Understand that substances can be classified as mixtures or compounds and according to their physical and chemical properties.</i>			
P.PM.M.1 Chemical Properties- Matter has chemical properties. The understanding of chemical properties helps to explain how new substances are formed.			
P.PM.07.11 Classify substances by their chemical properties (flammability, pH, acid-base indicators, reactivity).	See the Physical Science books to meet this standard.	Student Edition: (I) 10-15	Student Edition: (K) <i>Lab 77</i> Teacher Wraparound Edition: (L) A 12

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
<p>P.PM.M.2 Elements and Compounds- Elements are composed of a single kind of atom that are grouped into families with similar properties on the periodic table. Compounds are composed of two or more different elements. Each element and compound has a unique set of physical and chemical properties such as boiling point, density, color, conductivity, and reactivity.</p>			
<p>P.PM.07.21 Identify the smallest component that makes up an element.</p>	<p>Student Edition: (A) 68 Teacher Wraparound Edition: (A) DI 69</p>	<p>See the Physical Science books to meet this standard.</p>	<p>Student Edition: (K) 18 (L) 9 <i>Figure 2 9</i></p>
<p>P.PM.07.22 Describe how the elements within the Periodic Table are organized by similar properties into families (highly reactive metals, less reactive metals, highly reactive nonmetals, and some almost completely non-reactive gases).</p>	<p>Student Edition: (A) 69 Teacher Wraparound Edition: (A) CC 73; TPK 68</p>	<p>See the Life Science books to meet this standard.</p>	<p>Student Edition: (L) 12-13</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
P.PM.07.23 Illustrate the structure of molecules using models or drawings (water, carbon dioxide, salt).	Student Edition: (A) 70, 75 Teacher Wraparound Edition: (A) MM 74	Student Edition: (I) 14, 102 Teacher Wraparound Edition: (I) DI 14; MAM 14	Student Edition: (K) <i>Figure 3 41</i> <i>Figure 25 26</i> (L) <i>Lab 25</i> <i>Launch Lab 95</i> <i>Mini Lab 19, 100</i> <i>National Geographic 101</i> <i>Section 1 Review 102 #3</i> Teacher Wraparound Edition: (K) DI 41; MM 41 (L) A 97, 101; As 19, 95, 100, 106; CU 102, 106; DI 100; MM 22, 99; R 24
P.PM.07.24 List examples of physical and chemical properties of elements and compounds (boiling point, density, color, conductivity, reactivity).	Student Edition: (A) 68-75 <i>Mini Lab 73</i> Teacher Wraparound Edition: (A) CU 75	See the Physical Science books to meet this standard.	Student Edition: (K) 72-76 <i>Lab 77</i> <i>Section 1 Review 76</i> <i>Section 3 Study Guide 91</i> Teacher Wraparound Edition: (K) As 76, 77; D 73; DI 73; R 76; SCB 70E-70F; SJ 75; UA 75; VL 73

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
Changes in Matter			
<i>K-7 Standard P.CM: Develop an understanding of changes in the state of matter in terms of heating and cooling, and in terms of arrangement and relative motion of atoms and molecules. Understand the differences between physical and chemical changes. Develop an understanding of the conservation of mass. Develop an understanding of products and reactants in a chemical change.</i>			
P.CM.M.2 Chemical Changes- Chemical changes occur when two elements and/or compounds react and produce new substances. These new substances have different physical and chemical properties than the original elements and/or compounds. During the chemical change, the number and kind of atoms in the reactants are the same as the number and kind of atoms in the products. Mass is conserved during chemical changes. The mass of the reactants is the same as the mass of the products.			
P.CM.07.21 Identify evidence of chemical change through color, gas formation, solid formation, and temperature change.	Student Edition: (A) <i>Mini Lab 73</i>	Student Edition: (I) 14 Teacher Wraparound Edition: (I) LD 82, 98	Student Edition: (K) 81-85 <i>Integrate Astronomy 83</i> <i>Integrate Life Science 81</i> <i>Mini Lab 81</i> (L) 36 <i>Lab 53</i> <i>National Geographic 37</i> Teacher Wraparound Edition: (K) As 81; CU 87; D 81; DI 85; ILS 81; IM 85; QD 83; R 87; SJ 82 (L) IM 34F; NG 37; QD 39; SCB 34E

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
P.CM.07.22 Compare and contrast the chemical properties of a new substance with the original after a chemical change.	Student Edition: (A) <i>Mini Lab 73</i>	Student Edition: (I) 14, 97	Student Edition: (K) 76, 82 <i>Figure 13</i> Teacher Wraparound Edition: (K) VL 82
P.CM.07.23 Describe the physical properties and chemical properties of the products and reactants in a chemical change.	See the Earth Science books to meet this standard.	Student Edition: (I) 14, 97, 102 <i>MiniLAB 106</i> Teacher Wraparound Edition: (I) LD 82	Student Edition: (L) 36
LIFE SCIENCE			
<i>K-7 Standard L.OL: Develop an understanding that plants and animals (including humans) have basic requirements for maintaining life which include the need for air, water and a source of energy. Understand that all life forms can be classified as producers, consumers, or decomposers as they are all part of a global food chain where food/energy is supplied by plants which need light to produce food/energy. Develop an understanding that plants and animals can be classified by observable traits and physical characteristics. Understand that all living organisms are composed of cells and they exhibit cell growth and division. Understand that all plants and animals have a definite life cycle, body parts, and systems to perform specific life functions.</i>			
L.OL.M.2 Cell Functions- All organisms are composed of cells, from one cell to many cells. In multicellular organisms, specialized cells perform specialized functions. Organs and organ systems are composed of cells, and function to serve the needs of cells for food, air, and waste removal. The way in which cells function is similar in all living organisms.			
L.OL.07.21 Recognize that all organisms are composed of cells (single cell organisms, multicellular organisms).	Student Edition: (A) 16	See the Physical Science books to meet this standard.	Student Edition: (K) <i>Integrate Life Science</i> 28 Teacher Wraparound Edition: (K) R 29

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
L.OL.07.22 Explain how cells make up different body tissues, organs, and organ systems.	Student Edition: (A) 47	See the Life or Physical Science books to meet this standard.	Student Edition: (L) 109
L.OL.07.23 Describe how cells in all multicellular organisms are specialized to take in nutrients, which they use to provide energy for the work that cells do and to make the materials that a cell or organism needs.	Student Edition: (A) 16-20, 42, 44, 83-87 Teacher Wraparound Edition: (A) CU 87; D 86	See the Life or Physical Science books to meet this standard.	Student Edition: (L) 106, 109, 111-112, 115 Teacher Wraparound Edition: (L) CU 115; TFYI 112
L.OL.07.24 Recognize that cells function in a similar way in all organisms.	Student Edition: (A) 16, 40-47 <i>Lab 48</i> <i>Mini Lab 42</i> Teacher Wraparound Edition: (A) D 41QD 41; TPK 40; VL 43	See the Life Science books to meet this standard.	See the Life Science books to meet this standard.
L.OL.M.3- Growth and Development- Following fertilization, cell division produces a small cluster of cells that then differentiate by appearance and function to form the basic tissue of an embryo.			
L.OL.07.31 Describe growth and development in terms of increase of cell number and/or cell size.	Student Edition: (A) 98-104 <i>Lab 105</i> <i>Mini Lab 103</i> Teacher Wraparound Edition: (A) FF 100; IL 104; IM 47; QD 101; R 104	See the Life Science books to meet this standard.	See the Life Science books to meet this standard.

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
L.OL.07.32 Examine how through cell division, cells can become specialized for specific functions.	Student Edition: (A) 47	See the Life Science books to meet this standard.	See the Life Science books to meet this standard.
L.OL.M.6 Photosynthesis- Plants are producers; they use the energy from light to make sugar molecules from the atoms of carbon dioxide and water. Plants use these sugars along with minerals from the soil to form fats, proteins, and carbohydrates. These products can be used immediately, incorporated into the cells of a plant as the plant grows, or stored for later use.			
L.OL.07.61 Recognize the need for light to provide energy for the production of carbohydrates, proteins and fats.	Student Edition: (A) 84 <i>Lab 88-89</i> Teacher Wraparound Edition: (A) A 84	See the Life Science books to meet this standard.	The following references can be used in classroom discussion to meet this objective. Student Edition: (L) 106, 109-115 Teacher Wraparound Edition: (L) CU 115
L.OL.07.62 Explain that carbon dioxide and water are used to produce carbohydrates, proteins, and fats.	Student Edition: (A) 84	Student Edition: (I) 83-84, 109	See the Earth Science books to meet this standard.
L.OL.07.63 Describe evidence that plants make, use and store food.	Student Edition: (A) 84	Student Edition: (I) 84, 109	Student Edition: The following reference discusses Photosynthesis. (M) 140

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
Heredity			
<i>K-7 Standard L.HE: Develop an understanding that all life forms must reproduce to survive. Understand that characteristics of mature plants and animals may be inherited or acquired and that only inherited traits are passed on to their young. Understand that inherited traits can be influenced by changes in the environment and by genetics.</i>			
L.HE.M.2 Reproduction- Reproduction is a characteristic of all living systems; because no individual organism lives forever, reproduction is essential to the continuation of every species. Some organisms reproduce asexually. Other organisms reproduce sexually.			
L.HE.07.21 Compare how characteristics of living things are passed on through generations, both asexually and sexually.	Student Edition: (A) 98-104, 106-111, 128-134 <i>Applying Math</i> 133 <i>Applying Science</i> 109 <i>Lab</i> 105 <i>Mini Lab</i> 103, 130 <i>National Geographic</i> 110, 131 Teacher Wraparound Edition: (A) CU 104, 111; IL 104, 129; LD 102; MM 109; QD 101, 109; R 104, 111; SJ 103	See the Life Science books to meet this standard.	See the Life Science books to meet this standard.

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
L.HE.07.22 Compare and contrast the advantages and disadvantages of sexual vs. asexual reproduction.	<p>Student Edition: (A) 98-104, 106-111 <i>Applying Science</i> 109 <i>Lab</i> 105 <i>Mini Lab</i> 103 <i>National Geographic</i> 110 <i>Section Review #5</i></p> <p>Teacher Wraparound Edition: (A) CU 104, 111; IL 104; LD 102; MM 109; QD 101, 109; R 104, 111; SJ 103; VL 110</p>	See the Life Science books to meet this standard.	See the Life Science books to meet this standard.

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
EARTH SCIENCE			
Earth Systems			
<i>K-7 Standard E.ES: Develop an understanding of the warming of the Earth by the sun as the major source of energy for phenomenon on Earth and how the sun's warming relates to weather, climate, seasons, and the water cycle. Understand how human interaction and use of natural resources affects the environment.</i>			
E.ES.M.1 Solar Energy- The sun is the major source of energy for phenomena on the surface of the Earth.			
E.ES.07.11 Demonstrate, using a model or drawing, the relationship between the warming by the sun of the Earth and the water cycle as it applies to the atmosphere (evaporation, water vapor, warm air rising, cooling, condensation, clouds).	See the Earth Science books to meet this standard.	Student Edition: (I) 19-20 Teacher Wraparound Edition: (I) CFU 20; R 20; SCB 6E; SJ 19	The water cycle is demonstrated in the following reference. Student Edition: (K) Lab 53 Visualization of states of water and phase changes is discussed in the following references. (K) National Geographic 48 Teacher Wraparound Edition: (K) CC 51; NG 48
E.ES.07.12 Describe the relationship between the warming of the atmosphere of the Earth by the sun and convection within the atmosphere and oceans.	See the Earth Science books to meet this standard.	Student Edition: (I) 17-20 MiniLAB 19 Teacher Wraparound Edition: (I) DI 19; UAA 18	Teacher Wraparound Edition: (K) CC 51

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
E.ES.07.13 Describe how the warming of the Earth by the sun produces winds and ocean currents.	See the Earth Science books to meet this standard.	Student Edition: (I) 21-25 <i>National Geographic</i> 23 Teacher Wraparound Edition: (I) CFU 25; IM 6F	See the Earth Science books to meet this standard.
E.ES.M.4 Human Consequences- Human activities have changed the land, oceans, and atmosphere of the Earth resulting in the reduction of the number and variety of wild plants and animals sometimes causing extinction of species.			
E.ES.07.41 Explain how human activities (surface mining, deforestation, overpopulation, construction and urban development, farming, dams, landfills, and restoring natural areas) change the surface of the Earth and affect the survival of organisms.	See the Physical Science books to meet this standard.	Student Edition: (I) 83 <i>Science Online</i> 83	Student Edition: (L) 2-3 <i>National Geographic</i> 80 Teacher Wraparound Edition: (L) M 2; SJ 3
E.ES.07.42 Describe the origins of pollution in the atmosphere, geosphere, and hydrosphere, (car exhaust, industrial emissions, acid rain, and natural sources), and how pollution impacts habitats, climatic change, threatens or endangers species.	See the Earth Science books to meet this standard.	Student Edition: (I) 82-84, 93 #17, 96-102, 104-110 <i>Science and History</i> 88 <i>Launch Lab</i> 95 <i>MiniLAB</i> 100 <i>Lab</i> 103 <i>Use the Internet Lab</i> 116-117 Teacher Wraparound Edition: (I) A 102; CD 99; R 102	Student Edition: (L) <i>National Geographic</i> 80 (O) 76 Teacher Wraparound Edition: (L) As 80; NG 80 (O) UA 76

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
E.ES.M.7 Weather and Climate- Global patterns of atmospheric and oceanic movement influence weather and climate.			
E.ES.07.71 Compare and contrast the difference and relationship between climate and weather.	See the Earth Science books to meet this standard.	Student Edition: (I) 36, 66 Teacher Wraparound Edition: (I) TPK 36	See the Earth Science books to meet this standard.
E.ES.07.72 Describe how different weather occurs due to the constant motion of the atmosphere from the energy of the sun reaching the surface of the Earth.	See the Earth Science books to meet this standard.	Student Edition: (I) 36-39, 44-51, 61 #22, 63 #20 <i>National Geographic</i> 49 Teacher Wraparound Edition: (I) A 51; DI 24; DIS 24, 45; TFYI 47	See the Earth Science books to meet this standard.
E.ES.07.73 Explain how the temperature of the oceans affects the different climates on Earth because water in the oceans holds a large amount of heat.	See the Earth Science books to meet this standard.	Student Edition: (I) 67-69, 75, 91 #27, 93 #5 <i>MiniLAB</i> 75 <i>National Geographic</i> 76-77 Teacher Wraparound Edition: (I) CB 77; FF 68; TFYI 68	See the Earth Science books to meet this standard.

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
E.ES.07.74 Describe weather conditions associated with frontal boundaries (cold, warm, stationary, and occluded) and the movement of major air masses and the jet stream across North America using a weather map.	See the Earth Science books to meet this standard.	Student Edition: (I) 24, 44-51, 52-54, 61 #26, 63 #17-#18 <i>Lab 55</i> Teacher Wraparound Edition: (I) CC 46; CFU 51; DI 46; DIS 24; VL 46	See the Earth Science books to meet this standard.
E.ES.M.8 Water Cycle- Water circulates through the four spheres of the Earth in what is known as the “water cycle.”			
E.ES.07.81 Explain the water cycle and describe how evaporation, transpiration, condensation, cloud formation, precipitation, infiltration, surface runoff, ground water, and absorption occur within the cycle.	See the Earth Science books to meet this standard.	Student Edition: (I) 19-20, 33 #15-17 Teacher Wraparound Edition: (I) A 19; R 20; SJ 19	Student Edition: (K) 50-51 <i>Lab 53</i> Teacher Wraparound Edition: (K) CC 51
E.ES.07.82 Analyze the flow of water between the components of a watershed, including surface features (lakes, streams, rivers, wetlands) and groundwater.	See the Earth Science books (G, H) to meet this standard.	See the Earth Science books (G, H) to meet this standard.	See the Earth Science books (G, H) to meet this standard.

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
Fluid Earth			
<i>K-7 Standard E.FE: Develop an understanding that Earth is a planet nearly covered with water and that water on Earth can be found in three states, solid, liquid, and gas. Understand how water on Earth moves in predictable patterns. Understand Earth's atmosphere as a mixture of gases and water vapor.</i>			
E.FE.M.1 Atmosphere- The atmosphere is a mixture of nitrogen, oxygen and trace gases that include water vapor. The atmosphere has different physical and chemical composition at different elevations.			
E.FE.07.11 Describe the atmosphere as a mixture of gases.	See the Earth Science books to meet this standard.	Student Edition: (I) 8-15 <i>Integrate Life Science</i> 14 <i>Section Review</i> 15 <i>Applying Skills</i> 15 Teacher Wraparound Edition: (I) IES 28; SCB 6E; TPK 8; VL 9	Student Edition: (K) 108-109 (L) <i>Fields of...Methane?</i> 94 <i>National Geographic</i> 80 (O) <i>The Ozone Layer</i> 76 Teacher Wraparound Edition: (L) AP 94

STANDARDS	PAGE REFERENCES		
	Life Science (A)	Earth Science (I)	Physical Science (K, L, O)
E.FE.07.12 Compare and contrast the composition of the atmosphere at different elevations.	See the Earth Science books to meet this standard.	Student Edition: (I) 8-15, 32 #1-3 <i>Science Online</i> 10 Teacher Wraparound Edition: (I) A 15; CFU 15; DIS 10; IM 10; TFYI 11, 13	Student Edition: (L) <i>Fields of...Methane?</i> 94 <i>National Geographic</i> 80 (O) <i>The Ozone Layer</i> 76 Teacher Wraparound Edition: (L) AP 94