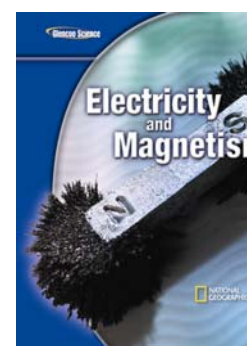
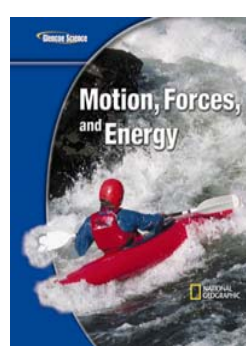
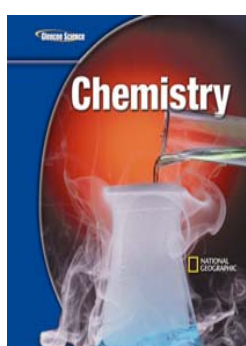
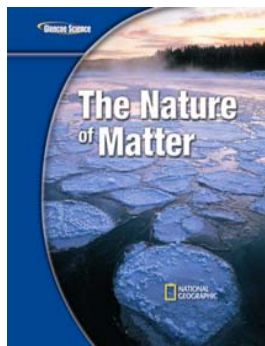
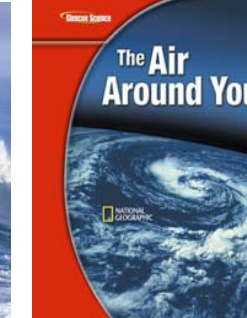
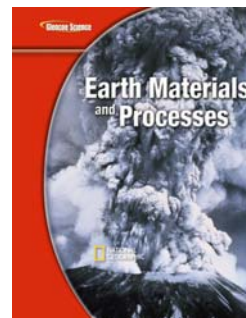


*Life's Structure and Function A
From Bacteria to Plants B
Animal Diversity C
Human Body Systems D
Ecology E*

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*Earth Materials and Processes F
The Changing Surface of Earth G
The Water Planet H
The Air Around You I
Astronomy J*

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*The Nature of Matter K
Chemistry L
Motion, Forces, and Energy M
Electricity and Magnetism N
Waves, Sound, and Light O*

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STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
STATE GOAL 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.			
Why This Goal Is Important: The inquiry process prepares learners to engage in science and apply methods of technological design. This understanding will enable students to pose questions, use models to enhance understanding, make predictions, gather and work with data, use appropriate measurement methods, analyze results, draw conclusions based on evidence, communicate their methods and results, and think about the implications of scientific research and technological problem solving.			
A. Know and apply the concepts, principles and processes of scientific inquiry.			
11.A.3a Formulate hypotheses that can be tested by collecting data.	Student Edition: (A) <i>Design Your Own Lab</i> 30-31, 58-59, 146-147, 176-177 <i>Lab</i> 135 (B) <i>Design Your Own Lab</i> 22-23, 114-115 (C) <i>Design Your Own Lab</i> 28-29, 96-97 (D) <i>Design Your Own Lab</i> 82-83, 136-137, 196-197 (E) <i>Design Your Own Lab</i> 26-27 <i>MiniLAB</i> 133 Teacher Wraparound Edition: (D) FH 82 (E) FH 26	Student Edition: (F) <i>Design Your Own Lab</i> 176-177 <i>Lab</i> 82 (G) <i>Design Your Own Lab</i> 54-55, 82-83 <i>Lab</i> 114-115 (H) <i>Design Your Own Lab</i> 26-27, 118-119 <i>Lab</i> 15 (I) <i>Design Your Own Lab</i> 26-27 (J) <i>Design Your Own Lab</i> 126-127 <i>Lab</i> 60-61 Teacher Wraparound Edition: (F) A 117 (G) IL 47	Student Edition: (K) <i>Design Your Own Lab</i> 62-63, 88-89 (L) <i>Design Your Own Lab</i> 54-55 (M) <i>Design Your Own Lab</i> 174-175 <i>You Do It</i> 5 (O) <i>Design Your Own Lab</i> 26-27, 86-87 Teacher Wraparound Edition: (K) A 57 (M) A 168; Ac 4 (N) A 72; AIL 56 (O) A 80, 87

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
11.A.3b Conduct scientific experiments that control all but one variable.	<p>Student Edition:</p> <p>(A) 10-12 <i>Design Your Own Lab</i> 30-31, 58-59, 146-147, 176-177</p> <p>(B) <i>Design Your Own Lab</i> 22-23, 114-115</p> <p>(C) <i>Lab</i> 62-63</p> <p>(D) <i>Design Your Own Lab</i> 82-83, 136-137</p> <p>(E) <i>Design Your Own Lab</i> 26-27</p> <p>Teacher Wraparound Edition:</p> <p>(A) As 31; PS 88; TFYI 129</p> <p>(E) As 117</p>	<p>Student Edition:</p> <p>(F) <i>Lab</i> 82</p> <p>(G) <i>Design Your Own Lab</i> 54-55, 82-83 <i>Lab</i> 114-115</p> <p>(I) <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 85</p> <p>(J) <i>Lab</i> 60-61</p> <p>Teacher Wraparound Edition:</p> <p>(G) IL 47</p>	<p>Student Edition:</p> <p>(L) <i>Design Your Own Lab</i> 54-55 <i>Lab</i> 116-117 <i>Launch Lab</i> 63</p> <p>(M) <i>Lab</i> 103, 168</p> <p>(N) <i>Lab</i> 27</p> <p>(O) <i>Lab</i> 107</p> <p>Teacher Wraparound Edition:</p> <p>(L) AIL 54; IL 49</p> <p>(M) Ac 45; IL 163</p> <p>(O) AIL 26</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
11.A.3c Collect and record data accurately using consistent measuring and recording techniques and media.	<p>Student Edition:</p> <p>(A) 190-192 <i>Design Your Own Lab</i> 58-59 <i>MiniLAB</i> 11, 42, 138 <i>Lab</i> 82, 88-89, 105</p> <p>(B) <i>MiniLAB</i> 40, 69</p> <p>(D) <i>Lab</i> 46, 73</p> <p>(E) <i>MiniLAB</i> 103</p> <p>Teacher Wraparound Edition:</p> <p>(A) QD 14</p> <p>(D) TS 166</p>	<p>Student Edition:</p> <p>(F) <i>Lab</i> 13, 26-27, 82 <i>Use the Internet Lab</i> 116-117</p> <p>(G) <i>Design Your Own Lab</i> 54-55, 82-83 <i>Lab</i> 75, 114-115</p> <p>(H) <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 15</p> <p>(I) <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 85</p> <p>(J) <i>Lab</i> 60-61 <i>Use the Internet Lab</i> 30-31</p>	<p>Student Edition:</p> <p>(K) <i>Lab</i> 53, 77 <i>MiniLab</i> 74</p> <p>(L) <i>Design Your Own Lab</i> 54-55</p> <p>(M) <i>Design Your Own Lab</i> 174-175 <i>Use the Internet Lab</i> 88-89</p> <p>(N) <i>Lab</i> 28-29</p> <p>(O) <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 107</p> <p>Teacher Wraparound Edition:</p> <p>(M) Ac 45, 128</p> <p>(N) Ac 12; DI 39</p>
11.A.3d Explain the existence of unexpected results in a data set.	<p>Student Edition:</p> <p>(A) 11-13, 157-159 <i>Applying Science</i> 13, 159</p> <p>(B) <i>Applying Science</i> 70</p> <p>(D) <i>Launch Lab</i> 35</p> <p>(E) <i>Lab</i> 54-55</p> <p>Teacher Wraparound Edition:</p> <p>(A) CYD 82; D 170; IM 163; LD 10; SJ 72</p> <p>(C) CYD 123, 125</p>	<p>Student Edition:</p> <p>(F) <i>Communicating Your Data</i> 44</p> <p>(G) <i>Design Your Own Lab</i> 82-83</p> <p>(H) <i>Design Your Own Lab</i> 26-27</p> <p>(I) <i>Design Your Own Lab</i> 26-27</p> <p>Teacher Wraparound Edition:</p> <p>(G) CYD 113</p>	<p>Student Edition:</p> <p>(K) <i>Design Your Own Lab</i> 89 #4</p> <p>(L) <i>Communicating Your Data</i> 55</p> <p>(M) <i>Communicating Your Data</i> 168, 175</p> <p>Teacher Wraparound Edition:</p> <p>(K) VL 75</p> <p>(L) CYD 107</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
11.A.3e Use data manipulation tools and quantitative (e.g., mean, mode, simple equations) and representational methods (e.g., simulations, image processing) to analyze measurements.	<p>Student Edition:</p> <p>(A) <i>Applying Math</i> 46, 74, 133 <i>National Geographic</i> 50-51</p> <p>(D) <i>Applying Math</i> 11</p> <p>(E) <i>Applying Math</i> 40, 56 <i>Design Your Own Lab</i> 26-27 <i>Graph It</i> 56</p> <p>Teacher Wraparound Edition:</p> <p>(A) D 44</p> <p>(E) A 56; D 56; VL 56</p>	<p>Student Edition:</p> <p>(F) <i>Lab</i> 26-27, 105</p> <p>(G) <i>Design Your Own Lab</i> 82-83 <i>Lab</i> 114-115, 169</p> <p>(H) <i>Lab</i> 58-59</p> <p>(I) <i>Lab</i> 85</p> <p>(J) <i>MiniLAB</i> 12 <i>Use the Internet Lab</i> 30-31 <i>Lab</i> 75</p>	<p>Student Edition:</p> <p>(K) <i>Applying Math</i> 59</p> <p>(L) <i>Design Your Own Lab</i> 54-55 <i>Lab</i> 53</p> <p>(M) <i>Applying Science</i> 78 <i>MiniLab</i> 11</p> <p>(N) <i>Applying Math</i> 21</p> <p>(O) <i>Applying Math</i> 83 <i>Design Your Own Lab</i> 26-27</p> <p>Teacher Wraparound Edition:</p> <p>(K) Ac 74; IL 16</p> <p>(M) Ac 12, 45</p> <p>(N) SJ 24</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
11.A.3f Interpret and represent results of analysis to produce findings.	Student Edition: (A) 11 <i>Applying Science</i> 13 <i>Design Your Own Lab</i> 30-31, 58-59, 146-147, 176-177 <i>MiniLAB</i> 77 <i>Use the Internet Lab</i> 118-119 (D) <i>MiniLAB</i> 160 Teacher Wraparound Edition: (A) LD 78; SJ 72	Student Edition: (F) <i>Lab</i> 82, 146-147 (G) <i>Design Your Own Lab</i> 54-55, 82-83 <i>Lab</i> 114-115 (H) <i>Design Your Own Lab</i> 118-119 <i>Lab</i> 58-59, 90-91 (I) <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 85, 86-87 (J) <i>Design Your Own Lab</i> 126-127 <i>Lab</i> 55, 60-61	Student Edition: (K) <i>Lab</i> 30-31 (L) <i>Lab</i> 53 (M) <i>Design Your Own Lab</i> 174-175 <i>Lab</i> 168 (N) <i>Lab</i> 27 (O) <i>Design Your Own Lab</i> 56-57, 86-87 Teacher Wraparound Edition: (L) A 55 (M) Ac 4, 45 (N) A 27; AIL 28

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
11.A.3g Report and display the process and results of a scientific investigation.	<p>Student Edition:</p> <p>(A) 12 <i>Design Your Own Lab</i> 30-31 Lab 164 <i>MiniLAB</i> 27, 113</p> <p>(B) Lab 140-141 <i>Model and Invent Lab</i> 52-53</p> <p>Teacher Wraparound Edition:</p> <p>(A) A 13; As 130 (B) SJ 48 (C) As 29</p>	<p>Student Edition:</p> <p>(F) <i>Design Your Own Lab</i> 176-177 Lab 13, 82, 170 <i>Use the Internet Lab</i> 116-117</p> <p>(G) <i>Design Your Own Lab</i> 82-83 <i>Use the Internet Lab</i> 176-177</p> <p>(H) <i>Design Your Own Lab</i> 118-119 Lab 15, 58-59</p> <p>(I) <i>Design Your Own Lab</i> 26-27 Lab 86-87</p> <p>(J) Lab 60-61 <i>Use the Internet Lab</i> 30-31</p> <p>Teacher Wraparound Edition:</p> <p>(I) IL 46</p>	<p>Student Edition:</p> <p>(K) <i>Communicating Your Data</i> 63</p> <p>(M) Chapter Review 61 #29 <i>Communicating Your Data</i> 27, 117</p> <p>(O) <i>Communicating Your Data</i> 46</p> <p>Teacher Wraparound Edition:</p> <p>(K) A 81, 89; CYD 24 (L) CYD 55 (M) A 164; CYD 168 (N) CYD 27, 72 (O) CYD 57</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
B. Know and apply the concepts, principles and processes of technological design.			
11.B.3a Identify an actual design problem and establish criteria for determining the success of a solution.	Student Edition: (A) 8-13, 157-159 (B) <i>Applying Science</i> 70 (D) <i>Launch Lab</i> 35 (E) <i>Lab</i> 54-55 Teacher Wraparound Edition: (A) CYD 82; D 170; IM 163; LD 10; SJ 72 (C) CYD 123, 125 (D) DI 16 (E) A 4; E 5	Student Edition: (F) <i>Model and Invent Lab</i> 88-89 (I) <i>Model and Invent Lab</i> 56-57 Teacher Wraparound Edition: (F) A 79; IL 134; R 145 (H) DI 102; IL 101	Student Edition: (K) <i>Design Your Own Lab</i> 62-63 (M) <i>Design Your Own Lab</i> 26-27, 116-117 Teacher Wraparound Edition: (M) A 55; AIL 116; DI 142; MM 166
11.B.3b Sketch, propose and compare design solutions to the problem considering available materials, tools, cost effectiveness and safety.	Student Edition: (A) 10-13, 157-159 (B) <i>Applying Science</i> 70 (D) <i>Launch Lab</i> 35 (E) <i>Lab</i> 54-55 Teacher Wraparound Edition: (A) CYD 82; D 170; IM 163; LD 10; SJ 72 (C) CYD 123, 125 (D) DI 16 (E) A 4; E 5	Student Edition: (F) <i>Model and Invent Lab</i> 88-89 (I) <i>Model and Invent Lab</i> 56-57 Teacher Wraparound Edition: (F) ACT 79 (H) IL 101	Student Edition: (K) <i>Design Your Own Lab</i> 62-63 (M) <i>Design Your Own Lab</i> 26-27, 116-117 Teacher Wraparound Edition: (M) A 55; AIL 116; MM 166

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
11.B.3c Select the most appropriate design and build a prototype or simulation.	Student Edition: (B) <i>Model and Invent</i> 52-53 (E) <i>Lab</i> 111 <i>Model and Invent</i> 116-117 Teacher Wraparound Edition: (A) FF 10 (E) A 4; E 5; MM 22, 52, 71, 80, 98	Student Edition: (F) <i>Model and Invent Lab</i> 88-89 (I) <i>Model and Invent Lab</i> 56-57 Teacher Wraparound Edition: (F) IL 79, 134; MM 78; R 145 (H) DI 102; IL 101	Student Edition: (K) <i>Design Your Own Lab</i> 62-63 (M) <i>Design Your Own Lab</i> 26-27, 116-117 Teacher Wraparound Edition: (M) A 55, 176; DI 142; MM 166
11.B.3d Test the prototype using available materials, instruments and technology and record the data.	Student Edition: (A) 8-13, 34 #18, 35 #25 <i>Design Your Own Lab</i> 30-31 <i>Science Online</i> 10 (C) <i>Design Your Own Lab</i> 28-29 (E) <i>Lab</i> 144-145 <i>Model and Invent</i> 116-117 Teacher Wraparound Edition: (A) AIL 30; AT 33; LD 10 (E) A 4; E 5; IL 108	Student Edition: (F) <i>Model and Invent Lab</i> 88-89 (I) <i>Model and Invent Lab</i> 56-57 Teacher Wraparound Edition: (F) IL 79, 134; MM 78; R 145 (H) DI 102; IL 101	Student Edition: (K) <i>Design Your Own Lab</i> 62-63 (M) <i>Design Your Own Lab</i> 26-27, 116-117 Teacher Wraparound Edition: (M) A 55; D 28; DI 142; MM 166

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
11.B.3e Evaluate the test results based on established criteria, note sources of error and recommend improvements.	<p>Student Edition:</p> <p>(A) 8-13, 34 #18, 35 #23 <i>Apply Science</i> 13 <i>Design Your Own Lab</i> 30-31 <i>Mini Lab</i> 11 <i>Science Online</i> 10</p> <p>(B) 4-5</p> <p>(C) 3, 5 <i>You Do It</i> 5</p> <p>(D) 3</p> <p>(E) 162</p> <p>Teacher Wraparound Edition:</p> <p>(A) As 31; AIL 30; AT 33; D 11; LD 10</p> <p>(B) E 5</p> <p>(C) YDI 5</p> <p>(E) A 4; E 5</p>	<p>Student Edition:</p> <p>(F) <i>Model and Invent Lab</i> 88-89</p> <p>(I) <i>Model and Invent Lab</i> 56-57</p> <p>Teacher Wraparound Edition:</p> <p>(H) DI 102</p>	<p>Student Edition:</p> <p>(K) <i>Design Your Own Lab</i> 62-63</p> <p>(M) <i>Design Your Own Lab</i> 26-27, 116-117</p> <p>Teacher Wraparound Edition:</p> <p>(M) A 55; D 28; MM 166</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
11.B.3f Using available technology, report the relative success of the design based on the test results and criteria.	<p>Student Edition:</p> <p>(A) 12 <i>Design Your Own Lab</i> 30-31 Lab 164 <i>MiniLAB</i> 27, 113</p> <p>(B) Lab 140-141 <i>Model and Invent Lab</i> 52-53</p> <p>Teacher Wraparound Edition:</p> <p>(A) A 13; As 130 (B) SJ 48 (C) A 29</p>	<p>Student Edition:</p> <p>(F) <i>Model and Invent Lab</i> 88-89</p> <p>(I) <i>Model and Invent Lab</i> 56-57</p>	<p>Student Edition:</p> <p>(K) <i>Communicating Your Data</i> 63</p> <p>(M) <i>Communicating Your Data</i> 117 <i>Design Your Own Lab</i> 26-27</p> <p>Teacher Wraparound Edition:</p> <p>(M) D 28; DI 142</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.			
Why This Goal Is Important: This goal is comprised of key concepts and principles in the life, physical and earth/space sciences that have considerable explanatory and predictive power for scientists and non-scientists alike. These ideas have been thoroughly studied and have stood the test of time. Knowing and being able to apply these concepts, principles and processes help students understand what they observe in nature and through scientific experimentation. A working knowledge of these concepts and principles allows students to relate new subject matter to material previously learned and to create deeper and more meaningful levels of understanding.			
A. Know and apply concepts that explain how living things function, adapt and change.			
12.A.3a Explain how cells function as “building blocks” of organisms and describe the requirements for cells to live.	Student Edition: (A) 98 (B) 63, 125-126 <i>Lab 132</i> (D) 22 Teacher Wraparound Edition: (A) CD 12; SCB 38E; TC 39, 67 (B) QD 125; TPK 8 (D) FF 68	See Glencoe’s Life Science books (A), (B), (D) (A) 98 (B) 63, 125-126 <i>Lab 132</i> (D) 22	See Glencoe’s Life Science books (A), (B), (D) (A) 98 (B) 63, 125-126 <i>Lab 132</i> (D) 22
12.A.3b Compare characteristics of organisms produced from a single parent with those of organisms produced by two parents.	Student Edition: (A) 2-5, 103-104, 112-117, 128-134, 136-142, 143-145 <i>Lab 118-119</i> (D) 2-5 Teacher Wraparound Edition: (A) AIL 146; CD144; DI 116; LD 102; SJ 103, 116; TFYI 144	See Glencoe’s Life Science books (A), (D) Student Edition: (A) 2-5, 103-104, 112-117, 128-134, 136-142, 143-145 <i>Lab 118-119</i> (D) 2-5	See Glencoe’s Life Science books (A), (D) Student Edition: (A) 2-5, 103-104, 112-117, 128-134, 136-142, 143-145 <i>Lab 118-119</i> (D) 2-5

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
12.A.3c Compare and contrast how different forms and structures reflect different functions (e.g., similarities and differences among animals that fly, walk or swim; structures of plant cells and animal cells).	Student Edition: (C) 10-11; 14-16; 17-20; 22-25; 38-42; 43-47; 48-55; 58-61; 72-75; 77-84; 85-89; 90-95 Teacher Wraparound Edition: (C) D20, 120	Student Edition: (H) 137-139 <i>MiniLAB</i> 139 <i>National Geographic</i> 141 Teacher Wraparound Edition: (H) A 139; IL 137; LD 138	Student Edition: (M) 86-87, 111 (O) 54-55 Teacher Wraparound Edition: (M) A 81
B. Know and apply concepts that describe how living things interact with each other and with their environment.			
12.B.3a Identify and classify biotic and abiotic factors in an environment that affect population density, habitat and placement of organisms in an energy pyramid.	Student Edition: (A) 16-20, 84 <i>Integrate Physics</i> 44 (B) 36, 129 (C) 9, 88 (E) 8-11, 12-15, 20, 51-53 <i>Lab</i> 54-55 Teacher Wraparound Edition: (B) TFYI 109 (E) Da1 19; DI 51; MM 22	Student Edition: (H) 135-142 Teacher Wraparound Edition: (H) V 141	Student Edition: (K) <i>Integrate Career</i> 108 (L) <i>Integrate Life Science</i> 82 (M) 167 (N) <i>Science and Society</i> 30

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
12.B.3b Compare and assess features of organisms for their adaptive, competitive and survival potential (e.g., appendages, reproductive rates, camouflage, defensive structures).	<p>Student Edition: (A) 156-163, 165-171, 173-175 <i>Design Your Own Lab</i> 176-177</p> <p>Teacher Wraparound Edition: (A) 154E, 154F; A 158; IL 162; IM 157; TFYI 166; TPK 156 (E) VL 39</p>	<p>Student Edition: (G) 159-160 <i>Lab</i> 169 (I) 70-73</p> <p>Teacher Wraparound Edition: (G) A 161; ACT 158 (H) ACT 141; SCB 126F (I) CFU 73; DI 71; FF 71; MM 72</p>	<p>Student Edition: (L) <i>Integrate Life Science</i> 82 (M) 87, 111 <i>Integrate Life Science</i> 135, 166 (N) 42 (O) 41, 54, 74</p> <p>Teacher Wraparound Edition: (M) A 81</p>
C. Know and apply concepts that describe properties of matter and energy and the interactions between them.			
12.C.3a Explain interactions of energy with matter including changes of state and conservation of mass and energy.	<p>Student Edition: (E) 20-21, 50-53 <i>Integrate Earth Science</i> 51</p> <p>Teacher Wraparound Edition: (E) D 51; DI 51; FF 22; IES 51; MM 22; QD 37, 52; TFYI 52; VLa 20; VL 23</p>	<p>Student Edition: (F) 39 <i>Integrate Chemistry</i> 43 (H) 9 <i>Lab</i> 15 <i>Science Online</i> 9 (I) 17-20 <i>MiniLAB</i> 19</p> <p>Teacher Wraparound Edition: (H) ACT 9; DI 9 (I) A 19</p>	<p>Student Edition: (K) 45-52 <i>Lab</i> 53 (M) 126-130, 131-137, 162-166 <i>Design Your Own Lab</i> 174-175 <i>Lab</i> 138 (O) 36-45, 96-100, 101-106 <i>Lab</i> 18, 46</p> <p>Teacher Wraparound Edition: (K) QD 51 (M) D 135; IL 127 (O) LD 38</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
12.C.3b Model and describe the chemical and physical characteristics of matter (e.g., atoms, molecules, elements, compounds, mixtures).	Student Edition: (A) 68-75 <i>Reference Handbook</i> 220-221 <i>Science Online</i> 72 (E) <i>Integrate Chemistry</i> 21 Teacher Wraparound Edition: (A) A 69; DI 69, 71; MM 74; QD 71; TFYI 69, 71; VL 71 (E) ICh 21	Student Edition: (F) 8-12, 14-18 <i>Lab</i> 26-27 <i>National Geographic</i> 10 (H) 8-14 (I) 8-15 Teacher Wraparound Edition: (F) A 13 (H) TFYI 11; VL 9, 13 (I) MM 14; UAA 18	Student Edition: (K) 18-23, 25-29, 72-76 <i>Lab</i> 24, 30-31, 77 (L) 64-66 <i>Model and Invent Lab</i> 26-27 Teacher Wraparound Edition: (K) Ac 20, 27; CU 23; MM 73; VL 21 (L) QD 66
D. Know and apply concepts that describe force and motion and the principles that explain them.			
12.D.3a Explain and demonstrate how forces affect motion (e.g., action/reaction, equilibrium conditions, free-falling objects).	Student Edition: (D) 14-19 <i>Integrate Physics</i> 15, 69 <i>National Geographic</i> 16 Teacher Wraparound Edition: (A) QD 70 (D) A 16; DI 16, 18; LD 17; QD 16; TFYI 15	Student Edition: (G) <i>Integrate Physics</i> 67 (J) 16-17 <i>MiniLAB</i> 21 Teacher Wraparound Edition: (G) CFU 68	Student Edition: (M) 36-41, 42-48, 49-54 <i>Design Your Own Lab</i> 56-57 <i>Lab</i> 55 <i>Launch Lab</i> 35 <i>Science Online</i> 50 Teacher Wraparound Edition: (M) A 54; Ac 38, 45, 51, 54; CU 41; QD 38
12.D.3b Explain the factors that affect the gravitational forces on objects (e.g., changes in mass, distance).	See Glencoe's Physical Science book (M) (M) 43-44 <i>Section Review</i> 48 #2	See Glencoe's Physical Science book (M) (M) 43-44 <i>Section Review</i> 48 #2	Student Edition: (M) 43-44 <i>Section Review</i> 48 #2 Teacher Wraparound Edition: (M) SJ 47; VL 44

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
E. Know and apply concepts that describe the features and processes of the Earth and its resources.			
12.E.3a Analyze and explain large-scale dynamic forces, events and processes that affect the Earth's land, water and atmospheric systems (e.g., jetstream, hurricanes, plate tectonics).	Student Edition: (E) 8, 36-42, 44-46, 49, 50-53, 64-67 <i>Integrate Astronomy</i> 9 <i>Integrate Career</i> 41 <i>Integrate Earth Science</i> 42 <i>Lab</i> 43 <i>Science Online</i> 41 Teacher Wraparound Edition: (E) As 11; D 41; DI 41; IC 41; QD 41; TFYI 42	Student Edition: (F) 98-101, 102-104, 106-115, 126-129, 156-161, 162-169 <i>Lab</i> 105 <i>Use the Internet Lab</i> 116-117 (H) 104-109 (I) 17-20, 21-25, 44-51 <i>National Geographic</i> 23 Teacher Wraparound Edition: (I) R 20	Student Edition: (N) 42, 49 (O) 14 Teacher Wraparound Edition: (K) CC 51 (N) CU 55 (O) A 15; CC 28; IL 14
12.E.3b Describe interactions between solid earth, oceans, atmosphere and organisms that have resulted in ongoing changes of Earth (e.g., erosion, El Nino).	Student Edition: (E) 8-9, 36-40, 41, 44-47, 49, 64-67 <i>Integrate Astronomy</i> 9 <i>Integrate Career</i> 41 <i>Integrate Earth Science</i> 42 <i>Lab</i> 43 <i>Mini Lab</i> 38 <i>National Geographic</i> 48 <i>Science Online</i> 41 Teacher Wraparound Edition: (E) D 41; DI 41; IC 41; IL 39; LD 38; QD 9; TFYI 42	Student Edition: (G) 42-48, 64-68, 69-74, 76-81, 92-102, 107-108 (H) 105-107 (I) 74-84 <i>Integrate Environment</i> 50 <i>National Geographic</i> 76-77 Teacher Wraparound Edition: (G) CC 73; MM 108 (H) DI 107; R 109	Student Edition: (L) 79 <i>Integrate Environment</i> 67 Teacher Wraparound Edition: (K) CC 51 (L) A 88

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
12.E.3c Evaluate the biodegradability of renewable and nonrenewable natural resources.	Student Edition: (E) 2-5, 94-100, 102-110 <i>National Geographic</i> 101 <i>You Do It</i> 5 Teacher Wraparound Edition: (E) 92E, 92F; A 4; As 5; CB 3; D 98; DI 99, 101; E 5; QD 5; SJ 3, 98; TFYI 99; VL 4	Student Edition: (F) 66-75, 76-81, 83-87 <i>Applying Science</i> 86 (H) 76-84, 143-147 Teacher Wraparound Edition: (F) DI 80; DIS 74, 80; SJ 69; V 72 (H) DIS 78, 146	Student Edition: (N) <i>Integrate Environment</i> 80 Teacher Wraparound Edition: (K) D 90
F. Know and apply concepts that explain the composition and structure of the universe and Earth's place in it.			
12.F.3a Simulate, analyze and explain the effects of gravitational force in the solar system (e.g., orbital shape and speed, tides, spherical shape of the planets and moons).	Student Edition: (A) <i>Integrate Earth Science</i> 23 (E) <i>Integrate Astronomy</i> 9 Teacher Wraparound Edition: (A) Section 3 Focus Transparency	Student Edition: (H) 113-116 (J) 17, 70-74, 83, 92 <i>Lab</i> 75 <i>MiniLAB</i> 21, 79 <i>Science Online</i> 43 Teacher Wraparound Edition: (H) DIS 116; QD 113; TFYI 115 (J) A 79; V 73	Student Edition: (M) 43 <i>Integrate History</i> 43 Teacher Wraparound Edition: (M) D 46

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
12.F.3b Describe the organization and physical characteristics of the solar system (e.g., sun, planets, satellites, asteroids, comets).	<p>Student Edition: (A) <i>Integrate Earth Science</i> 23 (E) <i>Integrate Astronomy</i> 9</p> <p>Teacher Wraparound Edition: (A) Section 3 Focus Transparency</p>	<p>Student Edition: (J) 40-45, 46-54, 56-59, 70-74, 76-81, 82-89, 90-93 <i>Launch Lab</i> 69 <i>MiniLAB</i> 84 <i>National Geographic</i> 52 <i>Science Online</i> 71</p> <p>Teacher Wraparound Edition: (J) ACT 88; CFU 93; DI 72; QD 78</p>	<p>Student Edition: (K) <i>Integrate Astronomy</i> 83 (M) <i>Integrate Astronomy</i> 69 (O) <i>National Geographic</i> 78</p>
12.F.3c Compare and contrast the sun as a star with other objects in the Milky Way Galaxy (e.g., nebulae, dust clouds, stars, black holes).	<p>Student Edition: (E) <i>Integrate Astronomy</i> 9</p> <p>Teacher Wraparound Edition: (A) TFYI 74</p>	<p>Student Edition: (J) 109-112, 114-119, 120-125 <i>MiniLAB</i> 122 <i>Science Online</i> 116 <i>Science Stats</i> 128</p> <p>Teacher Wraparound Edition: (J) CFU 119; DIS 119; IM 68F; R 119; TFYI 116; VL 117</p>	<p>See Glencoe's Earth Science book (J)</p> <p>Student Edition: (J) 109-112, 114-119, 120-125 <i>MiniLAB</i> 122 <i>Science Online</i> 116 <i>Science Stats</i> 128</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
STATE GOAL 13: Understand the relationships among science, technology and society in historical and contemporary contexts.			
<p>Why This Goal Is Important: Understanding the nature and practices of science such as ensuring the validity and replicability of results, building upon the work of others and recognizing risks involved in experimentation gives learners a useful sense of the scientific enterprise. In addition, the relationships among science, technology and society give humans the ability to change and improve their surroundings. Learners who understand this relationship will be able to appreciate the efforts and effects of scientific discovery and applications of technology on their own lives and on the society in which we live.</p>			
A. Know and apply the accepted practices of science.			
<p>13.A.3a Identify and reduce potential hazards in science activities (e.g., ventilation, handling chemicals).</p>	<p>Student Edition: (A) 15 <i>Design Your Own Lab</i> 30-31, 58-59, 176-177 Lab 48 MiniLAB 77 (B) <i>Design Your Own Lab</i> 114-115 Lab 140-141 MiniLAB 40, 95 (C) Lab 21 Teacher Wraparound Edition: (A) As 15; D 14</p>	<p>Student Edition: (F) <i>Lab</i> 26-27 <i>Science Skill Handbook</i> 195-197 (G) <i>Design Your Own Lab</i> 82-83 Lab 114-115 <i>Science Skill Handbook</i> 195-197 (H) <i>Lab</i> 58-59 <i>Science Skill Handbook</i> 167-169 (I) <i>Design Your Own Lab</i> 26-27 Lab 85 <i>Science Skill Handbook</i> 135-137 (J) <i>Lab</i> 60-61, 113 <i>Science Skill Handbook</i> 145-147 Teacher Wraparound Edition: (F) SJ 56</p>	<p>Student Edition: (K) <i>Lab</i> 30 <i>Science Skill Handbook</i> 137, 138-139 (L) <i>Communicating Your Data</i> 87 Lab 77 <i>Launch Lab</i> 35 (M) <i>Design Your Own Lab</i> 174 Lab 168 (N) 26 <i>Integrate Health</i> 25 Lab 56 (O) <i>Design Your Own Lab</i> 86 Teacher Wraparound Edition: (K) D 113; QD 110 (N) CU 26; DI 25</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
13.A.3b Analyze historical and contemporary cases in which the work of science has been affected by both valid and biased scientific practices.	<p>Student Edition: (A) 12-13, 21, 23 <i>National Geographic</i> 22</p> <p>Teacher Wraparound Edition: (A) A 13, 22; CC 11; CD 12; DI 13, 22; FF 22; TFYI 11, 12; VL 22</p>	<p>Student Edition: (F) 98-101, 102-104, 106-115 <i>Science Online</i> 99 (J) 70-74 <i>The Nature of Science</i> 2-5</p> <p>Teacher Wraparound Edition: (F) A 101; DIS 99; SJ 107 (J) CFU 74; SJ 72</p>	<p>Student Edition: (K) 8-17, 98-99 <i>Integrate Physics</i> 16 (M) <i>The Nature of Science</i> 2-5 (N) <i>The Nature of Science</i> 2-5 (O) <i>The Nature of Science</i> 2-5 <i>You Do It</i> 5</p> <p>Teacher Wraparound Edition: (K) IP 16; R 17 (M) E5 (N) CC 4; D3 (O) Ac 4; CB 3; HS 88</p>
13.A.3c Explain what is similar and different about observational and experimental investigations.	<p>Student Edition: (A) 10, 37 #17 <i>Design Your Own Lab</i> 30-31 <i>Mini Lab</i> 11 <i>Science Online</i> 10</p> <p>Teacher Wraparound Edition: (A) D11; LD 10; TFYI 12 (E) QD 16</p>	<p>Student Edition: (F) <i>Science Skill Handbook</i> 186-194 (G) <i>The Nature of Science</i> 4-5 <i>Science Skill Handbook</i> 186-194 (H) <i>Science Skill Handbook</i> 158-166 (I) <i>The Nature of Science</i> 2-5 <i>Science Skill Handbook</i> 126-134 (J) <i>Science Skill Handbook</i> 136-144</p> <p>Teacher Wraparound Edition: (J) DIS 4</p>	<p>This standard can be met when students, after reading <i>The Nature of Science</i> 2-5, are asked to write a paragraph on this topic and do the following experiments.</p> <p>Student Edition: (M) <i>Design Your Own Lab</i> 174-175 (experimental investigation) <i>Use the Internet Lab</i> 88-89 (observational investigation)</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
B. Know and apply concepts that describe the interaction between science, technology and society.			
13.B.3a Identify and explain ways that scientific knowledge and economics drive technological development.	<p>Student Edition:</p> <p>(B) <i>Lab 43</i> <i>Use the Internet Lab</i> 84-85</p> <p>(C) <i>Use the Internet Lab</i> 124-125</p> <p>(D) <i>Use the Internet Lab</i> 26-27</p> <p>(E) <i>Use the Internet Lab</i> 84-85</p> <p>Teacher Wraparound Edition:</p> <p>(B) DI 49; SJ 79</p> <p>(D) CYD 27, 83</p> <p>(E) CYD 27; DI 39</p>	<p>Student Edition:</p> <p>(F) 139-145 <i>National Geographic</i> 72</p> <p>(G) 24 <i>Science and Society</i> 116</p> <p>(I) <i>Science and Society</i> 58</p> <p>Teacher Wraparound Edition:</p> <p>(F) DI 80</p>	<p>Student Edition:</p> <p>(K) <i>Integrate Physics</i> 16 <i>The Nature of Science</i> 2-3</p> <p>(L) <i>The Nature of Science</i> 2-4</p> <p>(M) 169-173 <i>Science and Society</i> 58, 118</p> <p>(N) 73-83 <i>Science and Society</i> 86 <i>You Do It</i> 5</p> <p>(O) <i>Integrate Social Studies</i> 48 <i>Science and History</i> 88</p> <p>Teacher Wraparound Edition:</p> <p>(K) AIL 62; CC 108</p> <p>(M) DI 134; SJ 140</p> <p>(N) CD 53</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
13.B.3b Identify important contributions to science and technology that have been made by individuals and groups from various cultures.	<p>Student Edition: (E) 2-5 <i>You Do It</i> 5</p> <p>Teacher Wraparound Edition: (C) CC 111; CD 111 (E) CC 2, 96; CD 9, 129</p>	<p>Student Edition: (F) 98-101 <i>Science and History</i> 28</p> <p>(G) 157-158 (H) <i>The Nature of Science</i> 2-5 (J) 70-74</p> <p>Teacher Wraparound Edition: (F) SJ 107; TFYI 103 (I) CC 48 (J) ACT 124; CD 16, 41</p>	<p>Student Edition: (K) 9-17, 98-99 (L) 40 <i>The Nature of Science</i> 2-4</p> <p>(M) <i>Integrate History</i> 43 <i>The Nature of Science</i> 2-3 (N) <i>The Nature of Science</i> 3-4 (O) <i>Integrate History</i> 115 <i>The Nature of Science</i> 2-3 <i>Science and History</i> 88</p> <p>Teacher Wraparound Edition: (K) Ac 14; CD 107 (M) CC 136 (O) CD 109; SJ 115</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
13.B.3c Describe how occupations use scientific and technological knowledge and skills.	<p>Student Edition: (C) 46 <i>Oops!</i> 152 <i>Science and Society</i> 98</p> <p>Teacher Wraparound Edition: (C) 132E; AP 132; CB 152; D 152; SJ 52; TFYI 88 (D) IC 21, 158 (E) AP 124; IM 139</p>	<p>Student Edition: (F) <i>Integrate Career</i> 113, 141 <i>The Nature of Science</i> 2-5 (G) <i>Integrate Career</i> 93 <i>Science Online</i> 22 (H) <i>Integrate Career</i> 108 <i>The Nature of Science</i> 2-5 (I) <i>The Nature of Science</i> 2-5 (J) 8-13, 15-22, 23-29 <i>Integrate Career</i> 18, 51</p> <p>Teacher Wraparound Edition: (F) CD 158 (G) CC 94; DI 20 (H) ACT 4</p>	<p>Student Edition: (K) 116 <i>Integrate Career</i> 108 (L) <i>Integrate Career</i> 75, 110 (M) <i>Integrate Life Science</i> 37 <i>Integrate Social Studies</i> 20 (N) <i>Integrate Career</i> 78 (O) <i>Applying Science</i> 42 <i>National Geographic</i> 78 <i>Science Online</i> 53</p> <p>Teacher Wraparound Edition: (L) CC 66; DI 22 (M) CD 111 (N) CC 68 (O) CC 41, 118</p>
13.B.3d Analyze the interaction of resource acquisition, technological development and ecosystem impact (e.g., diamond, coal or gold mining; deforestation).	<p>Student Edition: (E) 94-100, 102-110 <i>National Geographic</i> 101</p> <p>Teacher Wraparound Edition: (E) 92E, 92F; A 4; CB 3; D 98; DI 99, 101; E 5; QD 5; SJ 3, 98; TFYI 99</p>	<p>Student Edition: (F) 66-75, 76-81, 83-87 (H) 54-57, 76-84, 143-147 <i>Lab</i> 90-91 <i>Science and Society</i> 28 <i>Use the Internet Lab</i> 148-149 (I) 82-84, 96-102</p> <p>Teacher Wraparound Edition: (F) QD 71; UAA 70 (H) ACT 41; SCB 34F</p>	<p>Student Edition: (L) <i>National Geographic</i> 80 (M) 139-147, 167</p> <p>Teacher Wraparound Edition: (M) CD 142; CYD 149</p>

STANDARDS	PAGE REFERENCES		
	Life Science (A-E)	Earth Science (F-J)	Physical Science (K-O)
13.B.3e Identify advantages and disadvantages of natural resource conservation and management programs.	<p>Student Edition: (E) 94-100, 102-110 <i>National Geographic</i> 101</p> <p>Teacher Wraparound Edition: (E) 92E, 92F; A 4; CB 3; D 98; DI 99, 101; E 5; QD 5; SJ 3, 98; TFYI 99</p>	<p>Student Edition: (F) <i>Science and Society</i> 58 (H) 54-57, 82-84, 147 (I) 111-115</p> <p>Teacher Wraparound Edition: (F) DIS 58 (H) CD 144; DI 20, 82; IL 83</p>	<p>Student Edition: (M) 143-147 <i>Use the Internet Lab</i> 148-149</p> <p>Teacher Wraparound Edition: (M) AIL 148; D 144, 146; SJ 145</p>
13.B.3f Apply classroom-developed criteria to determine the effects of policies on local science and technology issues (e.g., energy consumption, landfills, water quality).	<p>Student Edition: (E) 134, 135-136, 138-143 Lab 144-145</p> <p>Teacher Wraparound Edition: (E) A 10, 15, 141; As 143; D 11; TFYI 135, 142; TPK 138 Enrichment Worksheet 6D</p>	<p>Student Edition: (F) <i>MiniLAB</i> 73 (G) <i>Science Online</i> 51 (H) <i>Design Your Own Lab</i> 26-27 <i>Lab</i> 58-59 (I) <i>Use the Internet Lab</i> 116-117</p> <p>Teacher Wraparound Edition: (G) ACT 51; R 53 (H) ACT 24; IL 56 (I) A 117</p>	<p>Student Edition: (K) <i>Use the Internet Lab</i> 118-119 (M) <i>Use the Internet Lab</i> 148-149</p> <p>Teacher Wraparound Edition: (K) A 119; AIL 118 (M) AIL 148</p>