

Textbook Alignment to the Utah Core – Eighth Grade Integrated Science

This alignment has been completed using an “Independent Alignment Vendor” from the USOE approved list (www.schools.utah.gov/curr/imc/indvendor.html.) Yes X No _____

Name of Company and Individual Conducting Alignment: Robert Arnold and Nanette Kalis

A “Credential Sheet” has been completed on the above company/evaluator and is (Please check one of the following):

On record with the USOE.

The “Credential Sheet” is attached to this alignment.

Instructional Materials Evaluation Criteria (name and grade of the core document used to align): **Eighth Grade Integrated Science Core Curriculum**

Title: ***Physical Science © 2008; Ecology E © 2008; Earth Materials and Processes F © 2008; The Changing Surface of Earth G © 2008; The Water Planet H © 2008; The Air Around You I © 2008; Astronomy J © 2008***

ISBN#: **0-07-877962-6; 0-07-877820-4; 0-07-877822-0; 0-07-877824-7; 0-07-877826-3; 0-07-877828-X; 0-07-877830-1**

Publisher: **Glencoe/McGraw-Hill**

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>Overall percentage of coverage in the <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> of the Utah State Core Curriculum: _____ %</p> <p>Overall percentage of coverage in <i>ancillary materials</i> of the Utah Core Curriculum: _____ %</p>			
<p>STANDARD I: Students will understand the nature of changes in matter.</p>			
<p>Percentage of coverage in the <i>student and teacher edition</i> for Standard I: _____ %</p>		<p>Percentage of coverage not in student or teacher edition, but covered in the <i>ancillary material</i> for Standard I: _____ %</p>	
<p>Objective 1.1: Describe the chemical and physical properties of various substances.</p>			
<p>a.</p>	<p>Differentiate between chemical and physical properties.</p>	<p>Student Edition: 458-461 <i>Integrate Environment</i> 459 Teacher Wraparound Edition: A 461; QD 463 Student Edition: (F) 42</p>	

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>b. Classify substances based on their chemical and physical properties (e.g., reacts with water, does not react with water, flammable or nonflammable, hard or soft, flexible or nonflexible, evaporates or melts at room temperature).</p>	<p>Student Edition: 456, 460-463, 486, 673, 702-703 <i>Chemlab</i> 496-497 <i>Lab</i> 457, 583, 622-623 <i>Launch Lab</i> 449 <i>MiniLab</i> 453, 486</p> <p>Teacher Wraparound Edition: TPK 485</p> <p>Student Edition: (F) 12, 14-18, 42-43, 47-48, 50-54 <i>Lab</i> 44, 56-57 <i>Launch Lab</i> 7 <i>MiniLAB</i> 9, 18, 50 <i>National Geographic</i> 10 (G) <i>Lab</i> 49 (J) 114-119</p> <p>Teacher Wraparound Edition: (F) A 18; AIL 26, 56; TFYI 10</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓	
c.	Investigate and report on the chemical and physical properties of a particular substance.	<p>Student Edition: 257-261, 585-586, 726-730, 736-737 <i>Design Your Own Lab</i> 592-593 <i>Integrate Astronomy</i> 733 <i>Launch Lab</i> 695, 725 <i>National Geographic</i> 258</p> <p>Teacher Wraparound Edition: FYI 585, 586, 745; TPK 726</p> <p>Student Edition: (F) 14-18, 19-25, 163-165 <i>Applying Science</i> 16 <i>Lab</i> 26-27 (H) 8-14, 101-102 <i>Launch Lab</i> 7 (I) 8-15</p> <p>Teacher Wraparound Edition: (F) CC 15; DI 11, 17; IL 163; LD 16, 166; QD 17, 41; SCB 6E; SJ 24 (I) SCB 6E</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓	
Objective 1.2: Observe and evaluate evidence of chemical and physical change.				
a.	Identify observable evidence of a physical change (e.g., change in shape, size, phase).	<p>Student Edition: 460-461, 464, 476-480, 667-668 <i>Lab</i> 484 <i>Launch Lab</i> 475 <i>MiniLab</i> 460</p> <p>Teacher Wraparound Edition: QD 464; VL 461</p> <p>Student Edition: (F) 37, 45, 50-54 (G) 37-38 <i>MiniLAB</i> 40 (H) 9 <i>Lab</i> 9 <i>Science Online</i> 9 (I) 19, 30 #61 <i>Launch Lab</i> 35</p> <p>Teacher Wraparound Edition: (G) A 41; CC 38; CFU 41; R 41; TFYI 37; VL 38 (H) IL 24</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓	
b.	Identify observable evidence of a chemical change (e.g., color change, heat or light given off, change in odor, gas given off).			
		<p>Student Edition: 462-463, 464-465, 632-634, 710-711 <i>Integrate Environment</i> 637 <i>Lab</i> 466-467 <i>MiniLab</i> 460 <i>National Geographic</i> 647</p> <p>Teacher Wraparound Edition: QD 459, 464; SJ 462; TPK 632</p> <p>Student Edition: (F) 37, 46, 52-53, 67-68 (G) 39-41 <i>Design Your Own Lab</i> 54-55 <i>MiniLAB</i> 40 <i>Science Online</i> 39</p> <p>(J) 109, 115</p> <p>Teacher Wraparound Edition: (F) SCB 34E-F (G) A 41; CFU 41; QD 41; R 41; UAA 39</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>c. Observe and describe chemical reactions involving atmospheric oxygen (e.g., rust, fire, respiration, photosynthesis).</p>	<p>Student Edition: 260, 641, 645 <i>Integrate Environment</i> 637 <i>Launch Lab</i> 631 Teacher Wraparound Edition: D 728; IM 644; QD 573, 642 Student Edition: (G) 40, 163 (H) 135 (I) 14-15, 102 <i>Integrate Life Science</i> 14 Teacher Wraparound Edition: (F) SCB 64E (G) SCB 34E (H) SCB 98E; TFYI 137 (I) A 102; MM 14</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓	
d.	Investigate the effects of chemical change on physical properties of substances (e.g., cooking a raw egg, iron rusting, polymerization of a resin).	<p>Student Edition: 462, 464-465, 645, 772 <i>Accidents in Science</i> 750 <i>Integrate Environment</i> 637 <i>Lab</i> 466-467 <i>Science and Society</i> 718</p> <p>Teacher Wraparound Edition: IL 746; IM 644; QD 573</p> <p>Student Edition: (F) 40-43, 45-48, 68 (G) 39-41 <i>Design Your Own Lab</i> 54-55 <i>Launch Lab</i> 35 <i>MiniLAB</i> 40 <i>Science Online</i> 39</p> <p>(H) <i>Lab</i> 50</p> <p>Teacher Wraparound Edition: (F) ACT 68; LD 16; QD 53; VL 68 (G) CC 40; QD 41; R 41 (I) LD 82</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓	
Objective 1.3: Investigate and measure the effects of increasing or decreasing the amount of energy in a physical or chemical change, and relate the kind of energy added to the motion of the particles.				
a.	Identify the kinds of energy (e.g., heat, light, sound) given off or taken in when a substance undergoes a chemical or physical change.	<p>Student Edition: 167, 176-179, 462, 476-480, 641-645, 646-649 <i>Integrate Chemistry</i> 202 <i>Integrate Environment</i> 111 <i>National Geographic</i> 647</p> <p>Teacher Wraparound Edition: CU 650; QD 642; TPK 646; FYI 649, 745</p> <p>Student Edition: (F) 73-75, 76-81 (H) <i>Integrate Chemistry</i> 138 <i>Lab</i> 15 (I) <i>Launch Lab</i> 35 <i>MiniLAB</i> 19 (J) 109, 115-119</p> <p>Teacher Wraparound Edition: (F) IL 79; LD 78; QD 77; SCB 64E; TFYI 127; VL 80 (H) A 15 (I) QD 72 (J) LD 116</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
b.	Relate the amount of energy added or taken away from a substance to the motion of molecules in the substance.	<p>Student Edition: 476-482, 494-495 <i>Lab</i> 484</p> <p>Teacher Wraparound Edition: SJ 482</p> <p>Student Edition: (F) 11, 40-42 <i>Integrate Chemistry</i> 43 (H) 9-10 (I) 18-19</p> <p>Teacher Wraparound Edition: (H) A 15; TFYI 11; VL 9 (I) UAA 18</p>		
c.	Measure and graph the relationship between the states of water and changes in its temperature.	<p>Student Edition: 480, 482 <i>Lab</i> 484</p> <p>Teacher Wraparound Edition: VL 480, 482</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
d.	Cite evidence showing that heat may be given off or taken in during a chemical change (e.g., striking a match, mixing vinegar and antacid, mixing ammonium chloride and water).	Student Edition: 108, 176-177, 257, 260, 276, 465, 648-649 Teacher Wraparound Edition: A 649; VL 108 Student Edition: (F) 40-42, 46, 73-74, 79-81 (G) 40-41 <i>Design Your Own Lab</i> 54-55 (J) 109, 115-116 Teacher Wraparound Edition: (F) QD 77; VL 80		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>e. Plan and conduct an experiment, and report the effect of adding or removing energy on the chemical and physical changes.</p>	<p>Student Edition: 162, 212 <i>Lab 277</i>, 484 <i>Launch Lab 157</i>, 255, 353, 475 <i>MiniLab 202</i>, 361 Teacher Wraparound Edition: QD 161, 173 Student Edition: (F) 111 <i>Lab 13</i> <i>MiniLAB 111</i> (G) <i>Design Your Own Lab 54-55</i>, 82-83 (H) <i>Lab 15</i> <i>MiniLAB 11</i> (I) <i>Design Your Own Lab 26-27</i> <i>Lab 85</i> <i>Launch Lab 35</i> <i>MiniLAB 19</i> (J) <i>Lab 60-61</i> Teacher Wraparound Edition: (F) IL 163 (G) AIL 83 (H) IL 24; LD 13 (I) QD 72</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
Objective 1.4: Identify the observable features of chemical reactions.				
a.	Identify the reactants and products in a given chemical change and describe the presence of the same atoms in both the reactants and products.	Student Edition: 465, 632-633, 636, 638-640 <i>Applying Science</i> 644 Teacher Wraparound Edition: R 637		
b.	Cite examples of common significant chemical reactions (e.g., photosynthesis, respiration, combustion, rusting) in daily life.	Student Edition: 260-261, 641-645, 771-773 <i>Integrate Environment</i> 637 <i>Launch Lab</i> 631, 695 <i>National Geographic</i> 647 Teacher Wraparound Edition: A 649; CC 697; DI 639; FYI 737, 745; IL 643; TPK 632, 646 Student Edition: (F) 11, 41, 73-75, 79-81 <i>Integrate Physics</i> 11 (G) 39-41, 163 <i>Science Online</i> 39 (H) 85-89, 135 (I) 14-15 (J) 96-102, 109, 115-116 Teacher Wraparound Edition: (F) SCB 34E-F (G) A 41; CC 40; R 41; SCB 34E (H) IM 136; TFYI 137		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
c.	Demonstrate that mass is conserved in a chemical reaction (e.g., mix two solutions that result in a color change or formation of a precipitate and weigh the solutions before and after mixing).		
d.	Experiment with variables affecting the relative rates of chemical changes (e.g., heating, cooling, stirring, crushing, concentration).		

Student Edition:
463, 465, 632-634
MiniLab 636
Teacher Wraparound Edition:
IM 644; QD 633; R 465
Student Edition:
(F) 39
Section Review 39

Student Edition:
650
Lab 651
Teacher Wraparound Edition:
IE 650
Student Edition:
(F) *Lab* 12
(G) *Design Your Own Lab* 54-55
MiniLAB 40
Teacher Wraparound Edition:
(G) UAA 39

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
e.	<p>Research and report on how scientists or engineers have applied principles of chemistry to an application encountered in daily life (e.g., heat-resistant plastic handles on pans, rust-resistant paints on highway bridges).</p>		

Student Edition:
650, 740-741, 766, 772-773, 776
Accidents in Science 624, 750
Integrate Environment 772
Integrate History 650
National Geographic 738
Science and Society 718, 780
Teacher Wraparound Edition:
CD 643; IE 650; R 776
Student Edition:
(F) 73-75, 79-81
Science and History 28
(H) 102-103
Integrate Life Science 10
(J) 8-13, 29
Teacher Wraparound Edition:
(F) CC 15; DI 21; SJ 24
(J) SCB 6F

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
STANDARD II: Students will understand that energy from sunlight is changed to chemical energy in plants, transfers between living organisms, and that changing the environment may alter the amount of energy provided to living organisms.			
Percentage of coverage in the <i>student and teacher edition</i> for Standard II: _____ %		Percentage of coverage not in student or teacher edition, but covered in the <i>ancillary material</i> for Standard III: _____ %	
Objective 2.1: Compare ways that plants and animals obtain and use energy.			
a.	Recognize the importance of photosynthesis in using light energy as part of the chemical process that builds plant materials.	Student Edition: <i>Integrate Environment</i> 111 <i>Integrate Life Science</i> 392 Student Edition: (G) 163 (H) 135 <i>Section Review</i> 142 Teacher Wraparound Edition: (H) TFYI 137	
b.	Explain how respiration in animals is a process that converts food energy into mechanical and heat energy.	Student Edition: 114 <i>Integrate Health</i> 115 Teacher Wraparound Edition: IM 114 Teacher Wraparound Edition: (H) IM 136	

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
c.	Trace the path of energy from the sun to mechanical energy in an organism (e.g., sunlight - light energy to plants by photosynthesis to sugars - stored chemical energy to respiration in muscle cell - usable chemical energy to muscle contraction- mechanical energy).	Student Edition: <i>Integrate Environment</i> 111 <i>Integrate Health</i> 115 Teacher Wraparound Edition: SJ 111 Student Edition: (H) 46, 135-137 Teacher Wraparound Edition: (H) TFYI 137		
Objective 2.2: Generalize the dependent relationships between organisms.				
a.	Categorize the relationships between organisms (i.e., producer/consumer/decomposer, predator/prey, mutualism/parasitism) and provide examples of each.	Teacher Wraparound Edition: (H) DI 140; TFYI 146 (I) DI 76		
b.	Use models to trace the flow of energy in food chains and food webs.	Student Edition: <i>Integrate Environment</i> 111 Teacher Wraparound Edition: SJ 111 Student Edition: (H) 135-136 <i>Applying Skills</i> 142 Teacher Wraparound Edition: (H) MM 136; VL 136		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
c.	Formulate and test a hypothesis on the effects of air, temperature, water, or light on plants (e.g., seed germination, growth rates, seasonal adaptations).	Student Edition: (I) 121 #29 Teacher Wraparound Edition: (H) IL 83		
d.	Research multiple ways that different scientists have investigated the same ecosystem.	Student Edition: <i>Integrate History</i> 713 <i>Science and Society</i> 718 Teacher Wraparound Edition: IH 713 Student Edition: (G) <i>The Nature of Science</i> 4-5		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓	
Objective 2.3: Analyze human influence on the capacity of an environment to sustain living things.				
a.	Describe specific examples of how humans have changed the capacity of an environment to support specific life forms (e.g., people create wetlands and nesting boxes that increase the number and range of wood ducks, acid rain damages amphibian eggs and reduces population of frogs, clear cutting forests affects squirrel populations, suburban sprawl reduces mule deer winter range thus decreasing numbers of deer).	<p>Student Edition: 648 <i>Integrate History</i> 713 <i>Science and Society</i> 718</p> <p>Teacher Wraparound Edition: IH 713</p> <p>Student Edition: (G) 50-53 <i>Integrate History</i> 77 <i>The Nature of Science</i> 2-5</p> <p>(H) 54-57, 76-84, 143-147 (I) 96-102, 107-110 <i>Applying Skills</i> 110</p> <p>Teacher Wraparound Edition: (H) A 43; DI 83; SCB 34F (I) A 15; CFU 110; IL 108; QD 107; R 110; TFYI 109</p>		
b.	Distinguish between inference and evidence in a newspaper or magazine article relating to the effect of humans on the environment.	<p>Student Edition: (G) <i>You Do It</i> 5</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
c.	Infer the potential effects of humans on a specific food web.	Student Edition: <i>Integrate Environment</i> 111 Student Edition: (G) <i>Integrate Careers</i> 51 (H) 143-147 (I) 107-110, 123 #11-12 Teacher Wraparound Edition: (H) CFU 147; DIS 146; QD 144; SCB 34F (I) A 110; DI 107; IL 108; QD 107; VL 107, 109		
d.	Evaluate and present arguments for and against allowing a specific species of plant or animal to become extinct, and relate the argument to the of flow energy in an ecosystem.	Student Edition: (I) 115 Teacher Wraparound Edition: (H) TS 149		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
STANDARD III: Students will understand the processes of rock and fossil formation.			
Percentage of coverage in the <i>student and teacher edition</i> for Standard III: _____ %		Percentage of coverage not in student or teacher edition, but covered in the <i>ancillary material</i> for Standard IV: _____ %	
Objective 3.1: Compare rocks and minerals and describe how they are related.			
a.	Recognize that most rocks are composed of minerals.	Student Edition: 577 <i>Integrate Career</i> 576 Teacher Wraparound Edition: IC 576 Student Edition: (F) 36, 63 #10 <i>Launch Lab</i> 7, 35 Teacher Wraparound Edition: (F) A 7; R 39; SCB 34E-F	
b.	Observe and describe the minerals found in rocks (e.g., shape, color, luster, texture, hardness).	Student Edition: (F) 8-12, 14-18, 20-21 <i>Applying Science</i> 16 <i>Lab</i> 26-27 <i>MiniLAB</i> 18 Teacher Wraparound Edition: (F) A 18, 27; AIL 16; LD 16; QD 17; R 18; SCB 6E; UAA 17	

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
c.	Categorize rock samples as sedimentary, metamorphic, or igneous.	Student Edition: (F) 40-43, 45-48, 49-55 <i>Lab 44, 56-57</i> <i>Science Online 42, 46</i> Teacher Wraparound Edition: (F) A 48, 57; AIL 56; DI 37, 41, 42; R 43, 55; SCB 34E-F		
Objective 3.2: Describe the nature of the changes that rocks undergo over long periods of time.				
a.	Diagram and explain the rock cycle.	Student Edition: (F) 36-39, 40-42, 45-48, 49-55 <i>Get Ready to Read 36A-B</i> <i>MiniLAB 37</i> <i>National Geographic 38</i> Teacher Wraparound Edition: (F) A 55; CFU 39; SCB 34E-F; SJ 51; TBI 34		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE) and Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
b.	Describe the role of energy in the processes that change rock materials over time.	<p>Student Edition: (F) 37, 40-43, 45-46, 50-51 <i>National Geographic</i> 38 (G) 36-41 <i>Design Your Own Lab</i> 54-55 <i>MiniLAB</i> 40</p> <p>Teacher Wraparound Edition: (F) DIS 46; SCB 34E-F; SJ 51; UAA 46; V 38; VL 46 (G) DIS 38; IM 34F</p>		
c.	Use a model to demonstrate how erosion changes the surface of Earth.	<p>Student Edition: <i>Integrate Earth Science</i> 456</p> <p>Student Edition: (G) 50-53, 64-68, 69-74, 76-81, 92-102, 107-108, 109-112 <i>Design Your Own Lab</i> 82-83 <i>Lab</i> 75 <i>Launch Lab</i> 91 <i>MiniLAB</i> 65</p> <p>Teacher Wraparound Edition: (G) A 65, 68; ACT 95; IL 66; IM 62F; SCB 62E, 90E-F</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
d.	Relate gravity to changes in Earth's surface.	<p>Student Edition: <i>Integrate Earth Science</i> 79</p> <p>Teacher Wraparound Edition: IES 79</p> <p>Student Edition: (G) 64-68, 93 <i>Integrate Physics</i> 67 <i>Section Review</i> 68</p> <p>(H) 71-73</p> <p>Teacher Wraparound Edition: (G) SCB 62E; TFYI 65</p>		
e.	Identify the role of weathering of rocks in soil formation.	<p>Student Edition: 464</p> <p>Teacher Wraparound Edition: FYI 464</p> <p>Student Edition: (G) 41, 42-48 <i>MiniLAB</i> 44</p> <p>Teacher Wraparound Edition: (G) ACT 43; CFU 48; DIS 45; FF 43; IM 47; V 43</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>f. Describe and model the processes of fossil formation.</p>	<p>Student Edition: 545</p> <p>Student Edition: (G) 124-131 <i>Applying Skills</i> 131 <i>Get Ready to Read</i> 124A-B <i>Launch Lab</i> 121 <i>MiniLAB</i> 125 <i>Model and Invent Lab</i> 144-145</p> <p>Teacher Wraparound Edition: (G) A 123, 125; AR 126; CC 127; DI 125; IM 126; LD 163; MM 129, 157; QD 128; R 131; TFYI 126; UAA 127; VL 127</p>		
<p>Objective 3.3: Describe how rock and fossil evidence is used to infer Earth's history.</p>			
<p>a. Describe how the deposition of rock materials produces layering of sedimentary rocks over time.</p>	<p>Student Edition: (F) 49-55, 61 <i>Applying Math</i> 54</p> <p>(G) 64-65, 70-71, 79-81, 101-102</p> <p>Teacher Wraparound Edition: (F) DIS 51 (G) CC 71; LD 70</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
b.	Identify the assumptions scientists make to determine relative ages of rock layers.	<p>Student Edition: 544-545</p> <p>Teacher Wraparound Edition: DI 544</p> <p>Student Edition: (G) 132-137 <i>Get Ready to Read</i> 124A-B <i>Lab</i> 138</p> <p>Teacher Wraparound Edition: (G) A 137, 138; CFU 131, 137; IL 132; IM 122F; R 137; SCB 122E; TBI 122; TFYI 136; TPK 132</p>		
c.	Explain why some sedimentary rock layers may not always appear with youngest rock on top and older rocks below (i.e., folding, faulting).	<p>Student Edition: (G) 134, 149 #23, 151 #21 <i>Lab</i> 138 <i>National Geographic</i> 135</p> <p>Teacher Wraparound Edition: (G) ACT 135; DI 134; DIS 134; FF 133; R 137; V 135; VL 134</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
d.	Research how fossils show evidence of the changing surface of the Earth.	<p>Student Edition: 45</p> <p>Teacher Wraparound Edition: A 45</p> <p>Student Edition: (F) 99-100 <i>MiniLAB</i> 100 (G) 124-131, 149 #25, 151 #28 <i>Get Ready to Read</i> 124A-B <i>Section Review</i> 131 <i>Science Online</i> 136</p> <p>Teacher Wraparound Edition: (F) TFYI 100 (G) ACT 129; DI 130, 133; DIS 159; IL 136; SCB 122E; VL130</p>		
e.	Propose why more recently deposited rock layers are more likely to contain fossils resembling existing species than older rock layers.	<p>Student Edition: (G) 149 #18, 154-155, 162 <i>Applying Skills</i> 137</p> <p>Teacher Wraparound Edition: (G) IM 156; TBI 122</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
Objective 3.4: Compare rapid and gradual changes to Earth's surface.				
a.	Describe how energy from the Earth's interior causes changes to Earth's surface (i.e., earthquakes, volcanoes).	Student Edition: <i>Integrate Earth Science</i> 275, 295, 489 Student Edition: (F) 106-111, 121 #22, 123 #20, 126-127, 158-161 <i>MiniLAB</i> 111 <i>National Geographic</i> 109 <i>Science Online</i> 108 <i>Section Review</i> 115 Teacher Wraparound Edition: (F) A 111, 117; CC 113; LD 108; R 115; SCB 124E; TBI 96, 124		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>b. Describe how earthquakes and volcanoes transfer energy from Earth's interior to the surface (e.g., seismic waves transfer mechanical energy, flowing magma transfers heat and mechanical energy).</p>	<p>Student Edition: <i>Integrate Earth Science</i> 275, 295, 489</p> <p>Teacher Wraparound Edition: D 275</p> <p>Student Edition: (F) 106-111, 126-129, 130-137, 158-161, 162-169 <i>Get Ready to Read</i> 126A-B <i>Launch Lab</i> 125 <i>MiniLAB</i> 160 <i>Use the Internet Lab</i> 116-117</p> <p>Teacher Wraparound Edition: (F) ACT 164; AIL 166; DI 128; IL 163; QD 159; TBI 124</p>		
<p>c. Model the process of energy buildup and release in earthquakes.</p>	<p>Student Edition: <i>Integrate Earth Science</i> 295</p> <p>Teacher Wraparound Edition: FYI 294</p> <p>Student Edition: (F) 126-129, 130-137 <i>Applying Math</i> 143 <i>Applying Skills</i> 129 <i>Get Ready to Read</i> 126A-B <i>Launch Lab</i> 125 <i>National Geographic</i> 132</p> <p>Teacher Wraparound Edition: (F) ACT 127, 128; TFYI 131</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>d. Investigate and report possible reasons why the best engineering or ecological practices are not always followed in making decisions about building roads, dams, and other structures.</p>	<p>Student Edition: (F) 78 (G) 67-68 <i>Science and Society</i> 116 <i>The Nature of Science</i> 2-5 <i>You Do It</i> 5 Teacher Wraparound Edition: (F) DIS 74, 157; VL 78 (G) CC 4; DIS 3; EX 4; SJ 2</p>		
<p>e. Model how small changes over time add up to major changes to Earth's surface.</p>	<p>Student Edition: 45-46 Teacher Wraparound Edition: A 45 Student Edition: (F) 98-101, 114-115 <i>Lab</i> 105 <i>National Geographic</i> 109 (G) 69-74, 96-102, 107-108, 109-112 Teacher Wraparound Edition: (F) ACT 109; LD 108; TFYI 114; V 109 (G) CC 73; R 74</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓	
STANDARD IV: Students will understand the relationships among energy, force, and motion.				
Percentage of coverage in the <i>student and teacher edition</i> for Standard IV: _____ %	Percentage of coverage not in student or teacher edition, but covered in the <i>ancillary material</i> for Standard VI: _____ %			
Objective 4.1: Investigate the transfer of energy through various materials.				
a.	Relate the energy of a wave to wavelength.	Student Edition: 290-291, 297-298, 360-363 Student Edition: (F) 130-137 (H) 110-113 <i>Lab</i> 117 <i>National Geographic</i> 112 (J) 8-9 <i>Applying Math</i> 13 Teacher Wraparound Edition: (F) TPK 130 (H) SCB 98F (J) IL 9		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries ✓</i>
<p>b. Compare the transfer of energy (i.e., sound, light, earthquake waves, heat) through various mediums.</p>	<p>Student Edition: 164-165, 168-189, 293 <i>Integrate Earth Science</i> 295 <i>Lab</i> 302 <i>MiniLab</i> 169 <i>National Geographic</i> 294 Teacher Wraparound Edition: FYI 294, 386; LD 291 Student Edition: (F) 130-137 <i>Integrate Physics</i> 131 (H) 110-113 <i>Lab</i> 117 <i>National Geographic</i> 112 (J) 8-9 <i>Get Ready to Read</i> 8B Teacher Wraparound Edition: (F) DI 131; LD 134; QD 136 (H) R 116; UAA 113; V 112 (J) DIS 9</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries ✓</i>
<p>c. Describe the spread of energy away from an energy-producing source.</p>	<p>Student Edition: 164-165, 260-261, 290-291</p> <p>Teacher Wraparound Edition: QD 173</p> <p>Student Edition: (F) 130-137, 142 <i>Lab</i> 138, 146-147 <i>National Geographic</i> 132</p> <p>(H) 110-113 <i>Lab</i> 117 <i>MiniLAB</i> 111</p> <p>(J) 8-9</p> <p>Teacher Wraparound Edition: (F) CFU 137; DI 132; QD 142; USW 131</p> <p>(H) A 111; ACT 112</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>d. Compare the transfer of heat by conduction, convection, and radiation and provide examples of each.</p>	<p>Student Edition: 164-167 <i>Lab</i> 171, 180-181 <i>National Geographic</i> 166 Teacher Wraparound Edition: D 167; QD 173; SJ 160 Student Edition: (F) 111, 123 #20 <i>MiniLAB</i> 111 <i>Section Review</i> 115 (I) 17-19, 21, 25, 31 #21, 33 #23 <i>Applying Math</i> 20 <i>MiniLAB</i> 19 (J) 8-9 Teacher Wraparound Edition: (F) A 111; R 115 (I) CFU 20; DI 18; DIS 18; UAA 18; USW 18 (J) TPK 8</p>		
<p>e. Demonstrate how white light can be separated into the visible color spectrum.</p>	<p>Student Edition: 386-387 <i>Launch Lab</i> 383 Teacher Wraparound Edition: FF 387</p>		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
Objective 4.2: Examine the force exerted on objects by gravity.				
a.	Distinguish between mass and weight.	Student Edition: 77-78 Teacher Wraparound Edition: D 78; IM 77 Student Edition: (F) <i>Science Skill Handbook</i> 192 (G) <i>Science Skill Handbook</i> 192 (H) <i>Science Skill Handbook</i> 164 (I) <i>MiniLAB</i> 13 <i>Science Skill Handbook</i> 132 (J) <i>Science Skill Handbook</i> 142 Teacher Wraparound Edition: (G) SCB 90E		
b.	Cite examples of how Earth's gravitational force on an object depends upon the mass of the object.	Student Edition: 76-78 Teacher Wraparound Edition: FF 76; FYI 78 Student Edition: (J) <i>MiniLAB</i> 79 Teacher Wraparound Edition: (G) SCB 90E (J) A 79; TS 79		
c.	Describe how Earth's gravitational force on an object depends upon the distance of the object from Earth.	Student Edition: 76 Teacher Wraparound Edition: FF 76		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
d.	Design and build structures to support a load.	Student Edition: 138-139 Teacher Wraparound Edition: CD 139 Student Edition: (F) <i>MiniLAB</i> 144 Teacher Wraparound Edition: (F) A 144; IL 47; R 145		
e.	Engineer (design and build) a machine that uses gravity to accomplish a task.	Student Edition: <i>Design Your Own Lab</i> 58-59 <i>Model and Invent Lab</i> 148-149 Teacher Wraparound Edition: (F) MM 78 (J) ACT 19		
Objective 4.3: Investigate the application of forces that act on objects, and the resulting motion.				
a.	Calculate the mechanical advantage created by a lever.	Student Edition: 136, 138-141 <i>Lab</i> 147 Teacher Wraparound Edition: FYI 136		
b.	Engineer a device that uses levers or inclined planes to create a mechanical advantage.	Student Edition: <i>Model and Invent Lab</i> 148-149 Teacher Wraparound Edition: TPK 138		
c.	Engineer a device that uses friction to control the motion of an object.	Student Edition: 72 Teacher Wraparound Edition: FF 73; R 74		

OBJECTIVES & INDICATORS		Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries ✓
d.	Design and build a complex machine capable of doing a specified task.	Student Edition: <i>Science and History</i> 314 Teacher Wraparound Edition: D 133 Teacher Wraparound Edition: (F) MM 78 (H) DI 102; IL 101; MM 20 (J) A 14; ACT 19; IL 80		
e.	Investigate the principles used to engineer changes in forces and motion.	Student Edition: 52-56, 68-72, 132-133 <i>MiniLab</i> 134 Teacher Wraparound Edition: A 133; D 55; IM 53 Student Edition: (F) 95 #21 (G) <i>Extra Try at Home Labs</i> 199 (H) 42-43 <i>Science Online</i> 42, 45 (J) 15-17, 23 <i>MiniLAB</i> 21 Teacher Wraparound Edition: (G) DI 79; LD 100 (H) MM 20 (I) A 21; CD 16; DIS 16; LD 26; QD 16		

OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
Objective 4.4: Analyze various forms of energy and how living organisms sense and respond to energy.				
a.	Analyze the cyclic nature of potential and kinetic energy (e.g., a bouncing ball, a pendulum).	Student Edition: 108-111 <i>Design Your Own Lab</i> 116-117 <i>Lab</i> 106 <i>National Geographic</i> 110 Teacher Wraparound Edition: IM 109; QD 108 Student Edition: (G) <i>Integrate Physics</i> 67		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>b. Trace the conversion of energy from one form of energy to another (e.g., light to chemical to mechanical).</p>	<p>Student Edition: 107-108, 114-115 <i>Integrate Environment</i> 111 <i>Lab</i> 106</p> <p>Teacher Wraparound Edition: SJ 111</p> <p>Student Edition: (F) 66-75, 76-81, 95 #21, 130-131 <i>National Geographic</i> 132 (G) <i>Integrate Physics</i> 67 (H) 135-137 <i>Integrate Life Science</i> 47</p> <p>Teacher Wraparound Edition: (F) IL 79; MM 78 (I) IM 6F; SCB 6E</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>c. Cite examples of how organisms sense various types of energy.</p>	<p>Student Edition: 325-326, 339, 390-391, 427-429 <i>Integrate Life Science</i> 324, 427 <i>National Geographic</i> 340 <i>Science and Society</i> 346 Teacher Wraparound Edition: A 335; FF 337; VL 325 Student Edition: (F) <i>Science Stats</i> 148 Teacher Wraparound Edition: (F) RE 141 (H) DIS 92</p>		
<p>d. Investigate and report the response of various organisms to changes in energy (e.g., plant response to light, human response to motion, sound, light, insect's response to changes in light intensity).</p>	<p>Student Edition: 333-337, 339 <i>Design Your Own Lab</i> 344-345 <i>Integrate Physics</i> 408 <i>National Geographic</i> 340 Teacher Wraparound Edition: IP 408 Student Edition: (H) <i>Integrate Career</i> 138 <i>Integrate Life Science</i> 115 (I) <i>Integrate Life Science</i> 37 Teacher Wraparound Edition: (F) IL 134; MM 140 (I) DIS 73; SJ 40</p>		

OBJECTIVES & INDICATORS	Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
<p>e. Investigate and describe how engineers have developed devices to help us sense various types of energy (e.g., seismographs, eyeglasses, telescopes, hearing aids).</p>	<p>Student Edition: 429-431, 432-435 <i>Integrate Career</i> 325 <i>Integrate Health</i> 309 <i>Integrate History</i> 429 <i>Model and Invent Lab</i> 438-439 <i>National Geographic</i> 430, 555 <i>Science and History</i> 248 <i>Science and Society</i> 440 Teacher Wraparound Edition: A 430; FYI 433; IC 325; IH 429 Student Edition: (F) 133-137 <i>Lab</i> 138 <i>MiniLAB</i> 135 <i>Science Online</i> 133 (H) <i>Integrate Career</i> 108 <i>The Nature of Science</i> 2-5 <i>You Do It</i> 5 (I) <i>The Nature of Science</i> 2-5 <i>You Do It</i> 5 (J) 8-13, 108, 122-123 <i>Integrate Career</i> 51 <i>Lab</i> 14, 113 Teacher Wraparound Edition: (F) IL 134 (H) ACT 4 (J) DI 9; SCB 6E; SJ 11</p>		