Textbook Alignment to the Utah Core – 7th 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: Jennifer Coker

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

X 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):
Seventh Grade Integrated Science Core Curriculum

Title: *Life Science* © 2008; *Earth Materials and Processes F; The Changing Surface of Earth G; The Nature of Matter K*

ISBN#: 0-07-877800-X; F--0-07-877822-0; G--0-07-877824-7; K--0-07-877832-8

Publisher: Glencoe/McGraw-Hill

Overall percentage of coverage in the *Student Edition (SE) and Teacher Edition (TE)* of the Utah State Core Curriculum: _____% **Overall percentage of coverage in *ancillary materials* of the Utah Core Curriculum: _____%**				
STANDARD I: Students will understand the structure of matter.				
Percentage of coverage in the *student and teacher edition* for Standard I:_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard I: _____%**		
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*** ✓
Objective 1.1: Describe the structure of matter in terms of atoms and molecules.				
a.	Recognize that atoms are too small to see.	**Student Edition:** 66 **Teacher Wraparound Edition:** DIF 67 **Student Edition:** (K) 16 *Launch Lab* 7 **Teacher Wraparound Edition:** (K) FF 22; UA 9		

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* ✓
b.	Relate atoms to molecules (e.g., atoms combine to make molecules).	**Student Edition:** 68 *Section Review* 73 (#1) **Teacher Wraparound Edition:** MAM 72 **Student Edition:** (K) 25-26 *Chapter Review* 35 (#18) *MiniLab* 26 *Section Review* 29 (#3) **Teacher Wraparound Edition:** (K) CU 29; D 27; DI 27; TPK 25		
c.	Diagram the arrangement of particles in the physical states of matter (i.e., solid, liquid, gas).	The following page references can be incorporated to meet this standard. **Student Edition:** 73, 721 **Teacher Wraparound Edition:** VL 721 **Student Edition:** (K) 41-44 *National Geographic* 48 *Section Review* 44 (#2) *Standardized Test Practice* 69 (#23) **Teacher Wraparound Edition:** (K) ACT 42; MM 41, 73; QD 44; TPK 45		

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.	Describe the limitations of using models to represent atoms (e.g., distance between particles in atoms cannot be represented to scale in models, the motion of electrons cannot be described in most models).	The following page references can be incorporated to meet this standard. **Student Edition:** 66 **Teacher Wraparound Edition:** DIF 67 **Student Edition:** (K) 16 *Launch Lab* 7		
e.	Investigate and report how our knowledge of the structure of matter has been developed over time.	The following page references can be incorporated to meet this standard. **Student Edition:** 66 **Teacher Wraparound Edition:** 64E **Student Edition:** (K) 8-17 *Science and History* 32 **Teacher Wraparound Edition:** (K) ACT 14; MM 9; R 17; SJ 14		
Objective 1.2: Accurately measure the characteristics of matter in different states.				
a.	Identify evidence that particles are in constant motion.	**Student Edition:** 75 *MiniLab* 75 **Teacher Wraparound Edition:** LD 76; RT 78 **Student Edition:** (K) 40-44, 45-46, 49-62 **Teacher Wraparound Edition:** (K) ACT 42; QD 44; TPK 45		

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* ✓
b.	Compare the motion of particles at various temperatures by measuring changes in the volume of gases, liquids, or solids.	**Teacher Wraparound Edition:** (K) ACT 58; LD 43		
c.	Design and conduct an experiment investigating the diffusion of particles.	**Student Edition:** *MiniLab* 75 **Teacher Wraparound Edition:** AS 75; LD 76 **Teacher Wraparound Edition:** (K) QD 44		
d.	Describe the relationship between mass and volume as it relates to density.	**Student Edition:** *Applying Math* 404 **Student Edition:** (F) *Lab* 26-27 (K) 59 *Design Your Own Lab* 62-63 *MiniLab* 74, 75 *Standardized Test Practice* 95 (#16) **Teacher Wraparound Edition:** (K) A 71; QD 76		
e.	Design a procedure to measure mass and volume of gases.			
Objective 1.3: Investigate the motion of particles.				
a.	Identify evidence that particles are in constant motion.	**Student Edition:** 75 *MiniLab* 75 **Teacher Wraparound Edition:** LD 76; RT 78 **Student Edition:** (K) 40-44, 45-46, 49-62 **Teacher Wraparound Edition:** (K) ACT 42; QD 44; TPK 45		

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* ✓
b.	Compare the motion of particles at various temperatures by measuring changes in the volume of gases, liquids, or solids.	**Teacher Wraparound Edition:** (K) ACT 58; LD 43		
c.	Design and conduct an experiment investigating the diffusion of particles.	**Student Edition:** *MiniLab* 75 **Teacher Wraparound Edition:** AS 75; LD 76 **Teacher Wraparound Edition:** (K) QD 44		
d.	Formulate and test a hypothesis on the relationship between temperature and motion.	**Student Edition:** *MiniLab* 75 **Teacher Wraparound Edition:** AS 75 Students also can formulate hypotheses prior to the activities in: **Student Edition:** (K) *Lab* 53 **Teacher Wraparound Edition:** (K) ACT 58; LD 43		
e.	Describe the impact of expansion and contraction of solid materials on the design of buildings, highways, and other structures.	**Student Edition:** (K) 45-46		

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* ✓
STANDARD II: Students will understand the relationship between properties of matter and Earth's structure.				
Percentage of coverage in the *student and teacher edition* for Standard II:_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard II: _____%**		
Objective 2.1: Examine the effects of density and particle size on the behavior of materials in mixtures.				
a.	Compare the density of various objects to the density of known earth materials.	**Student Edition:** (K) *Chapter Review* 67 (#24) **Teacher Wraparound Edition:** (F) ACT 21 (K) A 61; IL 60		
b.	Calculate the density of earth materials (e.g., rocks, water, air).	**Student Edition:** (F) *Lab* 26-27 (K) *MiniLab* 74 **Teacher Wraparound Edition:** (K) A 71; QD 76		
c.	Observe and describe the sorting of earth materials in a mixture based on density and particle size (e.g., sorting grains of sand of the same size with different densities, sort aterials of different particle size with equal densities).	**Student Edition:** (G) 71, 76-77 *Applying Science* 77 *Design Your Own Lab* 82-83 **Teacher Wraparound Edition:** (G) LD 70; TPK 76		
d.	Relate the sorting of materials that can be observed in streambeds, road cuts, or beaches to the density and particle size of those materials.	**Student Edition:** (G) 71, 76-77 *Applying Science* 77 *Chapter Review* 87 (#24) **Teacher Wraparound Edition:** (F) D 51 (G) LD 70; TPK 756		

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* ✓
e.	Design and conduct an experiment that provides data on the natural sorting of various earth materials.	**Student Edition:** (G) *Design Your Own Lab* 82-83 **Teacher Wraparound Edition:** (G) AIL 83; LD 70		
Objective 2.2: Analyze how density affects Earth's structure.				
a.	Compare the densities of Earth's atmosphere, water, crust, and interior layers.	**Student Edition:** (F) 106, 111, 135-136		
b.	Relate density to the relative positioning of Earth's atmosphere, water, crust, and interior.	The relative positioning of the Earth's crust and interior is discussed in: **Student Edition:** (F) 135-136 In classroom discussion, the concept can be extended to include water and the atmosphere.		
c.	Model the layering of Earth's atmosphere, water, crust, and interior due to density differences.	**Student Edition:** (F) 106, 135-136 *MiniLab* 111 (G) 44-45 **Teacher Wraparound Edition:** (F) DI 136 (G) LD 46; R 48		
d.	Distinguish between models of Earth with accurate and inaccurate attributes.	**Student Edition:** (G) 18-23 *Model and Invent Lab* 26-27 **Teacher Wraparound Edition:** (G) ACT 20, 21; LD 19; QD 19		

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* ✓
STANDARD III: Students will understand that the organs in an organism are made of cells that have structures and perform specific life functions.				
Percentage of coverage in the *student and teacher edition* for Standard III:_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard III: _____%**		
Objective 3.1: Observe and describe cellular structures and functions.				
a.	Use appropriate instruments to observe, describe, and compare various types of cells (e.g., onion, diatoms).	**Student Edition:** 47, 50 *Lab* 46 *Lab: Design Your Own* 56-57 *MiniLab* 50 *National Geographic* 48-49 **Teacher Wraparound Edition:** AC 43; AS 46, 57		
b.	Observe and distinguish the cell wall, cell membrane, nucleus, chloroplast, and cytoplasm of cells.	**Student Edition:** 39-42 *Lab* 56 **Teacher Wraparound Edition:** QD 39		
c.	Differentiate between plant and animal cells based on cell wall and cell membrane.	**Student Edition:** 39-40 *Lab* 56 *Section Review* 45 (#5) **Teacher Wraparound Edition:** AS 46; QD 39; RT 45; VL 41		

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.	Model the cell processes of diffusion and osmosis and relate this motion to the motion of particles.	**Student Edition:** 74-77 *Caption Question* 75 *Lab* 80 *MiniLab* 75 **Teacher Wraparound Edition:** LD 76; RT 78		
e.	Gather information to report on how the basic functions of organisms are carried out within cells (e.g., extract energy from food, remove waste, produce their own food).	**Student Edition:** 38-44, 74-78, 81-85, 96-97 *National Geographic* 79 **Teacher Wraparound Edition:** TTPK 38; UA 41		
Objective 3.2: Identify and describe the function and inter-dependence of various organs and tissues.				
a.	Order the levels of organization from simple to complex (e.g., cell, tissue, organ, system, organism).	**Student Edition:** 14, 45 *Chapter Review* 60 (#18) *Section Review* 45 (#3)		
b.	Match a particular structure to the appropriate level (e.g., heart to organ, cactus to organism, muscle to tissue).	Can be incorporated into the following: **Student Edition:** 45, 484, 490, 493, 496-497, 525-529, 541, 556-557, 578-579		
c.	Relate the structure of an organ to its component parts and the larger system of which it is a part.	**Student Edition:** 45, 255, 484, 490, 493, 496-497, 525-529, 541, 556-557, 570-571, 578-579 *Chapter Review* 61 (#24) *Integrate Health* 255 *Reading Check* 45 **Teacher Wraparound Edition:** CFU 529		

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.	Describe how the needs of organisms at the cellular level for food, air, and waste removal are met by tissues and organs (e.g., lungs provide oxygen to cells, kidneys remove wastes from cells).	**Student Edition:** 45, 523-529, 540-545, 550-551, 556-557, 568-572, 577-579 **Teacher Wraparound Edition:** AR 542; CFU 529; TTPK 568; VL 578		
STANDARD IV: Students will understand that offspring inherit traits that make them more or less suitable to survive in the environment.				
Percentage of coverage in the *student and teacher edition* for Standard IV:_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard IV: _____%**		
Objective 4.1: Compare how sexual and asexual reproduction passes genetic information from parent to offspring.				
a.	Distinguish between inherited and acquired traits.	Can be incorporated into the following: **Student Edition:** 126, 132, 458-461 *Chapter Review* 149 (#21) **Teacher Wraparound Edition:** TTPK 126		
b.	Contrast the exchange of genetic information in sexual and asexual reproduction (e.g., number of parents, variation of genetic material).	**Student Edition:** 101-102, 104-105 *Caption Question* 105 *Section Review* 109 (#1, #4) **Teacher Wraparound Edition:** CC 105; LD 100		

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* ✓
c.	Cite examples of organisms that reproduce sexually (e.g., rats, mosquitoes, salmon, sunflowers) and those that reproduce asexually (e.g., hydra, planaria, bacteria, fungi, cuttings from house plants).	**Student Edition:** 101-102, 188, 210, 223, 272-274, 341 *MiniLab* 273 *Section Review* 191 (#3) **Teacher Wraparound Edition:** AS 273; IL 102; LD 100; TTPK 272		
d.	Compare inherited structural traits of offspring and their parents.	**Student Edition:** 127-128, 134-136, 139 *Caption Question* 134-135 *Chapter Review* 149 (#25) *National Geographic* 129 *Section Review* 140 (#7) **Teacher Wraparound Edition:** TTPK 126, 134		
Objective 4.2: Relate the adaptability of organisms in an environment to their inherited traits and structures.				
a.	Predict why certain traits (e.g., structure of teeth, body structure, coloration) are more likely to offer an advantage for survival of an organism.	**Student Edition:** 158, 332-333 *Lab* 162 *MiniLab* 171, 332, 410, 748 *Section Review* 161 (#5), 751 (#6) **Teacher Wraparound Edition:** LD 748		
b.	Cite examples of traits that provide an advantage for survival in one environment but not other environments.	**Student Edition:** 158 *Lab* 162 *Section Review* 161 (#5), 751 (#6) **Teacher Wraparound Edition:** AS 162; LD 748		

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* ✓
c.	Cite examples of changes in genetic traits due to natural and manmade influences (e.g., mimicry in insects, plant hybridization to develop a specific trait, breeding of dairy cows to produce more milk).	**Student Edition:** 140, 141-143, 159 *Chapter Review* 149 (#24) *Integrate Environment* 142 *Section Review* 143 (#4) *Time: Science and Society* 294 **Teacher Wraparound Edition:** CDIV 142; DIF 139; TFYI 142; TTPK 141 **Student Edition:** (G) 157-158 *Lab* 169		
d.	Relate the structure of organs to an organism's ability to survive in a specific environment (e.g., hollow bird bones allow them to fly in air, hollow structure of hair insulates animals from hot or cold, dense root structure allows plants to grow in compact soil, fish fins aid fish in moving in water).	**Student Edition:** 403, 429-431, 437-438 *Lab* 398 *MiniLab* 403, 410, 430, 438, 748 **Teacher Wraparound Edition:** LD 748		

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* ✓
STANDARD V: Students will understand that structure is used to develop classification systems.				
Percentage of coverage in the *student and teacher edition* for Standard V:_____ %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard V: _____%**		
Objective 5.1: Classify based on observable properties.				
a.	Categorize nonliving objects based on external structures (e.g., hard, soft).	**Student Edition:** *Section Review* 26 (#5) **Teacher Wraparound Edition:** IL 23; TTPK 22 **Student Edition:** (G) *Lab* 113 (K) *Lab* 77, 117 **Teacher Wraparound Edition:** (F) A 18; AIL 26; DI 42 (K) CU 23		
b.	Compare living, once living, and nonliving things.	**Student Edition:** *Lab* 46, 221 *Lab: Design Your Own* 56-57 *Lab: Model and Invent* 230-231 *Lab: Use the Internet* 502-503 **Teacher Wraparound Edition:** DIF 15; IL 23 **Student Edition:** (G) *Lab* 113 (K) *Lab* 77, 117		

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* ✓
c.	Defend the importance of observation in scientific classification.	The following page references can be incorporated to meet this standard. **Student Edition:** 22-23, 26 *Lab* 27, 261 *Lab: Design Your Own* 56-57 *Lab: Model and Invent* 230-231 **Teacher Wraparound Edition:** AC 26; AS 27; IL 23; TTPK 11 **Student Edition:** (G) *Lab* 113 (K) *Lab* 77		
d.	Demonstrate that there are many ways to classify things.	**Student Edition:** *Lab* 27 *Lab: Model and Invent* 230-231 *Launch Lab* 5 *Section Review* 26 (#5) **Teacher Wraparound Edition:** AS 27; CYD 27 **Student Edition:** (K) *Lab* 77 **Teacher Wraparound Edition:** (F) AIL 26		

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* ✓
Objective 5.2: Use and develop a simple classification system.				
a.	Using a provided classification scheme, classify things (e.g., shells, leaves, rocks, bones, fossils, weather, clouds, stars, planets).	**Student Edition:** 26 *Lab* 261 **Teacher Wraparound Edition:** AC 26 **Student Edition:** (F) *Lab* 56-57 (G) *Lab* 113 (K) 22-23 *Lab* 24 **Teacher Wraparound Edition:** (K) A 23		
b.	Develop a classification system based on observed structural characteristics.	**Student Edition:** *Lab* 27 *Lab: Model and Invent* 230-231 *Launch Lab* 5 *Section Review* 26 (#5) **Teacher Wraparound Edition:** AS 27; IL 23; MAM 25; TTPK 22 **Student Edition:** (K) *Lab* 77 **Teacher Wraparound Edition:** (F) AIL 56		

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* ✓
c.	Generalize rules for classification.	The following page references can be incorporated to meet this standard. **Student Edition:** *Launch Lab* 5 *Science Skill Handbook* 809 *Section Review* 26 (#5) *Standardized Test Practice* 35 (#22) **Teacher Wraparound Edition:** AS 5, 27; CC 24; TTPK 22		
d.	Relate the importance of classification systems to the development of science knowledge.	The following page references can be incorporated to meet this standard. **Student Edition:** 22-23 *Science Skill Handbook* 809 *Section Review* 26 (#1) **Student Edition:** (F) *Lab* 56-57 (K) 19		

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* ✓
e.	Recognize that classification is a tool made by science to describe perceived patterns in nature.	**Student Edition:** 22-23 *Lab* 27 *Lab: Model and Invent* 230-231 *Launch Lab* 5 *Science Skill Handbook* 809 **Teacher Wraparound Edition:** TTPK 22 **Student Edition:** (G) *Lab* 113 (K) 19 *Lab* 117 **Teacher Wraparound Edition:** (K) ACT 20; TFYI 20		
Objective 5.3: Classify organisms using an orderly pattern based upon structure.				
a.	Identify types of organisms that are not classified as either plant or animal.	**Student Edition:** 186-191, 210-220, 222-226 *Lab* 192, 221 *Launch Lab* 209 *MiniLab* 218 **Teacher Wraparound Edition:** TTPK 186, 210, 222		
b.	Arrange organisms according to kingdom (i.e., plant, animal, monera, fungi, protist).	The following page references can be incorporated to meet this standard. **Student Edition:** 23, 189, 211, 240-241, 331 *Reference Handbook* 848-851 **Teacher Wraparound Edition:** TTPK 222, 330		

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* ✓
c.	Use a classification key or field guide to identify organisms.	**Student Edition:** 26 *Lab* 27, 261 *Lab: Model and Invent* 230-231 **Teacher Wraparound Edition:** AC 26; AS 261; IL 23		
d.	Report on changes in classification systems as a result of new information or technology.	**Student Edition:** 22-23, 169, 172-173, 211 *Science Online* 23 **Teacher Wraparound Edition:** DI 223; TFYI 24, 167		