

## Textbook Alignment to the Utah 5<sup>th</sup> Grade Science Core Curriculum Rubric

<b>Title</b> _____ <b>ISBN#</b> _____			
<b>Publisher:</b> _____			
<b>Name of Person(s) conducting alignment and evaluation:</b> _____			
<b>Overall percentage of coverage of the Utah State Core Curriculum:</b> _____%			
<b>Standard I: Students will understand that chemical and physical changes occur in matter.</b>			
<b>Percentage of coverage for Standard I:</b> %			
Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
<b>Objective 1.1: Describe that matter is neither created nor destroyed even though it may undergo change.</b>	a. Compare the total weight of an object to the weight of its individual parts after being disassembled.		
	b. Compare the weight of a specified quantity of matter before and after it undergoes melting or freezing.		
	c. Investigate the results of the combined weights of a liquid and a solid after the solid had been dissolved and then recovered from the		

	liquid (e.g., salt dissolved in water then water evaporated).		
	d. Investigate chemical reactions in which the total weight of the materials before and after reaction is the same (e.g., cream and vinegar before and after mixing, borax and glue mixed to make a new substance).		
<b>Objective 1.2: Evaluate evidence that indicates a physical change has occurred.</b>	a. Identify the physical properties of matter (e.g., hard, soft, solid, liquid, gas).		
	b. Compare changes in substances that indicate a physical change has occurred.		
	c. Describe the appearance of a substance before and after a physical change.		
<b>Objective 1.3: Investigate evidence for changes in matter that occur during a chemical reaction.</b>	a. Identify observable evidence of a chemical reaction (e.g., color change, heat or light given off, heat absorbed, gas given off).		
	b. Explain why the measured weight of a remaining product is less than its reactants when a gas is produced.		
	c. Cite examples of chemical reactions in daily		

	life.		
	d. Compare a physical change to a chemical change.		
	e. Hypothesize how changing one of the materials in a chemical reaction will change the results.		
<b>Standard II: Students will understand that volcanoes, earthquakes, uplift, weathering, and erosion shape Earth's surface.</b>			
<b>Percentage of coverage for Standard II:   %</b>			
<b>Objectives</b>	<b>Indicators</b>	<b>If covered, appropriate page #'s</b>	<b>Comments on coverage</b>
<b>Objective 2.1: Describe how weathering and erosion change Earth's surface.</b>	a. Identify the objects, processes, or forces that weather and erode Earth's surface (e.g., ice, plants, animals, abrasion, gravity, water, wind).		
	b. Describe how geological features (e.g., valleys, canyons, buttes, arches) are changed through erosion (e.g., waves, wind, glaciers, gravity, running water).		
	c. Explain the relationship between time and specific geological changes.		
<b>Objective 2.2: Explain how volcanoes, earthquakes, and uplift affect Earth's surface.</b>	a. Identify specific geological features created by volcanoes, earthquakes, and uplift.		
	b. Give examples of		

	different landforms that are formed by volcanoes, earthquakes, and uplift (e.g., mountains, valleys, new lakes, canyons).		
	c. Describe how volcanoes, earthquakes, and uplift change landforms.		
	d. Cite examples of how technology is used to predict volcanoes and earthquakes.		
<b>Objective 2.3: Relate the building up and breaking down of Earth's surface over time to the various physical land features.</b>	a. Explain how layers of exposed rock, such as those observed in the Grand Canyon, are the result of natural processes acting over long periods of time.		
	b. Describe the role of deposition in the processes that change Earth's surface.		
	c. Use a time line to identify the sequence and time required for building and breaking down of geologic features on Earth.		
	d. Describe and justify how the surface of Earth would appear if there were no mountain uplift, weathering, or erosion.		
<b>Standard III: Students will understand that magnetism can be observed when there is an interaction between the magnetic fields of magnets or between a magnet and materials made of iron.</b>			
<b>Percentage of coverage for Standard III:    %</b>			

Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
<b>Objective 3.1: Investigate and compare the behavior of magnetism using magnets.</b>	a. Compare various types of magnets (e.g., permanent, temporary, and natural magnets) and their abilities to push or pull iron objects they are not touching.		
	b. Investigate how magnets will both attract and repel other magnets.		
	c. Compare permanent magnets and electromagnets.		
	d. Research and report the use of magnets that is supported by sound scientific principles.		
<b>Objective 3.2: Describe how the magnetic field of Earth and a magnet are similar.</b>	a. Compare the magnetic fields of various types of magnets (e.g., bar magnet, disk magnet, horseshoe magnet).		
	b. Compare Earth's magnetic field to the magnetic field of a magnet.		
	c. Construct a compass and explain how it works.		
	d. Investigate the effects of magnets on the needle of a compass and compare this to the effects of Earth's magnetic field on the needle of a compass (e.g., magnets		

	effect the needle only at close distances, Earth's magnetic field affects the needle at great distances, magnets close to a compass overrides the Earth's effect on the needle).		
<b>Standard IV: Students will understand features of static and current electricity.</b>			
<b>Percentage of coverage for Standard IV:    %</b>			
<b>Objectives</b>	<b>Indicators</b>	<b>If covered, appropriate page #'s</b>	<b>Comments on coverage</b>
<b>Objective 4.1: Describe the behavior of static electricity as observed in nature and everyday occurrences.</b>	a. List several occurrences of static electricity that happen in everyday life.		
	b. Describe the relationship between static electricity and lightning.		
	c. Describe the behavior of objects charged with static electricity in attracting or repelling without touching.		
	d. Compare the amount of static charge produced by rubbing various materials together (e.g., rubbing fur on glass rod produces a greater charge than rubbing the fur with a metal rod, the static charge produced when a balloon is rubbed on hair is greater than when a plastic bag is rubbed on hair).		

	e. Investigate how various materials react differently to statically charged objects.		
<b>Objective 4.2: Analyze the behavior of current electricity.</b>	a. Draw and label the components of a complete electrical circuit that includes switches and loads (e.g., light bulb, bell, speaker, motor).		
	b. Predict the effect of changing one or more of the components (e.g., battery, load, wires) in an electric unit.		
	c. Generalize the properties of materials that carry the flow of electricity using data by testing different materials.		
	d. Investigate materials that prevent the flow of electricity.		
	e. Make a working model of a complete circuit using a power source, switch, bell or light, and a conductor for a pathway.		
<b>Standard V: Students will understand that traits are passed from the parent organisms to their offspring, and that sometimes the offspring may possess variations of these traits that may help or hinder survival in a given environment.</b>			
<b>Percentage of coverage for Standard V:    %</b>			
<b>Objectives</b>	<b>Indicators</b>	<b>If covered, appropriate page #'s</b>	<b>Comments on coverage</b>
<b>Objective 5.1: Using</b>	a. Make a chart and collect		

<b>supporting evidence, show that traits are transferred from a parent organism to its offspring.</b>	data identifying various traits among a given population (e.g., the hand span of students in the classroom, the color and texture of different apples, the number of petals of a given flower).		
	b. Identify similar physical traits of a parent organism and its offspring (e.g., tress and saplings, leopards and cubs, chickens and chicks).		
	c. Compare various examples of offspring that do not initially resemble the parent organism but mature to become similar to the parent organism (e.g., mealworms and darkling beetles, tadpoles and frogs, seedlings and vegetables, caterpillars and butterflies).		
	d. Contrast inherited traits and behaviors that are not inherited but may be learned or induced by environmental factors (e.g., cat purring to cat meowing to be let out of the house; the round shape of a willow is inherited, while leaning away from the prevailing wind is induced).		
	e. Investigate variations and		

	similarities in plants grown from seeds of a parent plant (e.g., how seeds from the same plant species can produce different colored flowers or identical flowers).		
<b>Objective 5.2: Describe how some characteristics could give a species a survival advantage in a particular environment.</b>	a. Compare the traits of similar species for physical abilities, instinctual behaviors, and specialized body structures that increase the survival of one species in a specific environment over another species (e.g., difference between the feet of snowshoe hare and cottontail rabbit, differences in leaves of plants growing at different altitudes, differences between the feathers of an owl and a hummingbird, differences in parental behavior among various fish).		
	b. Identify that some environments give one species a survival advantage over another (e.g., warm water favors fish such as carp, cold water favors fish such as trout, environments that burn regularly favor grasses, environments that do not often burn favor		

	trees).		
	c. Describe how a particular physical attribute may provide an advantage for survival in one environment but not another (e.g., heavy fur in arctic climates keep animals warm whereas in hot desert climates it would cause overheating; flippers on such animals as sea lions and seals provide excellent swimming structures in the water but become clumsy and awkward on land; cacti retain the right amount water in arid regions but would develop root rot in a more temperate region; fish gills have the ability to absorb oxygen in water but not on land).		
	d. Research a specific plant or animal and report how specific physical attributes provide an advantage for survival in a specific environment.		

### General Rubric

Review Category	High Quality - 3	2	1	0	NA	Comments
<b>Curriculum Content Coverage</b>						
Content matches the	80% of the Utah	70% of the Utah	50% of the Utah	Less than 50% of		

standards and objectives of the Utah Core Curriculum.	Core and objectives are covered. Objectives are clearly stated with measurable outcomes.	Core and objectives are covered. Objectives are clearly stated with measurable outcomes.	Core and objectives are covered.	the Utah Core and objectives are covered		
Content is delivered in an appropriate sequence.	80% of the program content is covered in an appropriate sequence matching the Utah Core.	70% of the program content is covered in an appropriate sequence matching the Utah Core.	50% of the program content is covered in an appropriate sequence matching the Utah Core.	Less than 50% of the program content is covered in an appropriate sequence matching the Utah Core.		
Content is covered with appropriate depth.	The program provides 80% or more of the necessary depth needed for appropriate instruction.	The program provides 70% or less of the necessary depth needed for appropriate instruction.	The program provides 50% or less of the necessary depth needed for appropriate instruction.	The program lacks the necessary depth needed for appropriate instruction.		
Content endorses sound research-based practices.	The program utilizes 80% or more of current research-based practices.	The program utilizes 70% or less of current research-based practices.	The program utilizes 50% or less of current research-based practices.	The program does not utilize current research-based practices.		
Content is presented accurately and in an age-appropriate manner.	Materials reflect current content knowledge without content bias. Materials utilize cross-curricular references and experiences. Materials are age appropriate.	Materials have some content inaccuracies, but do not show content bias. Materials utilize some cross-curricular references. Materials are 70% age appropriate	Materials show many content inaccuracies and some content bias. Materials have very limited cross curricular references. Materials are approximately 50% age appropriate.	Materials have major content inaccuracies. Materials have no cross curricular references. Materials are not age appropriate.		

Content is engaging to the student.	80% or more of the materials and activities are interesting and engaging to the student promoting purposeful learning.	Less than 80% of the materials and activities are interesting and engaging to the student promoting purposeful learning.	50% or less of the materials and activities are interesting and engaging to the student promoting purposeful learning.	Very little, if any, of the materials and activities are interesting and engaging to the student promoting purposeful learning.		
Content is differentiated to meet different abilities and needs.	There are appropriate accommodations for various developmental levels acknowledging prerequisite skills and knowledge.	70% of the program provides appropriate accommodations for various developmental levels acknowledging prerequisite skills and knowledge.	50% of the program provides appropriate accommodations for various developmental levels acknowledging prerequisite skills and knowledge.	There are few or no appropriate accommodations for various developmental levels with little acknowledgment of needed prerequisite skills and knowledge.		
<b>Review Category</b> <b>Physical Qualities</b>	High Quality - 3	2	1	0	NA	Comments
Student materials provide appropriate print, illustrations and text features.	Student materials provide appropriate use of font, illustrations and text features, (e.g., illustrations, graphs, tables).	70% of the student material provides appropriate use of font, illustrations and text features, (e.g., illustrations, graphs, tables).	50% of the student material provides appropriate use of font, illustrations and text features, (e.g., illustrations, graphs, tables).	The student materials lack appropriate use of font, illustrations, and text features, (e.g., illustrations, graphs, tables).		
Student materials provide table of contents, glossary, index, and etc.	Student materials provide necessary table of contents, indices, glossaries, and other references to assist and guide students, parents, and teachers.	Student materials provide some table of contents, indices, glossaries, and other references to assist and guide students, parents, and teachers.	Student materials provide a limited amount of table of contents, indices, glossaries, and other references to assist and guide students, parents, and teachers.	Student materials provide very little, if any, table of contents, indices, glossaries, and other references to assist and guide students, parents, and teachers.		
Student materials are durable.	Student materials are securely bound	Student materials are adequately	Student materials have secure bindings.	Student materials have inferior		

	and reinforced.	hardbound.		bindings.		
Teacher materials are easy to use.	Teacher materials are well organized with easy to read font and good correlation with student materials.	Teacher materials are organized with easy to read font, and follow correlation with student materials.	Teacher materials are somewhat organized with hard to read font and layout. Materials provide difficult to follow correlation with student materials.	Materials are disorganized with hard to read font for teachers. Layout provides little or no correlation to student materials.		
Teacher material is durable.	Teacher materials are securely bound and reinforced while staying open and flat for teaching.	Teacher materials are adequately hardbound while staying open and flat for teaching	Teacher materials have secure bindings but do not open and lay flat to facilitate teaching.	Teacher materials have inferior bindings but do lay flat to facilitate teaching.		
<b>Review Category Technology Qualities</b>	High Quality - 3	2	1	0	NA	Comments
Technology provided is user friendly.	Program provides menus that are easy to read and follow. Program is user-friendly to install and requires a minimal level of computer expertise. Manuals and directions are understandable.	Program provides menus that are generally easy to read and follow. Installation requires little computer expertise. Manuals and directions are simple to understand.	Program menus are easy to read. Manuals might have to be read in detail to understand operation of technology, (e.g., laser remote, software). Installation might require some knowledge or expertise. Manuals are included.	Menus are not descriptive and hard to follow. Installation requires expertise. No manuals or written instructional materials are provided.		
Technology provided enhances the learning experience.	Technology provided is appropriate giving additional support for student learning.	Technology provided is appropriate giving some additional support for student learning.	Limited technology is provided giving little support for student learning.	No technology is provided.		

Technology has quality audio/visual attributes.	Program provides high quality audio and visual effects.	Program provides good audio and visual effects.	Program audio and visual effects are of poor quality.	No technology is available.		
<b>Review Category Ancillary Materials</b>	High Quality - 3	2	1	0	NA	Comments
Student ancillary materials provide appropriate supplemental instruction.	Program provides high quality student ancillary materials that enhance and supplement the delivery of instruction.	Program provides adequate student ancillary materials to enhance and supplement the delivery of instruction.	Program provides some student ancillary materials that are of limited value to supplement and enhance the delivery of instruction.	The program provides no student ancillary materials or student ancillary materials are of such poor quality and have little correlation to learning objectives that they are of no value.		
Student ancillary materials are easy to access and utilize.	Student ancillary materials are easy to access, are durable and easy to utilize.	Student ancillary materials are easy to access, are somewhat durable requiring some modification to utilize.	Student ancillary materials are difficult to access and require modification to utilize.	Student ancillary materials are of such poor quality or difficult to prepare or access that they are of little or no value.		
Parent ancillary materials are appropriate and support desired student learning	Parent ancillary materials are appropriate providing good support for desired student learning through home activities, homework, and practice opportunities.	Parent ancillary materials are appropriate providing adequate support for desired student learning through a variety of opportunities and activities.	Parent ancillary materials are not always appropriate nor do they provide adequate support through a variety of opportunities for student learning.	There are no parent ancillary materials available.		
<b>Review Category Assessment Materials</b>	High Quality - 3	2	1	0	NA	Comments

A variety of assessment options are provided.	Program provides multiple assessment measures to monitor individual student progress at regular intervals.	Program provides some assessment measures to monitor individual student progress at regular intervals.	Program provides limited assessment measures to monitor individual student progress at regular intervals.	Program provides no assessment measures or measures are of such poor quality or correlation to student learning to be of any value.		
Assessment tools are appropriate to inform instruction and are aligned with the program, the Utah Core curriculum, and U-PASS.	Assessment tools are appropriate to inform the major areas of instruction and are aligned with the program and the Utah Core curriculum and U-PASS.	Assessment tools are appropriate to inform some areas of the instructional program and are adequately aligned with the program and the Utah Core curriculum and U-PASS.	Assessment tools are appropriate to inform limited areas of the instructional program and are poorly aligned with the program and the Utah Core curriculum and U-PASS.	Assessment tools are not appropriate to inform areas of the instructional program and are not aligned with the program and the Utah Core curriculum and U-PASS.		

Assessment tools are easily accessible and utilized.	Assessment tools are easily accessible with a limited amount of training or expertise.	Assessment tools are accessible with some amount of training or expertise needed.	Assessment tools are difficult to access and require extensive training.	Assessment tools are not accessible.		
<b>Category Universal Access</b>	High Quality - 3	2	1	0	NA	Comments
Program content accurately reflects diverse populations.	Program provides ways to adapt curriculum for all students, (e.g., special learning needs, learning disabilities, ELL, and advanced learners).	Program provides some ways to adapt curriculum to meet special learning needs of students.	Program provides limited strategies to assist special learning needs of students.	Program provides no strategies to assist special learning needs of students.		
Program contents provides	Program	Program	Program	Program does not		

for the development of healthy attitudes and values.	accurately portrays and promotes understanding of cultural, racial, religious and diversity in society.	accurately portrays and promotes some understanding of cultural, racial, religious and diversity in society.	accurately portrays and promotes a limited understanding of cultural, racial, religious and diversity in society.	accurately portray or promote an understanding of cultural, racial, religious and diversity in society.		
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**I have reviewed the above program and recommend the following use: (Choose one category only.)**

- (1) Instructional materials are in alignment with content philosophy and instructional strategies of the Utah Core. Materials provide comprehensive coverage of course content and support U-PASS. Materials may be used for **primary course instruction**.
  - (2) Instructional materials provide limited alignment with the Utah Core or U-PASS or have a narrow or restricted scope and sequence. Use of these materials must be supplemented with necessary missing program elements for effective instruction. Materials may be used on a **limited basis with accompanying plan** for use with additional appropriate materials to assure coverage of core requirements.
    - Materials could be used to support primary course instruction - **Tier I** of the **Utah Model for Instruction and Intervention**.
    - Materials could be used to support intervention instruction - **Tier II** of the **Utah Model for Instruction and Intervention**.
    - Materials could be used to support intervention instruction - **Tier III** of the **Utah Model for instruction and Intervention**.
  - (3) Materials are not for student instructional use, but may only be used only as **teacher resource material**.
  - (4) Materials are aligned to the core, developmentally appropriate, may contain valuable content information, but are not intended to be used as the source for primary instruction, but **only as student resource material**.
- Materials have been reviewed, but **not adopted** because of lack of alignment, inaccurate content, misleading connotations, undesirable presentation, or are in conflict with existing law and rules, or otherwise unsuitable for use by students. **School districts are strongly cautioned against using these materials.** Materials were included in the publisher bid, but **not sampled** to the USOE or Textbook commission.
- Materials were not reviewed**, but may be purchased in accordance with the law and Rule **277-469-6**: Advanced placement materials, International materials, concurrent enrollment materials, library or trade books, reference materials, teacher professional materials which are not components of an integrated instructional program. Galley proofs or unfinished copies are not reviewed.

Evaluator Signature: \_\_\_\_\_

Date: \_\_\_\_\_