Science 5

PLD Type	Objective	Below Proficient	Approaching Proficient	Proficient	Highly Proficient
Policy		The Level 1 student is below proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly below the standard for the grade-level/course, is likely able to partially access grade level content and engages with higher order thinking skills with extensive support.	The Level 2 student is approaching proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards**.** The student generally performs slightly below the standard for the grade level/course, is able to access grade-level content and engages in higher order thinking skills with some independence and support.	The Level 3 student is proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs at the standard for the grade level/course, is able to access grade-level content, and engages in higher order thinking skills with some independence and minimal support.	The Level 4 student is highly proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly above the standard for the grade level/course, is able to access above grade-level content, and engages in higher order thinking skills independently.
Chemical and Physical Changes					
		The Level 1 Student:	The Level 2 Student:	The Level 3 Student:	The Level 4 Student:
Range	I.1 Describe that matter is neither created nor destroyed even though it may undergo change.	Explains that matter cannot be created or destroyed but that it can be changed. Performs simple experiments that demonstrate a change in matter.	Compares the total weight of an object to the weight of its individual parts after being disassembled. Performs an experiment to compare the weight of a quantity of matter before and after melting or freezing. Performs an experiment involving chemical changes in which the total weight of the materials before and after reaction is the same.	Investigates the combined weights of a liquid and a solid after the solid has been dissolved and then recovered from the liquid. Compares weights of a substance before and after a chemical change occurs.	Forms hypotheses about changes in the weights of substances following physical or chemical changes. Designs and conducts chemical and physical experiments to test their hypotheses. Records observations, makes, and justifies predictions about the weight of substances in their investigation.
Range	I.2 Evaluate evidence that indicates a physical change has occurred.	States that the three states of matter are solid, liquid, and gas. Provides an example of each state of matter.	Lists the physical properties of each state of matter. Draws a simple diagram showing the dispersion of molecules in each state of matter.	Compares changes in substances that indicate a physical change has occurred. Describes the appearance of a substance before and after a physical change.	Creates a presentation and explains to peers the characteristics and evidence of physical changes.
Range	I.3 Investigate evidence for changes in matter that occur during a chemical reaction.	Sorts examples of physical and chemical changes in daily life into appropriate categories.	Identifies the observable evidence of a chemical reaction (temperature change, light production, give off gas, or change colors). Identifies three examples of chemical reactions in every day life.	Explains why the measured weight of the remaining products is less than the original reactants when a gas is produced in a chemical change. Compares physical changes to chemical changes. Hypothesizes how changing one of the materials in a chemical reaction will change the results.	Hypothesizes how changing one of the materials in a chemical reaction will change the results. Conducts experiments using provided reactants. Records observations of chemical reactions. Creates a presentation and explains to peers the characteristics and evidence of chemical changes.

DRAFT

Science 5

PLD Type	Objective	Below Proficient	Approaching Proficient	Proficient	Highly Proficient
Policy		The Level 1 student is below proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly below the standard for the grade-level/course, is likely able to partially access grade level content and engages with higher order thinking skills with extensive support.	The Level 2 student is approaching proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards**.** The student generally performs slightly below the standard for the grade level/course, is able to access grade-level content and engages in higher order thinking skills with some independence and support.	The Level 3 student is proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs at the standard for the grade level/course, is able to access grade-level content, and engages in higher order thinking skills with some independence and minimal support.	The Level 4 student is highly proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly above the standard for the grade level/course, is able to access above grade-level content, and engages in higher order thinking skills independently.
Processes that Reshape Earth's Surface					
		The Level 1 Student:	The Level 2 Student:	The Level 3 Student:	The Level 4 Student:
Range	II.1 Describe how weathering and erosion change Earth's surface.	Given a picture and list of options, identifies which geologic changes occur quickly and which occur slowly. Recognizes geological features that are changed by weathering and erosion.	Describes how earthquakes, landslides, and volcanoes change Earth's surface quickly. Identifies objects, processes, and forces that weather and erode Earth's surface. Explains how canyons may be formed by streams, rivers, or glaciers.	Explains how weathering and erosion create a variety of geological features on Earth's surface, such as valleys, canyons, buttes, and arches. Using supporting evidence, describes which objects, processes, and forces formed specific geological features.	Analyzes the relationship between time and geological features. Predicts the future appearance of landscapes based on patterns of weathering and erosion evident in the area.
Range	II.2 Explain how volcanoes, earthquakes, and uplift affect Earth's surface.	Given a list of options, identifies which geologic features are created by volcanoes, earthquakes, and uplift. Identifies examples of how technology can predict volcanoes and earthquakes.	Identifies that volcanoes create islands, craters, and domes; earthquakes create faults and valleys; and uplift creates mountains and canyons.	Identifies, gives examples, and describes how volcanoes, earthquakes, and uplift change landforms. Explains that scientists use technology to predict earthquakes and volcanic activity. Distinguishes which geologic features are formed by which processes.	Predicts the future appearance of landscapes based on evidence from earthquake faults and volcanic activity. Explains how scientists use technology to predict earthquake and volcanic activity and evaluates the accuracy of predictions based on data. Uses physical evidence to explain why a geologic feature was formed in a certain way.

DRAFT

Science 5

PLD Type	Objective	Below Proficient	Approaching Proficient	Proficient	Highly Proficient
Policy		The Level 1 student is below proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly below the standard for the grade-level/course, is likely able to partially access grade level content and engages with higher order thinking skills with extensive support.	The Level 2 student is approaching proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards**.** The student generally performs slightly below the standard for the grade level/course, is able to access grade-level content and engages in higher order thinking skills with some independence and support.	The Level 3 student is proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs at the standard for the grade level/course, is able to access grade-level content, and engages in higher order thinking skills with some independence and minimal support.	The Level 4 student is highly proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly above the standard for the grade level/course, is able to access above grade-level content, and engages in higher order thinking skills independently.
Range	II.3 Relate the building up and breaking down of Earth's surface over time to the various physical land features.	Identifies which natural processes erode rock over long periods of time. Identifies which land features are created over long periods of time.	Uses a provided time line with visual representations to sort the sequence and time required for building and breaking down of geologic features. Identifies that deposition fills bodies of water with sediment.	Explains how layers of exposed rock are the result of natural processes acting over long periods of time. Describes the role of deposition in changing Earth's surface. Predicts how the Earth's surface would appear if there were no mountain uplift, weathering, or erosion.	Analyzes layers of exposed rock to predict the relative ages of different layers. Independently creates a time line depicting the formation of a specified geologic features. Describes positive and negative effects to Earth's surface of deposition.
Magnetism					
		The Level 1 Student:	The Level 2 Student:	The Level 3 Student:	The Level 4 Student:
Range	III.1 Investigate and compare the behavior of magnetism using magnets.	With support, experiments with: permanent, temporary and electromagnets. Identifies the differences and similarities of each type.	Defines "attract" and "repel". Investigates magnets' abilities to push or pull iron objects they are not touching. Creates diagrams of magnets showing attraction and repulsion. Labels poles appropriately .	Compares and contrasts permanent, temporary and electromagnets. Investigates how magnets will both attract and repel other magnets. Compares permanent magnets and electromagnets.	Describes historic and modern real world uses of magnets. Distinguishes uses of magnets that are supported by sound scientific principles.
Range	III.2 Describe how the magnetic field of Earth and a magnet are similar.	Creates a simple diagram of the Earth and its magnetic field. Explains key features of their diagram. Uses a compass and observes that it always points North. Explains why a compass needle points north.	Experiments with, diagrams, and labels the magnetic field of various types of magnets. Builds a simple compass and observes that it always points north. Investigates the effects of magnets on the needle of a compass.	Compares and contrasts the magnetic fields of various types of magnets. Compares Earth's magnetic field to the magnetic field of various types of magnet. Constructs a compass and explains how it works. Explains the effects of magnets on the needle of a compass and compares this to the effects of Earth's magnetic field on the needle of a compass.	Investigates how the strength of a magnet as varies with distance from the magnet. Independently performs investigations using different materials to make a compass. Explains why some materials are suitable for use as a compass needle.

DRAFT

Science 5

PLD Type	Objective	Below Proficient	Approaching Proficient	Proficient	Highly Proficient
Policy		The Level 1 student is below proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly below the standard for the grade-level/course, is likely able to partially access grade level content and engages with higher order thinking skills with extensive support.	The Level 2 student is approaching proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards**.** The student generally performs slightly below the standard for the grade level/course, is able to access grade-level content and engages in higher order thinking skills with some independence and support.	The Level 3 student is proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs at the standard for the grade level/course, is able to access grade-level content, and engages in higher order thinking skills with some independence and minimal support.	The Level 4 student is highly proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly above the standard for the grade level/course, is able to access above grade-level content, and engages in higher order thinking skills independently.
Electricity					
		The Level 1 Student:	The Level 2 Student:	The Level 3 Student:	The Level 4 Student:
Range	IV.1 Describe the behavior of static electricity as observed in nature and everyday occurrences.	Defines static electricity as stationary electricity. Describes evidence of static electricity in every day life and conducts simple investigations involving static electricity.	Lists several examples of static electricity found in everyday life. Identifies lightning is an example of static electricity found in nature. Describes various ways that static electricity can be producced.	Describes the relationship between static electricity and lightning. Describes the behavior of charged objects to attract or repel without touching. Compares the amount of static charge produced by rubbing various materials together. Investigates how various materials react differently to statically charged objects.	Predicts how various materials will react to statically charged objects, performs the experiment, and compares their predictions to the outcome of the experiment.
Range	IV.2 Analyze the behavior of current electricity.	Identifies a complete circuit. Recognizes that some materials conduct electricity and some do not.	Diagrams and labels a complete electrical circuit. Identifies materials that conduct electricity and materials that do not conduct electricity.	Uses provided supplies to create a complete electrical circuit including a switch and a load. Predicts the effect of changing one or more compenent in an electric circuit. Investigates properties of materials that conduct the flow of electricity and materials that insulate the flow of elecricity.	Troubleshoots problems with an electrical circuit and determines a solution to make it a working circuit. Predicts the effect of changing one or more of the components in an electric circuit, and explains reasons for these changes.
Inherited Traits					
		The Level 1 Student:	The Level 2 Student:	The Level 3 Student:	The Level 4 Student:

DRAFT

Science 5

PLD Type	Objective	Below Proficient	Approaching Proficient	Proficient	Highly Proficient
Policy		The Level 1 student is below proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly below the standard for the grade-level/course, is likely able to partially access grade level content and engages with higher order thinking skills with extensive support.	The Level 2 student is approaching proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards**.** The student generally performs slightly below the standard for the grade level/course, is able to access grade-level content and engages in higher order thinking skills with some independence and support.	The Level 3 student is proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs at the standard for the grade level/course, is able to access grade-level content, and engages in higher order thinking skills with some independence and minimal support.	The Level 4 student is highly proficient in applying the English language arts/literacy, mathematics, and science knowledge/skills as specified in the Utah Core State Standards. The student generally performs significantly above the standard for the grade level/course, is able to access above grade-level content, and engages in higher order thinking skills independently.
Range	V.1 Using supporting evidence, show that traits are transferred from a parent organism to its offspring.	Sorts like organisms by their physical traits. Identifies similar traits of parent and offspring. Recognizes that some organisms do not initally resemble their parent.	Retrieves data on a chart showing traits among a given population. Identifies similar traits of parent and offspring. Identifies examples of offspring that don't initally resemble their parent. Recognizes that some traits are inherited and some behaviors are learned or induced by environmental factors. Recognizes that seeds grown from the same parent plant may produce plants that do not appear identical.	Collects data and charts traits of given populations. Identifies similar traits of parent and offspring. Compares various examples of offspring that don't resemble parents but grow to resemble parents. Contrasts inherited traits with learned or induced by environmental factors. Investigates variations and similarities in plants grown from seeds of parent plants	Collects data and charts traits of given populations identifying the potential implications of these findings. Compares life cycles of organisms whose offspring don't initally resemble parents but grow to resemble parents. Designs an investigation to learn whether a given trait is determined by heredity, learned, or induced by environmental factors. Creates an investigation that demonstrates variations and similarities in plants grown from seeds of parent plants.
Range	V.2 Describe how some characteristics could give a species a survival advantage in a particular environment.	Identifies traits that allow an organism to survive in its habitat. Identifies environmental differences that may affect organisms' survival. Identifies traits of a specific organism.	Identifies traits of similar species for physical abilities and specialized body structures that increase the survival of one species in a specific environment over another species. Describes how a particular physical attribute may provide an advantage for survival in one environmenbt but not in another. Discusses survival traits of a specific plant or animal.	Compares the traits of similar species for instinctual behaviors that increase the survival of one species in a specific environment over another species. Explains how some environments give one species a survival advantage over another. Describes how a particular physical attribute may provide an advantage for survival in one environment but not in another environment.	Synthesizes understanding of physical abilities, instinctual behaviors and specialized body structures to create a theoretical organism well adapted to a given environment. Analyzes the physical attributes of an organism to determine the environment for which it is best suited.

DRAFT