WORKING DRAFT

Idaho Extended Content Standards Alignment in Science

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INTRODUCTION

All Idaho students, including students with disabilities, are required to participate in the Idaho Standards Achievement Test (ISAT). Students with disabilities can participate in the ISAT in one of three ways. They may take the ISAT without accommodations, the ISAT with accommodations, or the Idaho Alternate Assessment (IDAA). The IDAA is available to students with the most significant cognitive impairments (SCI), representing about 1.0% of the total student population. Student with SCI must meet four participation criteria to qualify for the IDAA, as determined by the Individualized Education Program (IEP) team. The Idaho Extended Content Standards (ECS) serve as instructional standards for students who qualify for the IDAA. The ECS are aligned with the Idaho Content Standards (ICS), but have been reduced in depth, breadth, and complexity.

The current ECS in Science were adopted in 2018. Between January and April 2023, they underwent a review to ensure appropriate alignment with the ICS. The current ECS in Science do not include kindergarten through grade 2. With permission of the Wyoming Department of Education, Idaho SDE staff included 2018 Wyoming Science Extended Content and Performance Standards for kindergarten through grade 2 as a starting point for the Idaho ECS alignment science review committees. The alignment review also included an examination of appropriate reductions in depth, breadth, and complexity, as would be appropriate for students with the most SCI. Forty-six educational partners served on the alignment review committees for English Language Arts/Literacy, Mathematics, and Science representing parents, community members, general and special educators, and administrators.

DOCUMENT STRUCTURE

The structure of the current ECS has become obsolete because of organizational changes made to the ICS adopted in 2022. Therefore, the existing ECS document will be completely replaced. Described below are global changes that will not appear in this red-lined document, nor the proposed ECS document.

- The term Core Content Connectors (CCC), which was included in the title and used to refer to the individual standards in the current ECS, has been removed to mirror language in the ICS.
- The number convention for the proposed ECS has been revised to correspond with the numbering conventions used in the 2022 Idaho Content Standards, with ".ECS" added to the end of each standard number. At a minimum, the numbering convention for all retained and revised ECS has changed.
    - As mentioned above, the ECS do not cover the full breadth of the ICS. In other words, there are not as many ECS as there are ICS. In this document, you will notice ICS that do not have corresponding ECS as would be expected. In the proposed document, the numbering of the ECS will have gaps.

This document is intended to illustrate the process the committee followed to review the current ECS and propose revisions to alignment to the ICS and appropriate reductions to depth, breadth, and complexity. To illustrate the changes to the current ECS, the proposed revisions to the current ECS appear as follows:

- Retained text appears in black text.
- Deleted text appears in ~~red, strikethrough~~ text.
- Changed text appears in blue text. [not sure which blue color to use here.]

The proposed revisions to the current ECS are organized into tables with four columns with one row per standard, as illustrated below.

Table 1: Organization of Proposed Revisions to ECS

Idaho Content Standards (ICS)	Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
This column contains the ICS	This column contains the current ECS. In some cases, there are several ECS for a single ICS.	This column contains the red-lined proposed revisions	This column contains the committee's rationale for the proposed revisions.

ABBREVIATIONS

- CCC: Core Content Connectors
- CCRA: College and Career Readiness Anchor
- ECS: Idaho Extended Content Standards
- ELA/L: English Language Arts/Literacy
- ICS: Idaho Content Standards
- IDAA: Idaho Alternate Assessment
- IEP: Individualized Education Program
- ISAT: Idaho Standards Achievement Test
- SCI: Significant cognitive impairment

KINDERGARTEN SCIENCE EXTENDED CONTENT STANDARDS

KINDERGARTEN PHYSICAL SCIENCE – PS

Kindergarten: Motion and Stability: Forces and Interactions

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
K-PS-1.1 With guidance and support, plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	Identify the effects of pushes and pulls on the motion of an object.	**K-PS-1.1.ECS** With guidance and support, compare what happens when an object is pushed and pulled.	To simplify the complexity of the standard.
K-PS-1.2 With guidance and support, analyze data to determine if a design solution works as intended to change the motion of an object with a push or a pull.	Identify changes in the speed of an object that occur with a push or pull.	**K-PS-1.2.ECS** With guidance and support, identify the change in motion of an object when it is pushed or pulled.	To simplify the complexity of the standard.

Kindergarten: Energy

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
K-PS-2.1 Make observations to determine the effect of the Sun's energy on the Earth's surface.	Identify the effect of sunlight on Earth's surface.	**K-PS-2.1.ECS** Use observations to explore the effect of sunlight on Earth's surface.	To simplify the complexity of the standard.

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
K-PS-2.2 Design and build a structure that will reduce the warming effect of the Sun's energy on a material.	Identify structures that will reduce the warming effect of sunlight.	**K-PS-2.2.ECS** Identify objects that will reduce the warming effect of sunlight.	Modified Wyoming Extended Content Standard to better align with ICS.

KINDERGARTEN LIFE SCIENCE – LS

Kindergarten: From Molecules to Organisms: Structures and Processes

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
K-LS-1.1 Use observations to describe how plants and animals are alike and different in terms of how they live and grow.	Describe the basic needs that animals have for survival.	**K-LS-1.1.ECS** Observe and communicate the basic needs that plants and animals need to live and grow.	To simplify the complexity of the standard.

KINDERGARTEN EARTH AND SPACE SCIENCE - ESS

Kindergarten: Earth's Systems

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
K-ESS-1.1 Use and share observations of local weather conditions to describe variations in patterns throughout the year.	Identify local weather conditions.	**K-ESS-1.1.ECS** Observe and identify local weather conditions in each season.	To simplify the complexity of the standard.

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
K-ESS-1.2 With guidance and support, use evidence to construct an explanation of how plants and animals interact with their environment to meet their needs.			This standard was omitted because it was addressed in a previous standard and will be addressed in future standards

Kindergarten: Weather and Climate

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
K-ESS-2.1 Use a model to represent the relationship between the needs of different plants and animals and the places they live.	Describe how animals meet their needs based on where they live.	**K-ESS-2.1** Given a model, describe how plants and animals' needs are met based on where they live.	To add plants to the standard and to simplify the complexity of the standard.
K-ESS-2.2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, local weather.	Identify and communicate local forms of severe weather and their warning signals.	**K-ESS-2.2.ECS** Show how to plan, prepare, and react to local weather.	To simplify the complexity of the standard.
K-ESS-2.3 Communicate ideas that would enable humans to interact in a beneficial way with the land, water, air, and/or other living things in the local environment.		**K-ESS-2.3.ECS** Communicate ways humans can interact in a beneficial way to help the environment.	To simplify the complexity of the standard.

GRADE 1 SCIENCE EXTENDED CONTENT STANDARDS

GRADE 1 PHYSICAL SCIENCE – PS

Grade 1: Waves

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
1-PS-1.1 With guidance and support, plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	Demonstrate that a material can produce sound through vibration.	**1-PS-1.1.ECS** With guidance and support, demonstrate that a material can produce sound through vibration and that sound can make materials vibrate.	To simplify the complexity of the standard.
1-PS-1.2 With guidance and support, make observations to construct an evidence-based explanation that objects in darkness can be seen only when illuminated.	Demonstrate and communicate that objects in darkness can be seen with a light source.	**1-PS-1.2.ECS** With guidance and support, make observations to demonstrate that objects in darkness can be seen only with a light source.	Combined the standards and to simplify the complexity of the standard.
1-PS-1.3 With guidance and support, plan and conduct investigations to determine the effect of placing materials in the path of a beam of light.	Identify a material that will allow a beam of light to shine through.	**1-PS-1.3. ECS** With guidance and support, explore materials that will allow a beam of light to shine through.	Combined the standards to simplify the complexity of the standard.
1-PS-1.4 Design and build a device that uses light or sound to communicate over a distance.	Identify multiple devices that communicate over a distance.	**1-PS-1.4.ECS** Investigate multiple devices that communicate over a distance.	Simplifying and adding to the Wyoming Standard

GRADE 1 LIFE SCIENCE – LS

Grade 1: From Molecules to Organisms: Structures and Processes

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
1-LS-1.1 Design and build a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.	Identify an object used by humans that mimics an animal's or a plant's external parts.	**1-LS-1.1.ECS** Observe and communicate how an object used by humans mimics an animal's or a plant's external parts.	Combined the standards and to simplify the complexity of the standard.
1-LS-1.2 Obtain information to identify patterns of behavior in parents and offspring that help offspring survive.	Identify behavior of parents and offspring that help the offspring survive.	**1-LS-1.2.ECS** Identify behavior of parents and offspring that help the offspring survive.	Used Wyoming Extended Content Standard
1-LS-1.3 Use classification supported by evidence to differentiate between living and non-living items.		**1-LS-1.3.ECS** Classify living and non-living items.	To simplify the complexity of the standard.

Grade 1: Heredity: Inheritance and Variation of Traits

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
1-LS-2.1 Make observations to construct an evidence-based explanation that offspring are similar to, but not identical to, their parents.	Given a variety of choices, match images of parents and their offspring.	**1-LS-2.1.ECS** Given a variety of choices, match images of parents and their offspring.	Used Wyoming Extended Content Standard

GRADE 1 EARTH AND SPACE SCIENCE – ESS

Grade 1: Earth's Place in the Universe

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
1-ESS-1.1 Use observations of the Sun, Moon, and stars to describe patterns that can be predicted.	Identify which objects are found in the sky during the day and at night.	**1-ESS-1.1.ECS** Identify which objects are found in the sky during the day and at night.	Used Wyoming Extended Content Standard
1-ESS-1.2 Make observations at different times of year to relate the amount of daylight to the time of year.			This standard will be addressed in future standards

GRADE 2 SCIENCE EXTENDED CONTENT STANDARDS

GRADE 2 PHYSICAL SCIENCE – PS

Grade 2: Matter and Its Interactions

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
2-PS-1.1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	Describe a material based on its observable properties.	**2-PS-1.1.ECS** Describe and classify a material based on its observable properties.	Combined the Wyoming Extended Content Standard and ICS to simplify the complexity of the standard.

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
2-PS-1.2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	Determine the material that is best suited for an intended purpose.	**2-PS-1.2.ECS** With guidance and support, test materials that are best suited for an intended purpose.	Combined the Wyoming Extended Content Standard and ICS to simplify the complexity of the standard.
2-PS-1.3 Make observations to construct an evidence-based argument that objects, when disassembled, may be used to create new objects using the same set of components.	Demonstrate that smaller pieces can make a larger object.	**2-PS-1.3.ECS** Demonstrate that when objects are disassembled, the components can be used to make new objects.	Combined the Wyoming Extended Content Standard and ICS to simplify the complexity of the standard.
2-PS-1.4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	Participate in a guided investigation which demonstrates how some changes caused by heating and cooling can be reversed and some cannot and identify an item that changes with heating or cooling.	**2-PS-1.4.ECS** With guidance and support, investigate and identify that some changes caused by heating and cooling can be reversed and some cannot.	Combined the Wyoming Extended Content Standard and ICS to simplify the complexity of the standard.

GRADE 2 LIFE SCIENCE – LS

Grade 2: Ecosystems: Interactions, Energy, and Dynamics

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
2-LS-1.1 Plan and conduct an investigation to determine the impact of light and water on the growth of plants.	Participate in a guided investigation to determine if plants need water to grow and communicate any observable changes.	**2-LS-1.1.ECS** With guidance and support, investigate and communicate how light and water impact the growth of plants.	Combined the Wyoming Extended Content Standard and ICS to simplify the complexity of the standard.
2-LS-1.2 Develop a model that demonstrates how plants depend on animals for pollination or the dispersal of seeds.	Participate in activities that demonstrate pollination or seeding, and communicate a way that seeds are dispersed.	**2-LS1.2.ECS** Participate in activities that demonstrate pollination or seeding, and communicate a way that seeds are dispersed.	Used Wyoming Extended Content Standard

Grade 2: Biological Adaptation: Unity and Diversity

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
2-LS-2.1 Make observations of plants and animals to compare the diversity of life in different habitats.	Make a model of an animal in its habitat.	**2-LS-2.1.ECS** Make observations of plants and/or animals to compare life in different habitats.	Combined the Wyoming Extended Content Standard and ICS to simplify the complexity of the standard.

GRADE 2 EARTH AND SPACE SCIENCE – ESS

Grade 2: Earth's Place in the Universe

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
2-ESS-1.1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.			This standard will be addressed in future standards.

Grade 2: Earth's Systems

Idaho Content Standards (ICS)	Wyoming Extended Content Standards	Proposed Alignment Revisions	Rationale for Revisions
2-ESS-2.1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	Participate in activities that demonstrate a design made to slow or prevent water from passing and communicate the changes.	**2.ESS-2.1.ECS** With guidance and support, participate in activities that slow or prevent wind or water from changing the shape of the land.	Combined the Wyoming Extended Content Standard and ICS to simplify the complexity of the standard.
2-ESS-2.2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.	Given a visual representation, communicate the difference between bodies of water and landforms.	**2-ESS-2.2-ECS** Given a visual representation, communicate the difference between bodies of water and landforms.	Used the Wyoming Extended Content Standard
2-ESS-2.3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.	Participate in a guided investigation and identify different states of matter (solid or liquid).	**2-ESS-2.3.ECS** With guidance and support, identify that water on Earth can be solid or liquid.	Combined the Wyoming Extended Content Standard and ICS to simplify the complexity of the standard.

GRADE 3 PHYSICAL SCIENCE – PS

Grade 3: Motion and Stability: Forces and Interactions

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
3-PS-1.1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	**CCC-PS1-3-1** Identify forces as the cause of an object's movement.	**3-PS-1.1.ECS** With guidance and support, conduct an investigation to i~~I~~dentify forces as the cause of an object's movement.	Simplified ICS and provided support.
3-PS-1.2 Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	**CCC-PS1-3-2** Predict the cycle of motion for an object moving in a pattern.	**3-PS-1.2.ECS** Make observations and p~~P~~redict the ~~cycle of~~ motion for an object moving in a pattern.	Combined the ICS and the IECS to increase rigor.
3-PS-1.3 Ask questions to determine cause and effect relationships of static electricity or magnetic interactions between two objects not in contact with each other.	**CCC-PS1-3-3** Describe how magnets interact with metal objects when they are not in contact with each other *Example: Place a paper clip two inches away from a magnet and slowly push the paper clip until the magnetic force pulls the paper clip to the magnet.*	**3-PS-1.3.ECS** With guidance and support, ~~Describe how magnets interact with metal~~ determine cause and effect relationships of magnetic interactions between two objects not in contact with each other. ~~*Example: Place a paper clip two inches away from a magnet and slowly push the paper clip until the magnetic*~~	Combined the ICS and the IECS to increase rigor. Provided additional support.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
		~~*force pulls the paper clip to the magnet.*~~	
3-PS-1.4 Define a problem that can be solved by applying scientific ideas about magnets.			Standard could be addressed with previous standard **3-PS-1.3.ECS**

GRADE 3 LIFE SCIENCE – LS

Grade 3: From Molecules to Organisms: Structures and Processes

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
3-LS-1.1 Develop models to demonstrate that living things, although they have unique and diverse life cycles, all have birth, growth, reproduction, and death in common.		**3-LS-1.1.ECS** With guidance and support, demonstrate that all living things, although they have unique and diverse life cycles, all have birth, growth, reproduction, and death in common.	Simplified the ICS by providing support.

Grade 3: Ecosystems: Interactions, Energy, and Dynamics

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
3-LS-2.1 Construct an argument that some animals form groups that help members survive.	**CCC-LS1-3-1** Determine how the group behavior helps the animals. *Note: Benefits might include obtaining food and protection.*	**3-LS-2.1.ECS** With guidance and support, explain ~~Determine~~ how group behavior helps animals survive. ~~*Note: Benefits might include obtaining food and protection.*~~	Simplified the ICS by providing support.

Grade 3: Heredity: Inheritance and Variation of Traits

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
3-LS-3.1 Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.	**CCC-LS2-3-1** Use evidence from graphics to identify similarities and differences between parents and their offspring.	**3-LS-3.1.ECS** Use evidence from graphics to identify similarities and differences between parents and their offspring.	
3-LS-3.2 Use evidence to support the explanation that traits can be influenced by the environment.	**CCC-LS2-3-2** Identify evidence that shows how the environment has influenced traits in plants and animals.	**3-LS-3.2.ECS** Identify evidence that shows how the environment has influenced traits in plants and animals.	
3-LS-3.3 Construct an argument with evidence that in a particular habitat some		**3-LS-3.3.ECS** Identify particular habitats where some organisms can survive well, some survive less well,	Added a simplified version of ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
organisms can survive well, some survive less well, and some cannot survive at all.		and some cannot survive at all.	

GRADE 3 EARTH AND SPACE SCIENCE – ESS

Grade 3: Earth's Systems

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
3-ESS-1.1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	**CCC-ESS1-3-1** Describe typical weather conditions expected during a particular season.	**3-ESS-1.1.ECS** With guidance and support, ~~Describe~~ graph typical weather conditions expected during a particular season.	Combined ICS and IECS to increase rigor.
3-ESS-1.2 Obtain and combine information to describe climates in different regions of the world.	**CCC-ESS1-3-2** Describe the climate of a region of the world.	**3-ESS-1.2.ECS** Describe the climate of different regions of the world.	Align closer to the ICS.

Grade 3: Earth and Human Activity

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
3-ESS-2.1 Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	**CCC-ESS2-3-1** Match the preventative measure to the related weather hazard.	**3-ESS-2.1.ECS** ~~Match~~ ~~the~~ Identify ~~preventative measure~~ ~~to~~ the best solution that	Align closer to the ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
		reduces the impacts of ~~the~~ a weather-related hazard.	

GRADE 4 SCIENCE EXTENDED CONTENT STANDARDS

GRADE 4 PHYSICAL SCIENCE – PS

Grade 4: Energy

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
4-PS-1.1 Use evidence to construct an explanation relating the speed of an object to the energy of that object.	**CCC-PS1-4-1** Recognize that if two identical objects are moving at different speeds, then the one moving faster has more energy.	**4-PS-1.1.ECS** With guidance and support, explain the relationship between the speed of an object and the energy of that object. ~~**CCC-PS1-4-1** Recognize that if two identical objects are moving at different speeds, then the one moving faster has more energy.~~	Align closer to the ICS
4-PS-1.2 Make observations to provide evidence that energy can be transferred by heat, sound, light, and electric currents.	**CCC-PS1-4-2** Identify examples of energy transferring from place to place (e.g., electrical energy	**4-PS-1.2.ECS** Identify examples of energy transferring from place to place (e.g., electrical energy	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
	becoming light energy in a lamp, electrical energy becoming heat energy in a microwave).	becoming light energy in a lamp, electrical energy becoming heat energy in a microwave).	
4-PS-1.3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.	**CCC-PS1-4-3** Predict the motion of a stationary object when a moving object collides with it.	**4-PS-1.3.ECS** Predict the motion of a stationary object when a moving object collides with it.	
4-PS-1.4 Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	**CCC-PS1-4-4** Given a situation, identify the device that is used to convert energy from one form to another (e.g., in a flashlight, a battery converts chemical energy to light; in a fan, electrical energy is converted to motion energy).	**4-PS-1.4.ECS** Given a situation, identify the device that is used to convert energy from one form to another (e.g., in a flashlight, a battery converts chemical energy to light; in a fan, electrical energy is converted to motion energy).	

Grade 4: Waves

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
4-PS-2.1 Develop a model of a simple mechanical wave to describe patterns of amplitude and wavelength and that waves can cause objects to move.	**CCC-PS2-4-1** Identify how wave patterns (amplitude and wavelength) can cause objects to move.	**4-PS-2.1.ECS** With guidance and support, use a model to i~~l~~dentify how wave patterns	Combine ICS and IECS. Added support.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
		(amplitude and wavelength) can cause objects to move.	
4-PS-2.2 Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	**CCC-PS2-4-2** Identify the correct path light follows between a light source, the object, and the eye.	**4-PS-2.2.ECS** With guidance and support, use a model to i~~l~~dentify the ~~correct~~ path light follows between a light source, the object, and the eye.	Added support IECS.
4-PS-2.3 Generate and compare multiple solutions that use patterns to transfer information.	**CCC-PS2-4-3** Describe how different sound patterns can convey different meanings.	**4-PS-2.3.ECS** With guidance and support, ~~Describe~~ generate sound patterns and compare how different sound patterns can convey different meanings.	Simplify ICS and added support.

GRADE 4 LIFE SCIENCE – LS

Grade 4: From Molecules to Organisms: Structures and Processes

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
4-LS-1.1 Construct an argument that plants and animals have internal and external	**CCC-LS1-4-1** Identify the functions (survival, growth, behavior, and/or reproduction) of various plant	**4-LS-1.1.ECS** Identify the functions (survival, growth, behavior, and/or reproduction) of various plant	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
structures that function to support survival, growth, behavior, and reproduction.	and animal structures. (Note: Structures could include thorn, stem, roots, petal, heart, lungs, stomach, brain, skin, or skeleton).	and animal structures. (Note: Structures could include thorn, stem, roots, petal, heart, lungs, stomach, brain, skin, or skeleton).	
4-LS-1.2 Use a model to describe how animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	**CCC-LS1-4-2** Identify an animal's response to a given environmental stimuli (e.g., ring a bell, a dog hears it and comes to the food bowl; a porcupine senses danger and bristles its quills at an enemy; a skunk senses danger and sprays).	**4-LS-1.2.ECS** Identify an animal's response to a given environmental stimuli. (e.g., ring a bell, a dog hears it and comes to the food bowl; a porcupine senses danger and bristles its quills at an enemy; a skunk senses danger and sprays).	

GRADE 4 EARTH AND SPACE SCIENCE – ESS

Grade 4: Earth's Place in the Universe

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
4-ESS-1.1 Identify evidence from patterns in rock formations and fossils in rock layers for changes in a landscape over time to support an explanation for changes in a landscape over time.	**CCC-ESS1-4-1** Describe how fossils in rock layers reveal changes in the landscape over time.	**4-ESS-1.1.ECS** ~~Describe~~ Identify how fossils in rock layers reveal changes in the landscape over time.	Changed the verb of the IECS to match the ICS.

Grade 4: Earth's Systems

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
4-ESS-2.1 Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	**CCC-ESS2-4-1** Use evidence (e.g., pictures, measurements, data) to show how erosion and/or weathering changes the landscape.	**4-ESS-2.1.ECS** Use evidence (e.g., pictures, measurements, data) to show how erosion and/or weathering changes the landscape.	
4-ESS-2.2 Analyze and interpret data from maps to describe patterns of Earth's features.	**CCC-ESS2-4-2** Use map symbols to describe Earth's features.	**4-ESS-2.2.ECS** With guidance and support u~~U~~se map symbols to describe Earth's features.	Added support to IECS.

Grade 4: Earth and Human Activity

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
4-ESS-3.1 Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	**CCC-ESS3-4-1** Describe an energy source's effect on the environment.	**4-ESS-3.1.ECS** With guidance and support, gather information on at least one ~~Describe an~~ energy source~~'s effect on~~ derived from natural resources and show how their use affects the environment.	Simplify and add support to ICS.
4-ESS-3.2 Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	**CCC-ESS3-4-2** Choose a design that would lessen the impact of a natural hazard on an environment (e.g., a raised house in an area prone to flooding).	**4-ESS-3.2.ECS** Select from multiple solutions ~~Choose~~ a design that would lessen the impact of a natural Earth process ~~hazard~~ on humans ~~an environment~~ (e.g., a raised house in an area prone to flooding).	Align closer with ICS.

GRADE 5 PHYSICAL SCIENCE – PS

Grade 5: Matter and Its Interactions

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-PS-1.1 Develop a model to describe that matter is made of particles too small to be seen.	**CCC-PS1-5-1** Use a model to explain that matter is still present even when it too small to be seen (e.g., sugar dissolved in water is still present; thus, the water is sweet).	**5-PS-1.1.ECS** With guidance and support, develop ~~Use~~ a model to explain that matter is ~~still present even when~~ made of particles too small to be seen ~~(e.g., sugar dissolved in water is still present; thus, the water is sweet)~~.	Align closer with ICS.
5-PS-1.2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	**CCC-PS1-5-2** Identify total weight data that show the total weight of matter before and after heating, cooling, or mixing materials.	**5-PS-1.2.ECS** With guidance and support, graph quantities to show that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. ~~**CCC-PS1-5-2** Identify total weight data that show the total weight of matter before and after heating, cooling, or mixing materials.~~	Replaced ECS with language from the ICS to better align, add support, and simplify ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-PS-1.3 Make observations and measurements to identify materials based on their properties.	**CCC-PS1-5-3** Make observations and match the materials based on their properties (e.g., color, hardness, solubility).	**5-PS-1.3.ECS** Make observations and match the materials based on their properties (e.g., color, hardness, solubility).	
5-PS-1.4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	**CCC-PS1-5-4** Use observations to determine if the mixing of two or more substances results in a new substance (e.g., baking cookies, making slime).	**5-PS-1.4.ECS** With guidance and support, conduct an investigation and u~~U~~se observations to determine if the mixing of two or more substances results in a new substance (e.g., baking cookies, making slime).	Add support and combine ICS with IECS

Grade 5: Motion and Stability: Forces and Interactions

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-PS-2.1 Support an argument that Earth's gravitational force exerted on objects is directed downward.	**CCC-PS2-5-1** Use observations to determine that objects, regardless of weight, fall toward Earth due to it's gravitational force.	**5-PS-2.1.ECS** With guidance and support, conduct an investigation and u~~U~~se observations to determine that objects, regardless of weight, fall toward Earth due to its gravitational force.	Adding support, adding clarification to the IECS.

Grade 5: Energy

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-PS-3.1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the Sun.	**CCC-PS3-5-1** Trace the source of an animal's energy through a food chain back to the sun.	**5-PS-3.1.ECS** Use models to follow ~~Trace~~ the source of an animal's energy through a food chain back to the sun	Align closer with ICS.

GRADE 5 LIFE SCIENCE – LS

Grade 5: From Molecules to Organisms: Structure and Processes

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-LS-1.1 Support an argument that plants get what they need for growth chiefly from air, water, and energy from the Sun.	**CCC-LS1-5-1** Use data from investigations to identify that air and water are the main sources of growth materials for plants (e.g., essential vs. non-essential).	**5-LS-1.1.ECS** With guidance and support, u~~U~~se data from investigations to identify that air, water, and energy from the Sun are needed for ~~the main sources of~~ plant growth ~~materials for plants~~ (e.g., essential vs. non-essential)	Align closer with ICS

Grade 5: Biological Adaptation: Unity and Diversity

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-LS-2.1 Analyze and interpret data from fossils to provide evidence of the types of organisms and the environments that existed long ago and compare those to living organisms and their environments.	**CCC-LS2-5-1** Identify the environment in which the fossil animal or plant lived.	**5-LS-2.1.ECS** With guidance and support, explain that fossilized plants and animals lived long ago and identify similar plants/animals that are alive today. ~~**CCC-LS2-5-1** Identify the environment in which the fossil animal or plant lived.~~	Replaced ECS with language from the ICS to better align, add support, and simplify ICS.
5-LS-2.2 Construct an argument with evidence for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	**CCC-LS2-5-2** Determine which variation of the characteristic is most helpful to the animal in its current environment (e.g., birds: shape and size of beaks).	**5-LS-2.2.ECS** Using evidence, select ~~Determine~~ which variation of the characteristic is most helpful to the animal in its current environment (e.g., birds: shape and size of beaks).	Aligning more closely with ICS
5-LS-2.3 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals living there may change.	**CCC-LS2-5-3** Determine the needs of organisms that can survive in a habitat and/or needs of organisms that cannot survive in a habitat.	**5-LS-2.3.ECS** With guidance and support, choose a solution to a problem caused when the environment changes and the types of plants and animals living there may change. ~~**CCC-LS2-5-3** Determine the needs of organisms that can~~	Replaced ECS with language from the ICS to better align, add support, and simplify ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
		~~survive in a habitat and/or needs of organisms that cannot survive in a habitat.~~	
5-LS-2.4 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**CCC-LS2-5-4** Determine how the environment may need to change after a natural or manmade event in order for the organisms found there to survive.	~~**CCC-LS2-5-4** Determine how the environment may need to change after a natural or manmade event in order for the organisms found there to survive.~~	ECS removed because it is not aligned with the ICS and content is addressed in previous ECS.

GRADE 5 EARTH AND SPACE SCIENCE – ESS

Grade 5: Earth's Place in the Universe

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-ESS-1.1 Support an argument that differences in the apparent brightness of the Sun compared to other stars is due to their relative distances from the Earth.	**CCC-ESS1-5-1** Identify that the sun is the closest star to Earth.	**5-ESS-1.1.ECS** With guidance and support, investigate the differences in the apparent brightness of the Sun compared to other stars due to their relative distances from the Earth. ~~**CCC-ESS1-5-1** Identify that the sun is the closest star to Earth.~~	Replaced ECS with language from the ICS to better align, add support, and simplify ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-ESS-1.2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	**CCC-ESS1-5-2** Use data and/or images to show that shadows can change in length and direction depending on the time of day in a predictable pattern. *Use a graphical display to sequence up to four basic phases of the moon. Given a model, name the seasons.*	**5-ESS-1.2.ECS** With guidance and support, represent patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. ~~**CCC-ESS1-5-2** Use data and/or images to show that shadows can change in length and direction depending on the time of day in a predictable pattern.~~ ~~*Use a graphical display to sequence up to four basic phases of the moon. Given a model, name the seasons.*~~	Replaced ECS with language from the ICS to better align, add support, and simplify ICS.

Grade 5: Earth's Systems

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-ESS-2.1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	**CCC-ESS2-5-1** Use a model to describe how an organism interacts with the land, water, or air in its environment.	**5-ESS-2.1.ECS** With guidance and support, develop a model using two of Earth's spheres (geosphere, biosphere, hydrosphere, or atmosphere)	Replaced ECS with language from the ICS to better align, add support, and simplify ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
		to describe ways they interact. ~~**CCC-ESS2-5-1** Use a model to describe how an organism interacts with the land, water, or air in its environment.~~	
5-ESS-2.2 Describe and graph the relative amounts of fresh and salt water in various reservoirs, to interpret and analyze the distribution of water on Earth.	**CCC-ESS2-5-2** Using a model, identify where fresh water and salt water are found.	**5-ESS-2.2.ECS** Using a model, identify where fresh water and salt water are found.	

Grade 5: Earth and Human Activity

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
5-ESS-3.1 Obtain and combine information about ways communities protect Earth's resources and environment using scientific ideas.	**CCC-ESS3-5-1** Describe ways to protect Earth's resources and clean up the environment (e.g., place trash in the trash can).	**5-ESS-3.1.ECS** Describe ways to protect Earth's resources and clean up the environment (e.g., place trash in the trash can).	

MIDDLE SCHOOL SCIENCE EXTENDED CONTENT STANDARDS

MIDDLE SCHOOL PHYSICAL SCIENCE – PS

Middle School: Matter and Its Interactions

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-PS-1.1 Develop models to describe the atomic composition of simple molecules.	**CCC-PS1-MS-1** Use models to distinguish molecules as either simple molecules (such as oxygen) or extended structures (such as carbon dioxide).	**MS-PS-1.1.ECS** Use models to distinguish molecules as ~~either~~ simple molecules (such as oxygen) ~~or extended structures (such as carbon dioxide)~~.	Removing language referencing extended structures as they are not mentioned in the ICS.
MS-PS-1.2 Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	**CCC-PS1-MS-2** Recognize that chemical changes involve changes in the molecules (atoms are rearranged), leading to a new material with properties that are different from the properties of the original substances.	**MS-PS-1.2.ECS** Recognize that chemical changes involve changes in the molecules (atoms are rearranged), leading to a new material with properties that are different from the properties of the original substances.	
MS-PS-1.3 Construct a scientific explanation, based on evidence, to describe that synthetic materials come from natural resources.	**CCC-PS1-MS-3** Gather information to identify the natural resources used to make a synthetic product (e.g., petroleum into plastics, aluminum into cans).	**MS-PS-1.3.ECS** Gather information to identify the natural resources used to make a synthetic product (e.g., petroleum into plastics, aluminum into cans).	
MS-PS-1.4 Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	**CCC-PS1-MS-4** Use a model to identify that the particles that make up an object move fast or slowly, depending on the temperature of the object.	**MS-PS-1.4.ECS** Use a model to identify that the particles that make up an object move ~~fast or slowly~~ faster or slower,	Clarity of language

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
		depending on the temperature of the object.	
MS-PS-1.5 Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.			
MS-PS-1.6 Undertake a design project to construct, test, and/or modify a device that either releases or absorbs thermal energy by chemical processes.	**CCC-PS1-MS-6** Use presented evidence to determine if a reaction has released or absorbed thermal energy (e.g., fireworks).	**MS-PS-1.6.ECS** Use presented evidence to determine if a reaction has released or absorbed thermal energy (e.g., ~~fireworks~~ lighting a match).	Chose to use an example that would be less sensory overloading than fireworks.

Middle School: Motion and Stability: Forces and Interactions

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-PS-2.1 Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.	**CCC-PS2-MS-1** Use models to predict how the motion of objects of the same size with different speeds will be affected when the objects collide.	**MS-PS-2.1.ECS** ~~Use models to predict~~ Demonstrate how the motion of objects ~~of the same size with different speeds~~ will be affected when the objects collide.	Revising to more closely match the ICS. Newton's Third Law does not reference the size or speed of objects.
MS-PS-2.2 Plan and conduct an investigation to provide evidence that the change in an	**CCC-PS2-MS-2** Predict how the motion of objects with	**MS-PS-2.2.ECS** Predict how the motion of objects with	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
object's motion depends on the sum of the forces on the object and the mass of the object.	different masses will change when acted on by forces.	different masses will change when acted on by forces.	
MS-PS-2.3 Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	**CCC-PS2-MS-3** Use data to make statements about the effect of distance on the interactions between magnets.	~~**CCC-PS2-MS-3** Use data to make statements about the effect of distance on the interactions between magnets.~~	Eliminating due to similarity to MS-PS-2.5.ECS
MS-PS-2.4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.	**CCC-PS2-MS-4** Predict how the motion of objects with different masses will change when acted on by forces.	**MS-PS-2.4.ECS** Predict how the motion of objects with different masses will change when acted on by gravitational forces.	Adding language to more closely align with ICS.
MS-PS-2.5 Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.	**CCC-PS2-MS-5** Relate the orientation of magnets and the distance between them to the behavior of the magnets.	**MS-PS-2.5.ECS** ~~Relate~~ With guidance and/or support, conduct an investigation about the orientation of magnets and the distance between them to recognize the behavior of the magnets.	Simplify the content but still having students conduct an investigation at an appropriate level.

Middle School: Energy

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-PS-3.1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.	**CCC-PS3-MS-1** Use mass and speed data to determine the object with the greatest kinetic energy.	**MS-PS-3.1.ECS** Use mass and speed data to determine the object with the greatest kinetic energy.	
MS-PS-3.2 Develop a model to describe the relationship between the relative positions of objects interacting at a distance and the relative potential energy in the system.		**MS-PS-3.2.ECS** Use models of objects interacting at a distance to show relative potential energy in the system (e.g., rollercoaster).	This is the only standard that covers potential energy and real-world examples best aid this population in their learning.
MS-PS-3.3 Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	**CCC-PS3-MS-3** Describe situations where thermal energy is transferred (e.g., if ice is added to a cup of water or if water in a pot is heated on a stove).	**MS-PS-3.3.ECS** With guidance and support, apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer. ~~**CCC-PS3-MS-3** Describe situations where thermal energy is transferred (e.g., if ice is added to a cup of water or if water in a pot is heated on a stove).~~	Replaced ECS with language from the ICS to better align, add support, and simplify ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-PS-3.4 Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.	**CCC-PS3-MS-4** Use temperature data to determine the changes of objects of the same material but different masses when heat is applied for a certain period of time.	**MS-PS-3.4.ECS** Investigate the relationships among the energy transferred, the type of matter, the mass, and the change in temperature of the sample. ~~**CCC-PS3-MS-4** Use temperature data to determine the changes of objects of the same material but different masses when heat is applied for a certain period of time.~~	Replaced ECS with language from the ICS to better align, add support, and simplify ICS.
MS-PS-3.5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	**CCC-PS3-MS-5** Identify the motion energy transfer in presented examples (e.g., a ball that was moving begins to slow down, so this means that energy was transferred from the object).	**MS-PS-3.5.ECS** Identify the motion energy transfer in presented examples (e.g., a bowling ball that ~~was~~ is moving ~~begins to slow down~~ transfers its energy into hitting the pins~~, so this means that energy was transferred from the object~~).	Providing a clearer example of energy transfer between objects.

Middle School: Waves

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-PS-4.1 Use diagrams of a simple wave to explain that (1) a wave has a repeating pattern with a specific amplitude, frequency, and wavelength, and (2) the amplitude of a wave is related to the energy in the wave.	**CCC-PS4-MS-1** Compare wave diagrams to identify differences in wavelength and amplitude.	**MS-PS-4.1.ECS** ~~Compare~~ Use simple wave diagrams to identify differences in wavelength and amplitude.	
MS-PS-4.2 Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.	**CCC-PS4-MS-2** Use models to recognize that light can be reflected, absorbed, or transmitted (light passes through the object).	**MS-PS-4.2.ECS** Use models to recognize that light and sound waves can be reflected, absorbed, or transmitted ~~(light passes through the object)~~.	Light is not the only type of wave, so providing an additional concrete example.
MS-PS-4.3 Present qualitative scientific and technical information to support the claim that digitized signals (0s and 1s) can be used to encode and transmit information.	**CCC-PS4-MS-3** Identify advantages or disadvantages of various means of communication.	~~**CCC-PS4-MS-3** Identify advantages or disadvantages of various means of communication.~~	This standard is not clearly aligned to the ICS and may not be relevant to students with significant cognitive disabilities.

MIDDLE SCHOOL LIFE SCIENCE – LS

Middle School: From Molecules to Organisms: Structure and Processes

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-LS-1.1 Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.	**CCC-LS1-MS-1** Use evidence to show that all living things are made up of one or more cells, which are the smallest units that can be said to be alive.	**MS-LS-1.1.ECS** Use evidence to show that all living things are made up of one or more cells~~, which are the smallest units that can be said to be alive~~.	The concept of cells as smallest living units is not covered in the ICS.
MS-LS-1.2 Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.	**CCC-LS1-MS-2** Describe the function of one or more of the following cell parts: nucleus, chloroplast, mitochondria, cell membrane, and cell wall.	**MS-LS-1.2.ECS** Describe the function of one or more of the following cell parts: nucleus, chloroplast, mitochondria, cell membrane, and cell wall.	
MS-LS-1.3 Make a claim supported by evidence for how a living organism is a system of interacting subsystems composed of groups of cells.	**CCC-LS1-MS-3** Use evidence to support a claim that groups of cells form tissues. Tissues come together to form organs, and multiple organs form organ systems.	**MS-LS-1.3.ECS** Use evidence to support a claim that groups of cells form tissues. Tissues come together to form organs, and multiple organs form organ systems.	
MS-LS-1.4 Construct a scientific argument based on evidence to defend a claim of life for a specific object or organism.	**CCC-LS1-MS-4** Use evidence to describe how living things share characteristics (e.g.,	**MS-LS-1.4.ECS** Use evidence to describe how living things share characteristics (e.g.,	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
	response to the environment, reproduction, energy use, growth and development, life cycles, made of cells).	response to the environment, reproduction, energy use, growth and development, life cycles, made of cells).	
MS-LS-1.5 Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.	**CCC-LS1-MS-5** Use a model or diagram to show that during photosynthesis, sunlight is used to combine carbon dioxide and water into food molecules, which can be used or stored by the plant and oxygen is given off.	**MS-LS-1.5.ECS** Use a model ~~or diagram~~ to ~~show that~~ identify the inputs that go into the plant (e.g., sunlight, water) and the outputs from the plant (e.g., food, oxygen) during photosynthesis (for example, fill in the missing part of the model). ~~sunlight is used to combine carbon dioxide and water into food molecules, which can be used or stored by the plant and oxygen is given off.~~	Clarification that the inputs and outputs of photosynthesis are the emphasis.
MS-LS-1.6 Develop a conceptual model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as matter moves through an organism.	**CCC-LS1-MS-6** Describe how food must be broken down so that the nutrients can be absorbed by the organism.	**MS-LS-1.6.ECS** Describe how food must be broken down so that the nutrients can be ~~absorbed~~ used by the organism.	Simplifying the ECS for better clarification.

Middle School: Ecosystems: Interactions, Energy, and Dynamics

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-LS-2.1 Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	**CCC-LS2-MS-1** Use data as evidence to show whether a population increases or decreases as a result of a change in the availability of resources in the ecosystem.	**MS-LS-2.1.ECS** Use data as evidence to show whether a population increases or decreases as a result of a change in the availability of resources in the ecosystem.	
MS-LS-2.2 Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	**CCC-LS2-MS-2** Describe interactions among organisms across multiple ecosystems (e.g., how a predatory, land-based animal interacts with prey in water ecosystems).	**MS-LS-2.2.ECS** Describe interactions among organisms across multiple ecosystems (e.g., how a predatory, land-based animal interacts with prey in water ecosystems).	
MS-LS-2.3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	**CCC-LS2-MS-3** Complete a cycle to show the flow of energy within the ecosystem.	**MS-LS-2.3.ECS** Complete a food web ~~cycle~~ to show how nutrients cycle ~~the flow of energy~~ within the ecosystem.	Simplify standard to focus on the cycling of matter. Used nutrients rather than matter for consistency of language.
MS-LS-2.4 Develop a model to describe the flow of energy through the trophic levels of an ecosystem.	**CCC-LS2-MS-4** Use a food chain/web to complete an energy pyramid.	~~**MS-LS-2.4.ECS** Use a food chain/web to complete an energy pyramid.~~	Cut in order to focus on matter rather than energy.
MS-LS-2.5 Construct an argument supported by evidence that changes to physical or	**CCC-LS2-MS-5** Use data to determine the effect on a population when a supply is	**MS-LS-2.5.ECS** Use data to determine the effect on a population when a supply is	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
biological components of an ecosystem affect populations.	limited due to environmental conditions.	limited due to environmental conditions.	
MS-LS-2.6 Design and evaluate solutions for maintaining biodiversity and ecosystem services.		**MS-LS-2.6.ECS** Design a solution to help protect living things in an ecosystem.	Simplified ICS. Added standard so students could be engaged in conversation of making change for our planet.

Middle School: Heredity: Inheritance and Variation of Traits

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-LS-3.1 Develop and use a model to describe why mutations may result in harmful, beneficial, or neutral effects to the structure and function of the organism.	**CCC-LS3-MS-1** Describe that changes to gene structures can cause new traits that may be helpful or harmful.	**MS-LS-3.1.ECS** Describe that changes to gene structures ~~can~~ may cause new traits ~~that may be helpful or harmful~~.	Not all changes to genetic structure cause help or harm.
MS-LS-3.2 Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.	**CCC-LS3-MS-2** Use a model to describe how asexual reproduction differs from sexual reproduction.	**MS-LS-3.2.ECS** ~~Use a model to d~~Describe how offspring differ in asexual reproduction ~~differs from~~ versus sexual reproduction.	Simplify the skill in the ICS standard and clarify the content in the standard.

Middle School: Biological Adaptation: Unity and Diversity

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-LS-4.1 Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.	**CCC-LS4-MS-1** Given images of ancient and present-day organisms, describe how the organism changed over time (e.g., wooly mammoth and modern elephant).	**MS-LS-4.1.ECS** Given images of ancient and present-day organisms, describe how the organism changed over time (e.g., woolly mammoth and modern elephant) or went extinct (dinosaurs).	Added an additional example of extinction and spelling correction.
MS-LS-4.2 Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer relationships.	**CCC-LS4-MS-2** Compare fossils with present-day organisms with similar characteristics.	**MS-LS-4.2.ECS** Compare fossils with present-day organisms with similar characteristics.	
MS-LS-4.3 Analyze visual evidence to compare patterns of similarities in the anatomical structures across multiple species of similar classification levels to identify relationships.	**CCC-LS4-MS-3** Compare the similarities of organisms within a similar classification (e.g., genus, species).	**MS-LS-4.3.ECS** Compare the similarities of organisms ~~within a similar classification (e.g., genus, species)~~ across multiple species.	A more appropriate level of understanding for students with significant cognitive disabilities.
MS-LS-4.4 Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.	**CCC-LS4-MS-4** Describe a trait in a population that would help organisms survive in a specific environment (e.g., wolf surviving in Yellowstone Park better than in a desert environment).	**MS-LS-4.4 ECS** Describe a trait in a population that would help organisms survive in a specific environment ~~(e.g., wolf surviving in Yellowstone Park better than in a desert environment)~~.	Removing inaccurate example

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-LS-4.5 Obtain, evaluate, and communicate information about how technologies allow humans to influence the inheritance of desired traits in organisms.	**CCC-LS4-MS-5** Use information to describe selective breeding as a process that allows the best traits to be chosen.	**MS-LS-4.5.ECS** ~~Use information to d~~Describe selective breeding as a process that allows the best traits to be chosen.	Simplified language
MS-LS-4.6 Use mathematical models to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.	**CCC-LS4-MS-6** Given a description of an environment, identify the animals or plants within a species that are most likely to survive.	~~**CCC-LS4-MS-6** Given a description of an environment, identify the animals or plants within a species that are most likely to survive.~~	This standard is not clearly aligned to the ICS and may not be relevant to students with significant cognitive disabilities.

MIDDLE SCHOOL EARTH AND SPACE SCIENCE – ESS

Middle School: Earth's Place in the Universe

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-ESS-1.1 Develop and use a model of the Earth-Sun-Moon system to describe the cyclic patterns of lunar phases, eclipses of the Sun and Moon, and seasons.	**CCC-ESS1-MS-1** Use a model to identify Earth's seasons and relate them to Earth's tilt and revolution around the sun	**MS-ESS-1.1.ECS** Use a model to identify Earth's seasons and relate them to Earth's tilt and revolution around the sun.	
MS-ESS-1.2 Develop and use a model to describe the role of gravity in the orbital motions within galaxies and the solar system.	**CCC-ESS1-MS-2** Describe the motions of all objects in the solar system that occur due to the gravitational force of the sun. Our solar system is within the Milky Way galaxy which is one of many galaxies.	**MS-ESS-1.2-ECS** Describe the orbital motions of ~~all~~ objects in the solar system. ~~that occur due to the gravitational force of the sun. (Our solar system is within the Milky Way galaxy which is one of many galaxies.)~~	Simplified content to focus on motion of objects in our solar system.
MS-ESS-1.3 Analyze and interpret data to determine scale properties of objects in the solar system.	**CCC-ESS1-MS-3** Use data to order the planets based on their size or distance from the sun.	**MS-ESS-1.3.ECS** Use data to order the planets based on their size or distance from the sun.	
MS-ESS-1.4 Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to analyze Earth's history.	**CCC-ESS1-MS-4** Identify the relative age of fossils based on their location in a column of rock layers.	**MS-ESS-1.4.ECS** Identify the relative age of fossils based on their location in a column of rock layers.	

Middle School: Earth's Systems

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-ESS-2.1 Develop a model to describe the cycling of Earth's materials and the internal and external flows of energy that drive the rock cycle processes.	**CCC-ESS2-MS-1** Describe how heat from Earth's core powers the rock cycle. Describe how the water cycle impacts the rock cycle (weathering and erosion).	**MS-ESS-2.1.ECS** ~~Describe how heat from Earth's core powers~~ Develop a model of the rock cycle. ~~Describe how the water cycle impacts the rock cycle (weathering and erosion).~~	Aligned to the ICS because it did not include the water cycle. Simplified the language.
MS-ESS-2.2 Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.	**CCC-ESS2-MS-2** Given a scenario, describe which process (weathering, erosion, deposition) contributed to the change of Earth's surface.	**MS-ESS-2.2.ECS** ~~Given a scenario, d~~Describe the ~~which~~ processes that ~~(weathering, erosion, deposition)~~ contribute~~d~~ to ~~the~~ changes in ~~of~~ Earth's surface.	Changed the wording to more closely align with the ICS standard's focus.
MS-ESS-2.3 Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.	**CCC-ESS2-MS-3** Use maps to show how the shapes of continents fit together as evidence of plate motions.	**MS-ESS-2.3.ECS** Use maps to show how the shapes of continents fit together as evidence of plate motions.	
MS-ESS-2.4 Develop a model to describe the cycling of water through Earth's systems driven by energy from the Sun and the force of gravity.	**CCC-ESS2-MS-4** Describe the parts of the water cycle.	**MS-ESS-2.4.ECS** Describe the parts of the water cycle.	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-ESS-2.5 Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.	**CCC-ESS2-MS-5** Describe weather conditions to predict local weather patterns.	**MS-ESS-2.5.ECS** Describe how weather conditions ~~to predict local weather patterns.~~ (humidity, temperature, precipitation, and wind) can change over time and move from one place to another.	Simplified content to focus on understanding what weather is and how it can change.
MS-ESS-2.6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.	**CCC-ESS2-MS-6** Describe how climate is determined in an area based on location, shape of land, and distance from water.	**MS-ESS-2.6.ECS** Describe how unequal heating of the Earth (poles vs equator) causes regional climate zones. ~~climate is determined in an area based on location, shape of land, and distance from water.~~	Changed extended standard to better align with the intent of the ICS standard.

Middle School: Earth and Human Activity

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
MS-ESS-3.1 Construct a scientific explanation based on evidence for how Earth's mineral, energy, and groundwater resources are unevenly distributed as a	**CCC-ESS3-MS-1** Use data to explain why specific resources are limited.	**MS-ESS-3.1.ECS** Use data to explain why ~~specific~~ Earth's resources are ~~limited~~ unevenly distributed.	Clarification to better align with ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
result of past and current geologic processes.			
MS-ESS-3.2 Analyze and interpret data on natural hazards to forecast future catastrophic events to mitigate their effects.	**CCC-ESS3-MS-2** Classify natural hazards as "predictable" or "not yet predictable."	**MS-ESS-3.2.ECS** Classify natural hazards as "predictable" or "not yet predictable."	
MS-ESS-3.3 Apply scientific practices to design a method for monitoring human activity and increasing beneficial human influences on the environment.	**CCC-ESS3-MS-3** Match human activities with their effect on Earth.	**MS-ESS-3.3.ECS** Design a solution to conserve and/or protect earth's resources. ~~Match human activities with their effect on Earth.~~	Simplified ICS. Added standard so students could be engaged in conversation of making change for our planet.
MS-ESS-3.4 Construct an argument based on evidence for how changes in human population and per-capita consumption of natural resources positively and negatively affect Earth's systems.	**CCC-ESS3-MS-4** Link population increases to a greater need for consumption of resources.	~~**CCC-ESS3-MS-4** Link population increases to a greater need for consumption of resources.~~	Over emphasis of content with other standards. Population impact will be further studied in high school.
MS-ESS-3.5 Ask questions to interpret evidence of the factors that cause climate variability throughout Earth's history.	**CCC-ESS3-MS-5** Use data (numerical, graphical, or pictorial) as evidence of rising temperatures over the last 100 years.	**MS-ESS-3.5.ECS** Use data (numerical, graphical, or pictorial) as evidence of climate variability ~~rising temperatures~~ throughout ~~over the last 100 years~~ geologic history.	Better aligned it to the ICS.

HIGH SCHOOL LIFE SCIENCE – LS

High School: From Molecules to Organisms: Structures and Processes

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-LS-1.1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	**CCC-LS1-HS-1** Explain that the DNA in a cell's nucleus is the genetic code that creates proteins that determine a cell's function.	**HS-LS-1.1.ECS** Explain that the structure of DNA encodes ~~in a cell's nucleus is the genetic code that creates proteins that determine a cell's function.~~ information that creates proteins which carry out the essential functions of life.	Better alignment to the ICS.
HS-LS-1.2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.	**CCC-LS1-HS-2** Use a model to explain the function of a body system and identify the major organ in the system.	**HS-LS-1.2.ECS** Use a model to explain the function of a body system and identify the major organs in the system.	Grammatical improvement.
HS-LS-1.3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	**CCC-LS1-HS-3** Sequence the steps in an investigation to show how an organism reacts to stimuli (e.g., eyes reacting to light, heart or lungs reacting to exercise).	**HS-LS-1.3.ECS** ~~Sequence the steps in~~ Conduct an investigation to show how an organism reacts to stimuli (e.g., eyes reacting to light, heart or lungs reacting to exercise).	Better alignment to the ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-LS-1.4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	**CCC-LS1-HS-4** Use a model to explain what happens during cell division.	**HS-LS-1.4.ECS** Use a model to explain what happens during cell division (mitosis).	Better alignment to the ICS.
HS-LS-1.5 Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	**CCC-LS1-HS-5** Use a model to identify the inputs that go into the plant (e.g., sunlight, water) and the outputs from the plant (e.g., food, oxygen) during photosynthesis (for example, fill in the missing part of the model).	**HS-LS-1.5.ECS** Use a model to ~~identify the inputs that go into the plant (e.g., sunlight, water) and the outputs from the plant (e.g., food, oxygen) during photosynthesis (for example, fill in the missing part of the model).~~ illustrate that photosynthesis transforms light energy into stored energy.	Better alignment to the ICS.
HS-LS-1.6 Construct an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	**CCC-LS1-HS-6** Use a model to identify that the elements that make up sugar molecules can be used to form other molecules (e.g., amino acids, DNA, proteins).	**HS-LS-1.6.ECS** Use a model to identify that the elements that make up sugar molecules can be used to form other molecules ~~(e.g., amino acids, DNA, proteins)~~.	Simplifying to allow for more level appropriate applications.
HS-LS-1.7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and	**CCC-LS1-HS-7** Use a model of cellular respiration to explain	**HS-LS-1.7.ECS** Use a model of cellular respiration to explain	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
oxygen molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy.	the input and output of the process.	the input and output of the process.	

High School: Ecosystems: Interactions, Energy, and Dynamics

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-LS-2.1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	**CCC-LS2-HS-1** Use data to determine if the food supply present in an ecosystem can sustain a specified increase in the number of organisms, or populations of organisms, eating that food supply in an ecosystem.	**HS-LS-2.1.ECS** Use data to determine if the food supply present in an ecosystem can sustain a specified increase in the number of organisms in a population~~, or populations of organisms, eating that food supply in an ecosystem~~.	Better alignment to the ICS.
HS-LS-2.2 Use mathematical representations to support explanations that biotic and abiotic factors affect biodiversity at different scales within an ecosystem.	**CCC-LS2-HS-2** Use data or a graphical representation to describe the relationship between population size and the availability of resources in an ecosystem.	~~**HS-LS-2.2.ECS** Use data or a graphical representation to describe the relationship between population size and the availability of resources in an ecosystem.~~	Duplication of core idea from standard HS-LS-2.1ECS
HS-LS-2.3 Construct an explanation using mathematical representations to support claims for the flow of energy through trophic	**CCC-LS2-HS-4** Create a food web that shows the	**HS-LS-2.3.ECS** Use a food chain/web to complete an energy pyramid. ~~Create a~~	Better alignment to the ICS. This strand explored matter at the middle school level and

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
levels and the cycling of matter in an ecosystem.	movement of matter and energy within an ecosystem	~~food web that shows the movement of matter and energy within an ecosystem.~~	added energy at the high school level.
HS-LS-2.4 Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	**CCC-LS2-HS-5** Given a model, describe the role of carbon during photosynthesis and respiration as it moves through the environment.	**HS-LS-2.4.ECS** Given a model, describe the ~~role of carbon during photosynthesis and respiration as it moves through the environment.~~ carbon cycle.	Simplified language for clarity.
HS-LS-2.5 Evaluate the claims, evidence, and reasoning that changing the conditions of a static ecosystem may result in a new ecosystem.	**CCC-LS2-HS-6** Classify natural and human-initiated changes in the physical environment that can affect a population.	**HS-LS-2.5.ECS** Describe how changes in the physical environment can affect an ecosystem. ~~Classify natural and human-initiated changes in the physical environment that can affect a population.~~	Captures the core idea of ICS better.
HS-LS-2.6 Design, evaluate, and/or refine practices used to manage a natural resource based on direct and indirect influences of human activities on biodiversity and ecosystem health.	**CCC-LS2-HS-7** Identify actions that can be taken to preserve or restore the environment.	**HS-LS-2.6.ECS** Identify actions that can be taken to preserve ~~or restore the environment~~ biodiversity.	Better alignment to the ICS.
HS-LS-2.7 Evaluate the evidence for the role of group behavior on individual and species' ability to survive and reproduce.	**CCC-LS2-HS-8** Given a group behavior, explain how that behavior helps individuals	**HS-LS-2.7.ECS** Given a group behavior, explain how that behavior helps individuals	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
	and species survive and reproduce.	and species survive and reproduce.	

High School: Heredity: Inheritance and Variation of Traits

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-LS-3.1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	**CCC-LS3-HS-1** Explain how traits (genes) are passed from one generation to the next through DNA.	**HS-LS-3.1.ECS** Explain ~~how~~ that traits (genes) are passed from one generation to the next through DNA.	Simplification is a more appropriate level of difficulty.
HS-LS-3.2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	**CCC-LS3-HS-2** Use a model to explain how new genetic combinations are a result of meiosis, DNA replication errors, or mutations caused by environmental factors.	**HS-LS-3.2.ECS** ~~Use a model to explain how~~ Identify that variations in offspring result from new genetic combinations ~~are a result of~~ (meiosis). (e.g., difference among siblings)~~, DNA replication errors, or mutations caused by environmental factors.~~	Simplification is a more appropriate level of difficulty.
HS-LS-3.3 Apply concepts of probability and statistical analysis to explain the variation			

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
and distribution of expressed traits in a population.			

High School: Biological Adaptation: Unity and Diversity

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-LS-4.1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	**CCC-LS4-HS-1** Using descriptions and pictures, determine the sequential development pattern from a fossil to a present-day organism.	**HS-LS-4.1.ECS** Using descriptions and pictures, determine the sequential development pattern from a fossil to a present-day organism.	
HS-LS-4.2 Construct an explanation based on evidence that the process of evolution, through the mechanism of natural selection, primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	**CCC-LS4-HS-2** Determine which factor (e.g., an inherited genetic variation, limited resources, organisms that were more fit to survive in an environment) resulted in a specific adaptation within a species.	**HS-LS-4.2.ECS** Explain that the process of evolution occurs through natural selection. ~~Determine which factor (e.g., an inherited genetic variation, limited resources, organisms that were more fit to survive in an environment) resulted in a specific adaptation within a species.~~	Simplified language for clarity and alignment to the ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-LS-4.3 Apply concepts of probability and statistical analysis to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	**CCC-LS4-HS-3** Given a scenario of similar organisms with different traits, predict which organism will likely survive (e.g., birds with different shaped beaks trying to eat insects).	~~**HS-LS-4.3.ECS** Given a scenario of similar organisms with different traits, predict which organism will likely survive (e.g., birds with different shaped beaks trying to eat insects).~~	Standard removed because content is not appropriate for students with significant cognitive impairments.
HS-LS-4.4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	**CCC-LS4-HS-4** Use evidence to explain that organisms that survive can pass on beneficial traits.	**HS-LS-4.4.ECS** Identify that advantageous traits become more common in populations (e.g., giraffe neck length increasing). ~~Use evidence to explain that organisms that survive can pass on beneficial traits.~~	Simplified language for clarity and alignment to the ICS.
HS-LS-4.5 Evaluate models that demonstrate how changes in an environment may result in the evolution of a population of a given species; the emergence of new species over generations; or the extinction of other species due to the processes of genetic drift, gene flow, mutation, and natural selection.	**CCC-LS4-HS-5** Describe an environmental change that will result in changes in the population of organisms.	**HS-LS-4.5.ECS** Describe an environmental change that will result in changes in the population of organisms.	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
No longer an ICS to align with this ECS	**CCC-LS4-HS-6** Use data (pictorial, graphical, or tabular) to determine the effectiveness of a strategy to protect a species.	~~**CCC-LS4-HS-6** Use data (pictorial, graphical, or tabular) to determine the effectiveness of a strategy to protect a species.~~	Removed due to no longer having an ICS to align with.

HIGH SCHOOL PHYSICAL SCIENCE – CHEMISTRY – PSC

High School: Structure and Properties of Matter

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSC-1.1 Develop models to describe the atomic composition of simple molecules and extended structures.	**CCC-PSC1-HS-1** Use a model to show how atoms combine to form simple molecules (O2) or complex molecules (NaCl or CO2).	**HS-PSC-1.1.ECS** Use a model to show how atoms combine to form simple molecules (O~~2~~$_2$) or complex molecules (NaCl or CO~~2~~$_2$).	Grammar corrections.
HS-PSC-1.2 Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.		**HS-PSC-1.2.ECS** Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	Content relevant for all students and the ability level of ICS is appropriate.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSC-1.3 Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrostatic forces between particles.		**HS-PSC-1.3.ECS** Use models to distinguish between ionic, covalent, and metallic compounds based on the types of bonding between their atoms.	Content relevant for all students. Captures the core idea of ICS while adjusting the difficulty level.
HS-PSC-1.4 Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and the various modes of radioactive decay.		**HS-PSC-1.4.ECS** Use a simple model to show the difference between fusion and fission.	Content relevant for all students Captures the core idea of ICS while adjusting the difficulty level.
HS-PSC-1.5 Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.			

High School: Chemical Reactions

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSC-2.1 Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.			
HS-PSC-2.2 Develop a model to illustrate that the energy transferred during an exothermic or endothermic chemical reaction is based on the bond energy difference between bonds broken (absorption of energy) and bonds formed (release of energy).		**HS-PSC-2.2.ECS** Use presented evidence to determine if a reaction has released (exothermic) or absorbed (endothermic) thermal energy.	Allow students exposure to the concept at a concrete level.
HS-PSC-2.3 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.	**CCC-PSC2-HS-3** Identify increasing the amount of reactants or increasing the temperature as ways to speed up a chemical reaction.	**HS-PSC-2.3.ECS** Identify that increasing the amounts of reactants or increasing the temperature ~~as~~ are ways to speed up a chemical reaction.	Grammar corrections
HS-PSC-2.4 Use mathematical representations to support the claim that the number and type of atoms, and therefore mass, are conserved during a chemical reaction.	**CCC-PSC2-HS-4** Recognize that when chemicals change, new material is formed after the reaction with equivalent mass/atoms before and after.	**HS-PSC-2.4.ECS** Recognize that when ~~chemicals change,~~ a chemical reaction occurs mass (number of atoms) is conserved. ~~new material is~~	Clarification of language

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
		~~formed after the reaction with equivalent mass/atoms before and after.~~	

High School: Energy

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSC-3.1 Ask questions to clarify the idea that electromagnetic radiation can be described either by a wave model or a particle model.			
HS-PSC-3.2 Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.			
HS-PSC-3.3 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects).			

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSC-3.4* Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy. **---OPTIONAL**			
HS-PSC-3.5 Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).		**HS-PS-3.5.ECS** With guidance and support, apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	Allow students exposure to the concept at a concrete level.

HIGH SCHOOL PHYSICAL SCIENCE – PHYSICS – PSP

High School: Motion and Stability: Forces and Interactions

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSP-1.1 Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.		**HS-PSP-1.1.ECS** Predict how the motion (velocity and acceleration) of objects with different masses will change when acted on by forces.	Allow students exposure to the concept at a concrete level.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSP-1.2 Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.			
HS-PSP-1.3 Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	**CCC-PSP1-HS-3** Use models to predict how impact is minimized when protective components are included.	**HS-PSP-1.3.ECS** Use models to predict how impact is minimized when protective components are included.	
HS-PSP-1.4 Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.		**HS-PSP-1.4.ECS** Predict how the motion of objects with different masses will change when acted on by gravitational forces.	Allow students exposure to the concept at a concrete level.
HS-PSP-1.5 Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.		**HS-PSP-1.5.ECS** Conduct an investigation to observe the behavior of an electromagnet.	Allow students exposure to the concept at a concrete level.
HS-PSP-1.6 Communicate scientific and technical information about why the			

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
molecular-level structure is important in the functioning of designed materials.			

High School: Energy

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSP-2.1 Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.			
HS-PSP-2.2 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects).			
HS-PSP-2.3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.		**HS-PSP-2.3.ECS** Design and/or build a device that converts one form of energy into another form of energy.	Allow students exposure to the concept at a concrete level.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSP-2.4 Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).		**HS-PSP-2.4.ECS** With guidance and support, apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	Allow students exposure to the concept at a concrete level.
HS-PSP-2.5 Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.	**CCC-PSP2-HS-5** Model magnetic behavior based on force (e.g., stronger magnets versus weaker magnets; number of paper clips one magnet can hold versus another.)	**HS-PSP-2.5.ECS** Model magnetic behavior based on force (e.g., stronger magnets versus weaker magnets; number of paper clips one magnet can hold versus another.)	

High School: Waves

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSP-3.1 Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.	**CCC-PSP3-HS-1** Compare wave diagrams to identify differences in frequency, wavelength, and amplitude through media.	**HS-PSP-3.1.ECS** Compare wave diagrams to identify differences in frequency, wavelength, and amplitude through media.	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-PSP-3.2 Evaluate questions about the advantages of using digital transmission and storage of information.	**CCC-PSP3-HS-2** Identify an advantage or disadvantage of a specific digital information technology.	**HS-PSP-3.2.ECS** Identify an advantage or disadvantage of a specific digital information storage technology.	Better alignment with ICS.
HS-PSP-3.3 Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.			
HS-PSP-3.4 Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.			
HS-PSP-3.5 Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.		**HS-PSP-3.5.ECS** Communicate information that some technological devices use waves to transmit and capture information.	Allow students exposure to the concept at a concrete level.

HIGH SCHOOL EARTH AND SPACE SCIENCE – ESS

High School: Earth's Place in the Universe

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-ESS-1.1 Develop a model based on evidence to illustrate the life span of the Sun and the role of nuclear fusion in the Sun's core to release energy that eventually reaches Earth in the form of radiation.	**CCC-ESS1-HS-1** Use a model to explain that the energy released from the sun's core warms the Earth and provides the surface of the Earth with light.	**HS-ESS-1.1.ECS** Use a model to explain that the energy released from the sun's core warms the Earth and provides the surface of the Earth with light.	
HS-ESS-1.2 Construct an explanation of the current model of the origin of the universe based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	**CCC-ESS1-HS-2** Use evidence to explain that the motion of distant galaxies is one way we know that the universe is expanding from its origin.	**HS-ESS-1.2.ECS** Use evidence to explain that the motion of distant galaxies is one way we know that the universe is expanding from its origin.	
HS-ESS-1.3 Communicate scientific ideas about the way stars, over their life cycle, transform elements.	**CCC-ESS1-HS-3** Use a model to explain that stars produce elements (including hydrogen, helium, and iron) during their life cycles.	**HS-ESS-1.3.ECS** Use a model to explain that stars produce elements (including hydrogen, helium, and iron) during their life cycles.	
HS-ESS-1.4 Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	**CCC-ESS1-HS-4** Use data to predict the motion of an object with a consistent orbit.	**HS-ESS-1.4.ECS** ~~Use data to p~~ Predict the motion of an object with a consistent orbit.	Captures the core idea of ICS while adjusting the difficulty level.
HS-ESS-1.5 Evaluate evidence of the past and current movements of continental and	**CCC-ESS1-HS-5** Explain that the youngest rocks are	**HS-ESS-1.5.ECS** Explain that the youngest rocks are	Clarification of language.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	formed as tectonic plates move apart.	formed ~~as~~ where tectonic plates move apart.	
HS-ESS-1.6 Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.			

High School: Earth's Systems

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-ESS-2.1 Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.	**CCC-ESS2-HS-1** Use models to demonstrate the results of surface and internal processes (e.g., mountains, valleys, sea mounts, volcanoes).	**HS-ESS-2.1.ECS** Use models to demonstrate the results of surface and internal processes (e.g., mountains, valleys, river basins, ~~sea mounts,~~ mid-ocean ridges, volcanoes).	More relatable examples.
HS-ESS-2.2 Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.			

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-ESS-2.3 Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.		**HS-ESS-2.3.ECS** Describe a model of the Earth's interior.	Allow students exposure to the concept at a concrete level.
HS-ESS-2.4 Use a model to describe how variations in the flow of energy into and out of Earth's systems result in variations in climate.			
HS-ESS-2.5 Plan and conduct an investigation of how the chemical and physical properties of water contribute to the mechanical and chemical mechanisms that affect Earth materials and surface processes.	**CCC-ESS2-HS-5** Use a model to explain how water changes Earth's materials and surface processes through erosion.	**HS-ESS-2.5.ECS** ~~Use a model to explain~~ Investigate how water changes Earth's materials and surface processes ~~through erosion~~.	Allow students exposure to the concept at a concrete level, and better aligns to ICS.
HS-ESS-2.6 Develop a model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.		**HS-ESS-2.6.ECS** With guidance and/or support, develop a model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.	Content relevant for all students Already appropriate at the ICSS level.
HS-ESS-2.7 Construct an argument based on evidence about the simultaneous	**CCC-ESS2-HS-7** Explain how life on Earth changes as Earth's systems change (Note: limit to common occurrences	**HS-ESS-2.7.ECS** Explain how life on Earth changes as Earth's systems change (Note: limit to common occurrences	

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
coevolution of Earth's systems and life on Earth.	and simple cause/effect relationships).	and simple cause/effect relationships).	

High School: Earth and Human Activity

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
HS-ESS-3.1 Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	**CCC-ESS3-HS-1** Evaluate how the availability of natural resources and/or the occurrence of natural hazards influence human activity.	**HS-ESS-3.1.ECS** Evaluate how the availability of natural resources and/or the occurrence of natural hazards influence human activity.	
HS-ESS-3.2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.		**HS-ESS-3.2.ECS** Evaluate the pros and cons of design solutions for use and management of energy and mineral resources.	Allow students exposure to the concept at a concrete level.
HS-ESS-3.3 Illustrate relationships among management of natural resources, the sustainability of human populations, and biodiversity.			
HS-ESS-3.4 Evaluate or refine a scientific or technological solution that mitigates or	**CCC-ESS3-HS-4** Predict how given technologies (e.g., recycling plants, devices to reduce emissions, etc.) will	**HS-ESS-3.4.ECS** Predict how given technologies (e.g., recycling plants, devices to reduce emissions, etc.) will	Better alignment with ICS.

Idaho Content Standards (ICS)	Current Extended Content Standards (ECS)	Proposed Alignment Revisions	Rationale for Revisions
enhances human influences on natural systems.	reduce the effect of human activities on natural systems based on a scenario.	~~reduce the effect of human activities~~ mitigate or enhance human influences on natural systems ~~based on a scenario~~.	
HS-ESS-3.5 Analyze geoscience data and the results from global climate models to make an evidence-based explanation of how climate variability can affect Earth's systems on a global and regional scale.	**CCC-ESS3-HS-5** Predict environmental change based on current climate data.	**HS-ESS-3.5.ECS** Predict environmental change based on ~~current climate data~~ global climate models.	Better alignment with ICS.
HS-ESS-3.6 Communicate how relationships among Earth systems are being influenced by human activity.	**CCC-ESS3-HS-6** Use a model to explain the influence of two or more human activities on Earth's systems.	**HS-ESS-3.6.ECS** Communicate how relationships among Earth systems are being influenced by human activity. ~~Use a model to explain the influence of two or more human activities on Earth's systems.~~	Replaced ECS with language from the ICS for better alignment.