WDE
Opportunity Through Education
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WY-ALT

2022+ WY-ALT Science Assessment Blueprint

ALIGNED TO 2018 WYOMING SCIENCE EXTENDED STANDARDS

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OPERATIONAL ON WY-ALT SCIENCE TESTS BEGINNING SCHOOL YEAR 2021-22

2018 Wyoming Science Extended Standards

Gr. 4, 8, & 10 WY-ALT Science Blueprint Snapshot

% Range by Domain on the WY-ALT Science Assessment

Grade	Physical Science	Life Science	Earth & Space Science
4	38-50%	18-25%	31-41%
8	31-38%	31-38%	25-35%
10	28-35%	34-47%	18-25%

The WY-ALT Science Assessment will consist of 32 operational items, which are used to provide a score, and 8 field-test items which are not included in calculating the student's score.

Wyoming's alternate assessment, WY-ALT, is designed for a small number of students with the most significant cognitive disabilities. This assessment is part of a statewide instructionally supportive assessment system that complies with the requirements of federal accountability law and the Individuals with Disabilities Education Improvement Act of 2004 (IDEA).

The WY-ALT Assessment is aligned to the Wyoming Extended Standards. The 2018 Science Extended Standards are an extension of the 2016 Wyoming Science Standards and designed to allow students to demonstrate their knowledge and skills in an appropriately rigorous assessment. This WY-ALT Science Blueprint also mirrors the 2021+ WY-TOPP Science Blueprint.

WY-ALT Gr. 4 Science Blueprint

2018 Wyoming Science Extended Standards

32 Items Total

PHYSICAL SCIENCE [38-50%]

PS3 Energy
SES-4-PS3-1 Demonstrate how the speed of an object is related to the energy of the object.
SES-4-PS3-2 Make observations to describe that heat energy can be transferred from place to place.
SES-4-PS3-3 Demonstrate how a change in energy occurs when objects collide.
SES-4-PS3-4 Identify devices that use different types of energy.

PS4 Waves and Their Applications in Technologies for Information Transfer
SES-4-PS4-2 Use a model to demonstrate that light reflects from some objects.

LIFE SCIENCE [18-25%]

LS1 From Molecules to Organisms: Structure and Processes
SES-4-LS1-1 Use a model to demonstrate that plants and animals have structures that support their survival.
SES-4-LS1-2 Use a model to describe that animals respond different types of stimuli.

EARTH & SPACE SCIENCE [31-41%]

ESS1 Earth's Place in the Universe
SES-ESS-1-1 Describe that landscapes can change.

ESS2 Earth's Systems
SES-ESS-2-1 Use a model to describe an erosion event.
SES-ESS-2-2 Recognize different kinds of information, from maps, that describe Earth's features.

ESS3 Earth and Human Activity
SES-ESS-3-2 Recognize the impacts of natural Earth processes on humans.

WY-ALT Gr. 8 Science Blueprint

2018 Wyoming Science Extended Standards

32 Items Total

PHYSICAL SCIENCE [31-38%]

PS1 Matter and Its Interactions

SES-MS-PS1-1 Model how simple parts can be put together to make more complex structures.
SES-MS-PS1-2 Make observations of substances interacting to determine if a chemical reaction has occurred.
SES-MS-PS1-5 Show that the amount of a substance used in a reaction does not change even if the new substance looks different.

PS2 Motion and Stability: Forces and Interactions

SES-MS-PS2-1 Investigate, and describe, the direction of motion of two colliding objects of equal and unequal masses. [PS2-2 incorporated]
SES-MS-PS2-4 Use surroundings and information provided to predict the effects of gravity.

PS3 Energy

SES-MS-PS3-1 Identify changes in kinetic energy on a labeled diagram.
SES-MS-PS3-2 Identify differing amounts of potential energy on a labeled diagram.
SES-MS-PS3-5 Demonstrate how kinetic energy is transferred between objects.

PS4 Waves and Their Applications in Technologies for Information Transfer

SES-MS-PS4-1 Identify larger amplitude waves as having more energy.

LIFE SCIENCE [31-38%]

LS1 From Molecules to Organisms: Structure and Processes

SES-MS-LS1-1 Identify differences between a living and non-living thing.
SES-MS-LS1-2 Explore, and identify, the structure and function of major parts of a cell.
SES-MS-LS1-3 Model that a body system is made up of interacting organs.
SES-MS-LS1-5 Identify environmental conditions needed for successful growth of organisms.
SES-MS-LS1-6 Model what a plant uses, what it creates, and what the plant releases during photosynthesis.

LS2 Ecosystems: Interactions, Energy, and Dynamics

SES-MS-LS2-1 Recognize the effects of resource availability on individuals and on populations.
SES-MS-LS2-3 Explain that energy moves among living and non-living parts of an ecosystem.
SES-MS-LS2-4 Recognize how changes to an ecosystem affect populations.

LS3 Heredity: Inheritance and Variation of Traits

SES-MS-LS3-1 Explain that organisms have differences in their traits that can affect their survival. [LS4-4 incorporated]
SES-MS-LS3-2 Students will investigate, and identify, features of living organisms that come from their parents.

LS4 Biological Evolution: Unity and Diversity

SES-MS-LS4-1 Compare fossils with plants and animals that exist today.
SES-MS-LS4-6 Demonstrate understanding that natural selection changes distribution of traits in a population over time.

EARTH & SPACE SCIENCE [25-35%]

ESS1 Earth's Place in the Universe

SES-MS-ESS1-1 Model the Earth-sun-moon positions for lunar phases, eclipses of the sun and moon, and seasons.
SES-MS-ESS1-2 Model that the solar system is a collection of many varied objects, held together by gravity, that move in predictable ways.
SES-MS-ESS1-4 Organize, or model, evidence from rocks and rock strata within the geologic time scale to demonstrate Earth's history.

ESS2 Earth's Systems

SES-MS-ESS2-1 Model the cycling processes involved in the creation of various rock forms.
SES-MS-ESS2-3 Compare locations of fossils, rocks, continental shapes, and structures as evidence of past plate motions.
SES-MS-ESS2-4 Identify the processes involved in the cycling of Earth's water.

ESS3 Earth and Human Activity

SES-MS-ESS3-1 Identify how the levels of Earth's resources can change over time.
SES-MS-ESS3-2 Recognize that some natural hazards (e.g., volcanic eruptions, severe weather) can be predicted while others are not currently predictable.
SES-MS-ESS3-3 Model ways that humans can minimize their impact on the environment.

WY-ALT Gr. 10 Science Blueprint

2018 Wyoming Science Extended Standards

32 Items Total

PHYSICAL SCIENCE [28-35%]

PS1 Matter and Its Interactions

SES-HS-PS1-1 Using a model, identify the parts of an atom (protons, neutrons, electrons).
SES-HS-PS1-2 Use a Periodic Table to identify the symbols and atomic numbers for five main group elements (1-20).
SES-HS-PS1-5 Conduct an investigation measuring temperature differences, while observing and recording the reactions.
SES-HS-PS1-8 Compare models which illustrate fusion, fission, and radioactive decay.

PS2 Motion and Stability: Forces and Interactions

SES-HS-PS2-1 Predict the outcome, when changing either mass or force, in an experiment using Newton's Second Law of Motion.
SES-HS-PS2-2 Demonstrate what happens to the velocity of an object when the mass of the object is increased.
SES-HS-PS2-3 Select between a variety of designs to minimize force on an object, during a collision, and record outcomes.

PS3 Energy

SES-HS-PS3-1 Demonstrate differences in the energy of a system when a component is changed.
SES-HS-PS3-3 Conduct an experiment to convert one form of energy to another form of energy.

PS4 Waves and Their Applications in Technologies for Information Transfer

SES-HS-PS4-1 Demonstrate that simple waves have a repeating pattern with a specific wavelength, frequency, and amplitude.

LIFE SCIENCE [34-47%]

LS1 From Molecules to Organisms: Structure and Processes

SES-HS-LS1-1 Construct a model of DNA.
SES-HS-LS1-2 Construct a model of hierarchical organization of interacting systems from smallest to largest.
SES-HS-LS1-3 Identify a feedback mechanism that helps maintain homeostasis.
SES-HS-LS1-4 Use a model to demonstrate mitosis.
SES-HS-LS1-5 Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.
SES-HS-LS1-6 Construct models of carbon-based molecules.
SES-HS-LS1-7 Use a model to demonstrate that energy can be transferred through breaking and forming bonds.

LS2 Ecosystems: Interactions, Energy, and Dynamics

SES-HS-LS2-2 Identify factors that affect biodiversity in different environments.
SES-HS-LS2-3 Construct models of matter and energy cycles. [LS2-4 incorporated]
SES-HS-LS2-5 Construct a model of the carbon cycle to include interaction with the atmosphere.
SES-HS-LS2-6 Demonstrate how a change in conditions can change an ecosystem.

LS3 Heredity: Inheritance and Variation of Traits

SES-HS-LS3-1 Identify traits that are passed from parent to offspring.
SES-HS-LS3-2 Demonstrate that mutations can occur in DNA.

LS4 Biological Evolution: Unity and Diversity

SES-HS-LS4-2 Demonstrate how a population can adapt to survive.
SES-HS-LS4-4 Demonstrate how a population can change based on natural selection.
SES-HS-LS4-5 Using evidence indicate the emergence of a new species over time.

EARTH & SPACE SCIENCE [18-25%]

ESS1 Earth's Place in the Universe

SES-HS-ESS1-3 Compare life cycles of other stars to our sun.
SES-HS-ESS1-5 Use models to explore the theory of plate tectonics.

ESS2 Earth's Systems

SES-HS-ESS2-4 Use a model to identify changes in the flow of energy that can change the climate.
SES-HS-ESS2-7 Explain how life on Earth had to adapt to changes in the atmosphere, hydrosphere, or geosphere.

ESS3 Earth and Human Activity

SES-HS-ESS3-1 Demonstrate how the availability of natural resources, the occurrence of natural hazards, and/or changes in climate have influenced human activity.
SES-HS-ESS3-5 Use global climate models to identify global, or regional, change in climate and associated future impacts to Earth systems.