

Wyoming Department of Education Required Virtual Education Course Syllabus

BIG HORN COUNTY SCHOOL DISTRICT

Program Name	WYCA	Content Area	Science
Course ID	CAEL76307	Grade Level	3
Course Name	Science 3 B	# of Credits	0.5
SCED Code	NoCourseSCED	Curriculum Type	Connections Academy

COURSE DESCRIPTION

Science provides a way for people to actively learn about the world around them. Throughout this course the student will continue to perform hands-on activities to explore organisms, investigate changes, and examine the solar system. The McGraw-Hill textbook, Science: A Closer Look, and the science kit are the primary resources for this course. The Earth science units detail Earth's composition and the relationships between the Earth, moon, and sun. The physical science unit explores the properties of matter. The student will also explore different careers in science and the scientific method.

In this course, the student will create a model to investigate how simple machines work, investigate why the moon's shape appears to change during the month, and delve into many more exciting experiments. The lessons in this course are designed to accommodate a variety of learning styles and to provide a variety of opportunities for the entire family to participate in the student's education. Some lessons, or groups of lessons, in each unit are activity-centered, which allows the student to engage the new concepts through exploration and discovery; others are more traditional, requiring the student to read, research, and reflect on the underlying theory.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK
3-LS2-1	Construct an argument that some animals form groups that help members survive.
3-LS3-1	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.
3-LS3-2	Use evidence to support the explanation that observable traits can be influenced by the environment.
3-LS4-1	Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.
3-LS4-2	Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.
3-LS4-3	Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
3-LS4-4	Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.
3-ESS2-1	Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
3-ESS2-2	Obtain and combine information to describe climates in different regions of the world.
3-ESS3-1	Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES
<p>Unit 1: Heredity</p> <p>In this unit, your student will explore traits that are inherited and those that are acquired. He will learn how similar traits can vary between individuals of the same species and how the environment can influence some traits. Your student will analyze inheritance scenarios and use evidence to identify inherited and acquired traits. He will also explain how environmental factors can affect traits.</p>	3-LS3-1, 3-LS3-2	<ul style="list-style-type: none"> Describe different kinds of traits that plants and animals inherit from their parents. Explain the difference between learned and inherited traits. Explain how a given trait may vary amongst individuals of a species. Support an argument with evidence that some traits may be influenced by the environment.

<p>Unit 2: Adaptations</p> <p>In this unit, your student will observe and describe physical and behavioral adaptations of animals. Your student will explain how the behaviors of animals, including the behavior of living in groups, help animals survive. He will explain and predict how variations in characteristics provide an advantage for survival or reproduction.</p>	<p>3-LS2-1, 3-LS4-2</p>	<ul style="list-style-type: none"> • Explain the difference between physical and behavioral adaptations. • Describe examples of behavioral adaptations that help animals survive, including the way some animals form groups. • Explain how variations in characteristics among animals of the same species can provide an advantage for survival or reproduction.
<p>Unit 3: Variation & Change</p> <p>In this unit, your student will learn why certain organisms thrive in a specific habitat while others do not. He will also explore what happens to organisms when their habitats change. Your student will analyze the impact of an environmental change on a specific habitat, evaluate potential solutions to an environmental problem, and discuss the merits of each solution with his peers.</p>	<p>3-LS4-3, 3-LS4-4</p>	<ul style="list-style-type: none"> • Construct an argument with evidence that in a specific environment some organisms thrive and others do not. • Describe changes to environments caused by living organisms. • Analyze changes in populations of certain species when the environment is changed. • Evaluate a solution to a problem caused by environmental change in which the types of plants and animals that live there are affected.
<p>Unit 4: Fossils and Evolution</p> <p>In this unit, students will understand the different ways fossils form. She will explain how studying fossils provides evidence about plants and animals of the past, as well as information about environmental change on Earth. Finally, she will compare fossil organisms to organisms living today and describe the general evolutionary patterns in the fossil record.</p>	<p>3-LS4-1</p>	<ul style="list-style-type: none"> • Using fossil evidence, support an argument for major environmental change in a given region. • Explain how studying fossils helps scientists learn about the way plants and animals lived long ago. • Demonstrate ways that fossils form. • Compare fossil organisms to currently living organisms.
<p>Unit 5: Seasonal Weather and Climate</p> <p>In this unit, your student will distinguish characteristics of weather and climate. She will learn the major biomes and compare and contrast biomes in different regions. She will also plan and conduct an engineering design problem to address weather related hazards.</p>	<p>3-ESS2-1, 3-ESS2-2, 3-ESS3-1</p>	<ul style="list-style-type: none"> • Describe and compare climates in different regions of the world. • Interpret graphs of temperature and rainfall in similar seasons of different climates. • Define a design problem concerning reducing impact of a weather related hazard, then generate and compare multiple solutions.