

Wyoming Department of Education Required Virtual Education Course Syllabus

BIG HORN COUNTY SCHOOL DISTRICT #1

Program Name	WYCA	Content Area	Science
Course ID	CAEL76379	Grade Level	4
Course Name	Science 4 B	# of Credits	0.5
SCED Code	NoCourseSCED	Curriculum Type	Connections Academy

COURSE DESCRIPTION

Science is an adventure in which everyone can take part! In this second semester course, the student will be participating in scientific investigations of many different forms including simple observations and experiments. Results from these investigations will provide information about the surrounding world. The McGraw-Hill textbook, Science: A Closer Look, and the science kit are the primary resources for this course.

The Earth Science units provide an opportunity for the student to investigate the solar system and the effects of different climates on Earth. The Physical Science units enable the student to explore the composition and use of different forms of energy. In this course the student will analyze the effect of warmed air on weather, explore chemical reactions, create a compound machine, and much, much more!

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK
4-LS1-2	Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.
4-ESS1-1	Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.
4-ESS2-1	Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
4-ESS2-2	Analyze and interpret data from maps to describe patterns of Earth's features.
4-ESS3-1	Obtain and combine information to describe that energy and fuels are derived from renewable and non-renewable resources and how their uses affect the environment.
4-ESS3-2	Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES
<p>Unit 1: Senses and the Brain In this unit, your student will learn how in animals information is sent from the senses to the brain. Your student will analyze how different kinds of information can change behavior. She will learn that when information from the environment or another living thing results in a response, that information is called a stimulus. She will also learn that reaction time refers to how fast a response occurs. Your student will model the system that allows animals to engage in appropriate behaviors.</p>	4-LS1-2	<ul style="list-style-type: none"> Explain how information is transferred from the senses to the brain. Compare the reaction time of different animals. Use a model to describe that different animals respond to stimuli in different ways.
<p>Unit 2: Weathering In this unit, your student will learn the major distinctions between weathering and erosion. He will define mechanical weathering. He will also investigate the role water, wind, and vegetation play in mechanical weathering.</p>	4-ESS2-1	<ul style="list-style-type: none"> Differentiate between weathering and erosion Investigate the role of water in mechanical weathering Describe the role of wind and vegetation in mechanical weathering
<p>Unit 3: Erosion and Landforms In this unit, your student will learn the causes of erosion and how weathering, erosion and deposition work together to form landforms. She will also learn how rock layers and fossils can tell us about Earth's changes. She will analyze and interpret physical and topographical maps.</p>	4-ESS1-1, 4-ESS2-1, 4-ESS2-2	<ul style="list-style-type: none"> Describe how the process of erosion and deposition creates landforms Use evidence from rock layers and fossils to describe changes in landscapes over time Analyze and interpret maps to describe patterns of Earth's features.
<p>Unit 4: Impact on Humans In this unit, Your student will learn about the impact of different natural disasters on humans. The student will learn that purposeful design can lead to building which are more stable during earthquakes.</p>	4-ESS3-2	<ul style="list-style-type: none"> Describe the impact of natural Earth processes such as earthquakes, volcanoes, floods, and erosion, on humans Generate and compare multiple solutions to reduce the impact of a natural disaster on humans

<p>Unit 5: Natural Energy Resources</p> <p>In this unit, your student will understand the different energy sources that provide energy for electricity, driving cars, and other aspects of daily life. He will explain the difference between renewable and non-renewable energy. He will know what fossil fuels are and analyze the environmental impacts associated with using fossil fuels.</p>	4-ESS3-1	<ul style="list-style-type: none">• Distinguish between renewable and non-renewable sources of energy• Explain the formation of fossil fuels• Analyze the environmental impact of sourcing and using fossil fuels
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