

Wyoming Department of Education Required Virtual Education Course Syllabus

BIG HORN COUNTY SCHOOL DISTRICT #1

Program Name	WYCA	Content Area	Science
Course ID	CAEL61614	Grade Level	2
Course Name	Science 2 B	# of Credits	0.5
SCED Code	NoCourseSCED	Curriculum Type	Connections Academy

COURSE DESCRIPTION

Studying science helps us understand the world around us as well as the world that existed before us. The McGraw-Hill textbook, Science: A Closer Look, and the science kit are the primary resources for this course. The student will study the major branches of science as he performs hands on activities. The Earth science units investigate Earth's weather patterns and seasons as well as the solar system. The physical science units analyze changes in matter and explore different forms of energy.

In this course, the student will compare the strength of different magnets, analyze the affect of sunlight on temperature, and do much, much more! 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 allow the student to engage the new concepts he encounters 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
2-PS1-1	Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
2-PS1-2	Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
2-PS1-3	Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.
2-PS1-4	Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.
2-LS2-1	Plan and conduct an investigation to determine if plants need sunlight and water to grow.
2-LS2-2	Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
2-LS4-1	Make observations of plants and animals to compare the diversity of life in different habitats.
2-ESS1-1	Use information from several sources to provide evidence that Earth events can occur quickly or slowly.
2-ESS2-2	Develop a model to represent the shapes and kinds of land and bodies of water in an area.
2-ESS2-3	Obtain information to identify where water is found on Earth and that it can be solid, liquid, or gas.
K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
K-2-ETS1-3	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES
<p>Unit 1: Observing Weather</p> <p>In this unit, your student will learn about weather. He will study temperature, wind, and precipitation, and he will learn about the water cycle and how it affects changes in weather. Your student will also learn how to predict the weather based on collected data.</p>	2-ESS2-3	<ul style="list-style-type: none"> Describe how weather is measured Illustrate and explain the water cycle Understand how weather can be predicted
<p>Unit 2: Earth and Space</p> <p>In this unit, your student will learn about Earth's place in space. She will study Earth's rotation and its orbit around the sun, and she will identify and describe the planets in the solar system. Your student will also complete an activity in which she will observe and record the moon's phases.</p>		<ul style="list-style-type: none"> Explain what causes day, night, and seasons Describe the planets in the solar system Identify the moon's phases

<p>Unit 3: Looking at Matter In this unit, your student will learn about matter. He will identify and compare solids, liquids, and gases; and he will compare and contrast different properties of matter. Your student will also practice recording data when he completes a sorting activity about solids and liquids.</p>	<p>2-PS1-1, 2-PS1-2</p>	<ul style="list-style-type: none"> • Define matter and its properties • Describe solids, liquids, and gases • Explain how matter is measured
<p>Unit 4: Changes in Matter In this unit, your student will learn about chemical and physical changes of matter. She will read how heat can change matter and how mixtures form. Your student will also make observations and communicate data when she completes a hands-on activity using cream.</p>	<p>2-PS1-4</p>	<ul style="list-style-type: none"> • Identify chemical changes in matter • Identify physical changes in matter • Observe how matter changes state
<p>Unit 5: How Things Move In this unit, your student will learn about forces, motion, and magnets. He will read about the forces of gravity and friction, and he will learn how to measure and record changes in a moving object's position. Your student will also complete an activity that investigates the speeds of different objects.</p>	<p>K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3, 2-PS1-2, 2-PS1-3, 2-ESS1-1, 2-ESS2-2, 2-LS2-2, 2-LS4-1</p>	<ul style="list-style-type: none"> • Describe the forces of gravity and friction • Explain an object's position and motion • Identify magnetic objects
<p>Unit 6: Using Energy In this final unit, your student will learn about energy. She will study heat, sound, light, and electricity, and she will learn how the sun provides heat to planets in the solar system. Your student will also practice measuring and comparing temperatures using thermometers.</p>	<p>K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3, 2-PS1-2, 2-PS1-3, 2-ESS1-1, 2-ESS2-2, 2-LS2-2, 2-LS4-1</p>	<ul style="list-style-type: none"> • Describe how Earth receives energy from the sun • Explain how sounds are produced • Identify properties of light and electricity