

Wyoming Department of Education Required Virtual Education Course Syllabus

BIG HORN COUNTY SCHOOL DISTRICT #1

Program Name	WYCA	Content Area	Science
Course ID	CAEL76236	Grade Level	K
Course Name	Science K A	# of Credits	0.5
SCED Code	NoCourseSCED	Curriculum Type	Connections Academy

COURSE DESCRIPTION

In this course, the student will explore the nature of science and how to solve problems, as well as investigate living and nonliving things. The student will learn how to study the surrounding world by observing, collaborating, and sharing with others. Using illustrations and labels, the student will identify the steps used to solve problems and use these steps to plan, design, and test a solution to a problem. Finally, the student will examine, describe, compare, and analyze the characteristics of living and nonliving things in order to complete portfolio assessments.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK
K-PS2-1	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.
K-PS2-2	Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.
K-PS3-1	Make observations to determine the effect of sunlight on Earth's surface.
K-PS3-2	Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.
K-ESS2-2	Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
K-ESS3-1	Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.
K-ESS3-2	Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.
K-ESS3-3	Communicate solutions that will manage the impact of humans on the land, water, air, and/or other living things in the local environment.

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES
Unit 1: The Nature of Science In this unit, your student will gain an understanding of what science is. Your student will learn how to study the world around him by making observations using his five senses. He will learn that working with others to ask questions and seek answers is an important part of the scientific process. In order to more accurately share his work with others, your student will create visual representations. He will also learn about the types of tools used for observation, data collection, and safety. This unit will culminate with an investigation throughout which your student will demonstrate the important steps involved in the scientific process.	K-PS2-1, K-PS3-2, K-ESS3-2	<ul style="list-style-type: none"> • Formulate questions and make accurate observations using the five senses • Identify the importance of collaborating with others to perform a fair scientific test • Discover ways to record, explain, and share information about observations and tests • Demonstrate how to use tools to make observations and collect information • Select the appropriate tools and safety rules to use when conducting science experiments
Unit 2: Solve Problems In this unit, your student will learn how to solve problems. She will learn the problem-solving steps of planning, designing, and testing in order to find a solution. Your student will also have the opportunity to share her solutions with others. This unit will culminate with a portfolio assessment involving the scientific process.	K-PS2-1, K-PS2-2, K-ESS3-3	<ul style="list-style-type: none"> • Identify a problem and predict possible solutions • Plan, create, and conduct an investigation • Construct accurate observations using the five senses • Record, display, and share information with others using drawings, photos, writings, and oral presentations

<p>Unit 3: Living and Nonliving Things</p> <p>In this unit, your student will explore the characteristics of living and nonliving things. Through comparisons, readings, and pictorial representations; he will learn that non-living things do not move or change on their own, and that living things can grow, change and move. He will compare and contrast different animals and plants and identify the essential needs of all living things. At the end of the unit, your student will complete a portfolio assessment that enables him to demonstrate his understanding of living and nonliving things.</p>	<p>K-PS3-1, K-ESS2-2, K-ESS3-1, K-ESS3-2, K-ESS3-3</p>	<ul style="list-style-type: none"> • Describe characteristics of living and nonliving things • Differentiate between living and nonliving things • Identify the essential needs of all living things • Compare characteristics of animals that make them alike and different from other animals • Compare characteristics of plants that make them alike and different from other plants
<p>Unit 4: Plants and Animals</p> <p>In this unit, the student will relate her prior knowledge about plants and animals to investigate how plants and animals change as they grow. The student will recognize the characteristics in animals that are passed on from parents to their babies. These characteristics help animals grow and change as they adapt to their environment, whether it be land or water. These skills will be assessed in a portfolio assessment in which the student observes and collects data on how plants and animals depend on the land, air and water.</p>	<p>K-PS3-1, K-ESS3-2</p>	<ul style="list-style-type: none"> • Classify young animals and their parents • Describe how animals, plants, and people change as they grow • Distinguish between plants and animals that live on land and in water • Observe and collect data to show the interdependence between plants, animals, humans, and the Earth