Wyoming Department of Education Required Virtual Education Course Syllabus

BIG HORN COUNTY SCHOOL DISTRICT #1

Program Name	WYCA	Content Area	Science
Course ID	CAEL76247	Grade Level	K
Course Name	Science K B	# of Credits	0.5
SCED Code	NoCourseSCED	Curriculum Type	Connections Academy

COURSE DESCRIPTION

In this course, the student will explore life, Earth, and physical science. The student will learn how to investigate using critical thinking skills. The student will answer questions about the Earth and the sky. In the final chapter, physical science, the student will utilize inquiry methods to explore objects, matter, and mixtures. Throughout this course, the student will enhance skills in language arts, mathematics, and computer literacy. In portfolio assessments, students may choose to chart weather observations over a period of time; observe and collect data on how plants and animals depend on the land, air and water; or observe and compare solids and liquids at room temperature.

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-LS1-1	Use observations to describe patterns of what plants and animals (including humans) need to survive.
K-ESS2-1	Use and share observations of local weather conditions to describe patterns over time.
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: More Plants and Animals In this unit, the student will relate his 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.	K-LS1-1, K-ESS2-1, K-ESS2-2, K-ESS3-1, K-ESS3-2, K-ESS3-3, K-LS1-1	• 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

Unit 2: Earth and Sky In this unit, your student will investigate Earth and the sky. She will be able to identify the resources that make up Earth and recognize how the sky changes from day to night. In addition, she will acknowledge the similarities and differences that occur in weather patterns. Lastly, your student will utilize math skills to collect and analyze weather data in a portfolio assessment. This integration of math and science skills will help your student make the real-world connection necessary to develop critical thinking skills.	K-PS3-1, K-PS3-2, K-ESS2-1, K-ESS3-1, K-ESS3-2, K-ESS3-3	• Investigate the Earth's covering • Identify characteristics of the day and night sky • Identify characteristics of each season • Summarize the relationship between the sun's position and the time of day • Compare and contrast weather patterns
Unit 3: All About Objects This unit is the foundation of physical science. As the student progresses through the lessons and activities, he will see how his five senses can help him describe, identify, and find uses for objects. The unit also provides opportunities for the student to sort and compare objects, important skills that cross multiple disciplines. The assessments in this unit will help the student relate information about objects to everyday life.	K-ESS3-3	• Observe and tell about objects using the five senses • Analyze and categorize objects by their composition and characteristics • Explore how various objects can be used based on their characteristics • Compare loud and soft sounds
Unit 4: Matter and Mixtures In this unit, your student will investigate the concept of matter as well as the three states of matter: solids, liquids, and gases. Each state of matter has different characteristics. Your student will see how liquids and gases take the shape of the container while solids keep their shape. The portfolio assessment will allow your student to observe changes in solids and liquids. Lastly, your student will study how matter can be mixed to create mixtures.	K-ESS3-3	• Describe and measure matter as a solid • Discover and investigate the properties of solids, liquids, and gases • Investigate how gases fill their containers • Observe changes in water caused by freezing, melting and boiling • Create and describe a mixture