

Wyoming Department of Education Required Virtual Education Course Syllabus

Natrona County School District # 1

Program Name	Natrona Virtual Learning	Content Area	SC
Course ID	NVA070001	Grade Level	K
Course Name	Science K	of Credits	
SCED Code	70001	Curriculum Type	K1 Inc

COURSE DESCRIPTION

Kindergarten students begin to develop observation skills as they learn about the five senses, the earth's composition, and the basic needs of plants and animals. Students will explore topics such as:

- My Body—the five senses; major organs and systems
- Plants and Animals—needs and habitats; conservationist Jane Goodall
- Measurement—size, height, length, weight, capacity, and temperature
- Matter—solid, liquid, and gas
- The Seasonal Cycle—changing weather in the seasons
- Our Earth—geographical features; taking care of the earth; environmentalist Rachel Carson
- Motion—pushes and pulls; magnets
- Astronomy—the earth, sun, moon, and stars; exploring space; astronauts Neil Armstrong and Sally Ride

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
SC4.1.1	Characteristics of Organisms: Students describe observable characteristics of living things, including structures that serve specific functions and everyday behaviors.
SC4.1.2.	Life Cycles of Organisms: Students sequence life cycles of living things, and recognize that plants and animals resemble their parents.
SC4.1.3.	Organisms and Their Environments: Students show connections between living things, their basic needs, and the environments.
SC4.1.4.	Properties of Earth Materials: Students investigate water, air, rocks, and soils to compare basic properties of earth materials.
SC4.1.5.	Objects in the Sky: Students describe observable objects in the sky and their patterns of movement.

SC4.1.6.	Changes in Earth and Sky: Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.
SC4.1.7.	Properties of Objects: Students classify objects by properties that can be observed, measured, and recorded, including color, shape, size, weight, volume, texture, and temperature.
SC4.1.8.	Changes in States of Matter: Students demonstrate that the processes of heating and cooling can change matter from one state to another.
SC4.1.9.	Physical Phenomena: Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism.
SC4.1.10	Position and Motion of Objects: Students demonstrate that pushing and pulling can change the position and motion of objects.
SC4.2.1.	Students research answers to science questions and present findings through appropriate means.
SC4.2.2.	Students use the inquiry process to conduct simple scientific investigations. Collect and organize data. Use data to construct simple graphs, charts, diagrams, and/or models. Draw conclusions and accurately communicate results, making connections to daily life. Pose or identify questions and make predictions. Conduct investigations to answer questions and check predictions.
SC4.2.3.	Students identify and use appropriate scientific equipment.
SC4.2.4.	Students properly use safety equipment and recognize hazards and safety symbols while practicing standard safety procedures.
SC4.3.1.	Students recognize the nature and history of science. Discuss how scientific ideas change over time. Describe contributions of scientists.
SC4.3.2.	Students recognize how scientific information is used to make decisions. Identify and describe local science issues, such as environmental hazards or resource management. Suggest feasible solutions and personal action plans to address an identified issue.

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS

Observing My World Observing My World		Name the five senses. Explain that a scientist observes. Explore concepts to be addressed during the year in Science K. Describe your observations, using one sense at a time.
Observing My World A Closer Look		Compare observations of small objects with and without a magnifying glass. Explain that light is needed in order for our eyes to see. Describe the function of eyes.
Observing My World Sort by Sight	SC4.1.7	Describe objects by using the sense of sight. Sort objects according to their size, shape, and/or color.
Observing My World Hear Here		Describe sounds as high or low. Identify the parts of the body that we use for hearing. Describe sounds as loud or soft.
Observing My World Something Smells		Name the body part we use for smelling. Identify odors using the sense of smell. Explain that odors travel through the air.
Observing My World You've Got Taste		Identify foods using the sense of taste. Compare sweet and sour tastes. Explain the function of the tongue and taste buds.
Observing My World A Touchy Subject	SC4.1.7	Categorize objects as hard, soft, rough, or smooth, using the sense of touch. Identify objects using only the sense of touch. Recognize that you can use multiple senses at the same time.
My Body 1 Everybody's Bodies		Identify and compare external features of the human body.
My Body 2 Bones Make Our Skeletons		Explain that bones protect the insides of our bodies. Explain that our skeletons hold us up and give us shape. Recognize that bones fit together at the joints to make our skeletons. Identify major joints of the body.
My Body Inside Out		Explain that the heart pumps blood through the body. Know that the brain controls our bodies and allows us to think and remember. Explain how muscles work. Identify major joints of the body.
My Body A Toothy Grin		Identify the three main outer parts of the tooth: the crown, the neck, and the root. State that people are born with two sets of teeth. Explain that we use our front teeth to bite or tear food and our back teeth to grind and chew food. Explain ways to keep teeth healthy.
Introduction to Living Things 1 What's Alive?		Determine whether something is living or nonliving. Know that living things grow with food, water, and air.
Introduction to Living Things 2 What		Know that plants take in water through their roots. State that plants use sunlight to make food. Name the three main things

Do Plants Need?		that plants need: food, water, and air. Know that plants take in air through tiny holes in their leaves.
Introduction to Living Things 3 What Do Animals Need?		Know that shelter is place where animals make their homes, in order to keep safe. Know how animals' needs are different from plants' needs. Name the three main things that animals need: food, water, and air. Identify what animals eat and what they use for shelter.
Introduction to Living Things 4 Changes		Identify how living things can grow and change. Identify how nonliving things can change. Conclude what happens to a plant when it does not get everything it needs to grow. Identify what animals eat and what they use for shelter.
Plants Plant Structures		Name the following plant structures: root, stem, trunk, branch, leaf, flower, and fruit. Compare plant structures among a variety of different plants.
Plants Sow Many Seeds!		Recognize that there are many different types of seeds. State that the fruit is the part of the plant that contains seeds. Identify seeds and fruits that we eat. Compare, sort, and graph seed types by their physical attributes.
Plants Plants as Food		Identify plant roots, stems, leaves, flowers, and fruit as food that we eat.
Plants Trees Are Plants, Too!		Name the following parts of a tree: root, trunk, branch, twig, leaf, and bark. State that evergreen trees keep most of their leaves all year round. State that deciduous trees lose their leaves in the fall and grow new ones in the spring.
Animals What's That Animal?		Identify animal bodies and coverings including fur, feathers, scales, a hard outer shell, and smooth skin and soft bendable bodies. Match animals to their body coverings.
Animals Animal Motion		Match animal features that are used for movement. Identify how animals move. Demonstrate different types of animal movements.
Animals What Do Animals Eat?		Identify how animals get their food. Know that some animals eat plants, others eat animals, and some eat both plants and animals.
Animals 4 Biography: Jane Goodall	SC4.3.1	Observe animal behavior. Explain that Jane Goodall discovered that chimpanzees use tools. Explain that Jane Goodall studied animal behavior.
Make the Measurement 1		Sequence group of objects by their height or length. Explain that length is how long something is. Explain that height is how

Length and Height		high or tall something is. Compare the height and length of two objects.
Make the Measurement 2 Give Me a Hand		Measure lengths in nonstandard units. Make a pictograph to compare the measurements of several objects in nonstandard units.
Make the Measurement 3 How Heavy? How Much?		Sequence objects by their weight. Sequence objects by their capacity.
Make the Measurement 4 Hot and Cold		Identify household objects as being hot, warm, or cold. Use a thermometer to see how high and low temperatures affect it.
What's the Matter? Solids		Observe that everything is made of matter. Know that matter is a solid, a liquid, or a gas. Identify solid forms of matter.
What's the Matter? Liquids		Recognize that liquids can be poured and take the shape of their containers. Identify liquid forms of matter. Test whether certain materials are liquid or solid.
What's the Matter? Gases		Identify some characteristics of gases. Demonstrate that gases, such as air, take up space.
What's the Matter? Sink or Float		Observe that one liquid can float on top of another. Observe that some objects sink when you place them in water. Observe that some objects float when you place them in water.
What's the Matter? Changing Matter	SC4.1.8	Know that liquid can change to solid. Know that matter can change forms. Know that a solid can change to a liquid.
What's the Weather? 1 What About Weather?		Record weather conditions on a weather chart. Determine the appropriate clothing for different weather conditions. Identify different weather conditions.
What's the Weather? 2 The Sun's Up		Record weather conditions on a weather chart. Record weather conditions on a weather chart. Explain that the sun is a source of warmth. Demonstrate that the sun warms water and that the water goes into the air.
What's the Weather? 3 As the Wind Blows		Use a windsock to observe the wind. Demonstrate how wind (moving air) can move objects. Learn that wind is moving air.
What's the Weather? 4 Watching the Clouds Go By		Know that clouds are made of water. Know that different types of clouds are associated with different types of weather. Know that clouds come in many different shapes, sizes, and colors. Know

		that clouds are moved by the wind.
What's the Weather? 5 Raindrops and Rainbows		State that rainbows sometimes form after it rains. Explain that rain is water that falls from clouds in the sky. Know that rainbows are made up of red, orange, yellow, green, blue, indigo, and purple
What's the Weather? 6 Weather Watch		Describe four types of severe weather: droughts, floods, hurricanes, and tornadoes. Graph observations from a weather chart.
1 Seasons Falling for Fall		Explain that the weather gets cooler in the fall. Explain that some animals gather and store food during the fall. Recognize the changes that occur to deciduous trees in the fall.
1 Seasons Winter Wonderland		Explain that the weather is coldest in the winter. Recognize the changes that can occur to deciduous trees in the winter. Explain that food can be hard for animals to find in the winter.
1 Seasons Animals in Winter		Recognize that animals use different strategies to make it through cold winters (for example, hibernating, migrating, storing food, or actively searching for food and shelter.)
1 Seasons Spring Has Sprung		Explain that many animals become more active and have babies in the spring. Recognize the changes that occur to deciduous trees in the spring. Explain that the weather becomes warmer in spring.
1 Seasons Summer Sun	SC4.1.6	Explain that the weather is warmest in the summer. Explain that the seasons continuously cycle from one to the next, always in the same order. Recognize the changes that occur in many deciduous trees in the summer.
1 Planet Earth 1 The Shape of the Earth		Identify the shape of the Earth as a sphere. Define Earth as the name of our world. Locate the North Pole, South Pole, and the equator on globe.
1 Planet Earth The Earth's Surface		Explain that the Earth's surface is composed of land and water. Identify the large areas of land on Earth as continents. Identify the large areas of water on Earth as oceans. Explain that more of the Earth's surface is covered by water than by land.
11 Planet Earth Land Shapes		Identify mountains, valleys, hills, islands, and plains. Recognize that land on Earth has different shapes.
1 Planet Earth 4 Bodies of Water		Identify oceans, lakes, ponds, rivers, and streams as bodies of water on the surface of the Earth.

1 Planet Earth 5 Rocks and Soil	SC4.1.4	Explain that land is made of rocks and soil, and that rocks are found all over the Earth, even under bodies of water. Explain that soil is made of tiny bits of rock mixed with other bits of things like leaves, worms, and bugs, living and dead. Sort rocks by size and by texture.
1 Taking Care of Our Earth The Earth Gives Us So Much		Identify water and trees as resources we use every day.
1 Taking Care of Our Earth Why Should We Conserve?	SC4.3.2	State one way to conserve water and one way to conserve electricity.
1 Taking Care of Our Earth Is There a Solution to Pollution?	SC4.3.2	Describe different ways to keep the Earth clean. Identify water and land pollution.
1 Taking Care of Our Earth Reduce, Reuse, Recycle	SC4.3.2	State that one way to conserve is to reduce the amount of paper you throw away.
1 Taking Care of Our Earth Biography: Rachel Carson	SC4.3.1	Tell that Rachel Carson studied and wrote books about nature. Observe and record things found in nature.
1 Make It Move 1 How Things Move		Describe an object's position. Tell how an object has moved using position words.
1 Make It Move 2 Pushes and Pulls	SC4.1.10	Explain that big pushes can make things go faster than small pushes. Demonstrate how pushes and pulls can make things move.
1 Make It Move A New Way to Push and Pull		Recognize that magnets are strongest at the ends, at their poles. Show that magnets attract some things made of metal. Demonstrate how magnets can attract and repel each other with pushes and pulls.
1 Make It Move 4 Magnets Are Everywhere		Identify ways people use magnets. Explain that magnets can work through certain objects.
1 Astronomy Day and Night		Explain that day and night are result of the spinning of the Earth.
1 Astronomy The Closest Star	SC4.1.5	State that the sun is star. Recognize that stars are very far away. Compare the size of the sun to the size of the Earth.

1 Astronomy Star Patterns		Recognize that groups of stars form shapes in the sky called constellations. Identify the Big Dipper and Little Dipper constellations.
1 Astronomy 4 Biography: Neil Armstrong	SC4.3.1	Identify Neil Armstrong as the first person to walk on the moon. Name some items that the astronauts brought back from the first trip to the moon.
1 Astronomy On the Surface of the Moon		Explain why people cannot live on the moon. Describe the surface of the moon as dusty, rocky, and covered with craters.
1 Astronomy 6 Biography: Sally Ride	SC4.3.1	Identify Sally Ride as the first American woman to fly into space. Compare life on Earth to how astronauts must live while traveling in space.