

Wyoming Department of Education Required Virtual Education Course Syllabus

Campbell County School District # 1

Program Name	Campbell County Virtual School	Content Area	SC
Course ID	SC5V	Grade Level	5
Course Name	Science 5	# of Credits	
SCED Code		Curriculum Type	K12 Inc

COURSE DESCRIPTION

SCIENCE 5

Students perform experiments, develop scientific reasoning, and recognize science in the world around them. They build a model of a watershed, test how cell membranes function, track a hurricane, and analyze the effects of gravity. Students will explore topics such as water resources (aquifers, watersheds, and wetlands), the oceans (currents, waves, tides, the ocean floor), Earth's atmosphere (weather patterns, maps, forecasts, fronts), motion and forces (pushes or pulls, position and speed, gravity), chemistry (structure of atoms, elements and compounds), cells and cell processes, taxonomy of plants and animals, and animal physiology.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
SC8.1.1	Levels of Organization in Living Systems: Students model the cell as
SC8.1.2	Reproduction and Heredity: Students describe reproduction as a characteristic of all living systems, which is essential to the
SC8.1.4	Diversity of Organisms: Students investigate the interconnectedness of organisms, identifying similarity and diversity of
SC8.1.5	Behavior and Adaptation: Students recognize behavior as a response of an organism to an internal or environmental stimulus
SC8.1.7	The Earth in the Solar System: Students describe Earth as the third planet in the Solar System and understand the effects of the
SC8.1.8	The Structure of the Earth System: Students examine the structure of the Earth, identifying layers of the Earth, considering plate
SC8.1.10	The Structure and Properties of Matter: Students identify characteristic properties of matter such as density, solubility, and
SC8.1.11	Physical and Chemical Changes in Matter: Students evaluate chemical and physical changes, recognizing that chemical change
SC8.1.12	Forms and Uses of Energy: Students investigate energy as a property of substances in a variety of forms with a range of uses.
SC8.1.13	The Conservation of Matter and Energy: Students identify supporting evidence to explain conservation of matter and energy,
SC8.1.14	Effects of Motions and Forces: Students describe motion of an object by position, direction, and speed, and identify the effects
SC8.2.3	Students clearly and accurately communicate the result of their own work, as well as information obtained from other sources.
SC8.2.4	Students recognize the relationship between science and technology in meeting human needs.
SC8.2.5	Students properly use appropriate scientific and safety equipment, recognize hazards and safety symbols, and observe standard
SC8.3.1	Students explore the nature and history of science:
SC8.3.2	Students explore how scientific information is used to make decisions: • The role of science in solving personal, local, and

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Water Resources	SC8.3.2	Unit 1: Water Resources Summary Water is one of our most valuable resources. We need it to sustain our bodies. We use it to water our crops, produce our electricity, and get our housework done. Yet only one percent of all the water on Earth is available freshwater. Protecting this resource from misuse and pollution is a concern for all people on Earth.
The World's Oceans	SC8.1.8 SC8.2.4 SC8.3.1 SC8.3.2	Unit 2: The World's Oceans Summary Oceans have long fascinated people, and for good reason. Ocean waves are exciting and beautiful. Ocean animals and plants are amazing and mysterious. Equally important, humans need some of the resources found in the ocean.
Earth's Atmosphere	SC8.2.4	Unit 3: Earth's Atmosphere Summary The atmosphere is like a blanket that covers the Earth. The gases in the atmosphere make a big difference to our everyday life. The movement of these gases causes weather. Understanding the atmosphere is important to understanding our Earth and everything that lives on it.

Motion and Forces	SC8.1.7 SC8.1.12 SC8.1.13 SC8.1.14	Unit 4: Motion and Forces Summary Do you know how and why things move? We can explain all motion using three laws: 1) An object at rest stays at rest, and an object in motion stays in motion until it is acted upon by a force. 2) A change in an object's motion depends on the amount and direction of force placed upon the object. 3) For every action there is an equal and opposite reaction.
Chemistry	SC8.1.10 SC8.1.11 SC8.1.13 SC8.2.3 SC8.2.5	Quick! Name something that is not made of atoms. You can't. Everything, from a toothbrush to a mud puddle is made from the atoms of elements. There are just over 100 elements known to the world today, but those elements make millions of compounds. Learn about atoms and elements and discover what scientists know about particles that are too tiny to be seen.
Cells and Cell Processes	SC8.1.1 SC8.1.2 SC8.1.4	Unit 6: Cells and Cell Processes Summary Compared to most scientific discoveries, ideas about cells began forming not that long ago. In the 1600s, people began wondering about what makes up living things. We now know that the smallest part of any living thing is a cell—with organelles that perform jobs much like the organs in your body. Learn the parts of plant and animal cells and their jobs.
Taxonomy of Plants and Animals		Unit 7: Taxonomy of Plants and Animals Summary
Animal Physiology	SC8.1.1 SC8.1.2 SC8.1.4 SC8.1.5 SC8.1.10 SC8.1.11	Unit 8: Animal Physiology Summary There are billions of animals living on Earth. Inside each of their bodies are special systems that constantly adjust to changes. These changes take place in the environment around and within their bodies. Take an in-depth look at the systems that keep these animals alive.