

Identifier	Poplar - Grade 5 - Science		Introduced	Completed
5 S 1	PHYSICAL SCIENCE			
5 S 1.1.1	Forces and Motion	Investigate and describe the relationship that exists between the size of a change in motion of an object to the size of a push or pull on that object.		
5 S 1.1.2	Forces and Motion	Investigate and describe that objects usually move downward when they fall or are released in the air or on ramps.		
5 S 1.1.3	Forces and Motion	Investigate and describe that objects may move in a variety of ways (e.g., straight lines or by rotating, rolling, or revolving).		
5 S 1.1.4	Forces and Motion	Classify objects by whether they sink or float in air or water.		
5 S 1.1.5	Forces and Motion	Investigate and describe the ways that magnets attract and repel each other and certain kinds of other materials.		
5 S 1.2.1	Structure and Properties of Matter	Separate mixtures based on their properties.		
5 S 1.2.2	Structure and Properties of Matter	Describe and classify matter in terms of elements, compounds, and mixtures.		
5 S 1.2.3	Structure and Properties of Matter	Investigate and describe the ways that solids remaining after a solvent has been evaporated may form distinctive patterns of crystals.		
5 S 1.2.4	Structure and Properties of Matter	Investigate and describe how materials can be broken down physically into smaller and smaller pieces, and that each piece may retain its same properties.		
5 S 1.2.5	Structure and Properties of Matter	Investigate and describe how the observable properties of a material depend on its composition.		
5 S 1.3.1	Energy and Matter - Interactions and Forms	Investigate and describe how warm objects cool and cool objects warm when they are put together, until they reach the same temperature.		
5 S 1.3.2	Energy and Matter - Interactions and Forms	Investigate and describe how energy can be used to bring about changes in matter (e.g., melting an ice cube).		
5 S 1.3.3	Energy and Matter - Interactions and Forms	Investigate and describe how vibrations produce sound.		
5 S 1.3.4	Energy and Matter - Interactions and Forms	Describe how electrical components are utilized in the design of simple electrical circuits.		
5 S 1.3.5	Chemical Reaction	Investigate and describe how observable changes in matter may occur when different materials are heated, mixed, or cooled.		
5 S 2	LIFE SCIENCE			
5 S 2.1.1	Structure and Function	Investigate, compare, and contrast the different life cycles of different living things.		
5 S 2.1.2	Structure and Function	Investigate, compare, and contrast the different structures of organisms that serve different functions for growth, reproduction, and survival.		
5 S 2.1.3	Structure and Function	Investigate and describe how plants and animals have features that help them live in various environments.		
5 S 2.2.1	Internal and External Influences on Organisms	Investigate and describe how clues for behavior may be detected by the senses in humans and other living things.		
5 S 2.2.2	Internal and External Influences on Organisms	Investigate and describe how some organisms can learn from their experiences.		
5 S 2.2.3	Internal and External Influences on Organisms	Investigate and describe how some environmental conditions are more favorable than others to living things.		
5 S 2.3.1	Heredity and Diversity	Investigate and describe how some characteristics between offspring and parents are inherited, but other characteristics are learned.		
5 S 2.3.2	Heredity and Diversity	Explain how living things may be classified on the basis of similar features, behaviors, and/or habits.		
5 S 2.3.3	Heredity and Diversity	Describe how there are variations among individuals within a population of a certain species.		
5 S 2.3.4	Heredity and Diversity	Reproduction is a characteristic essential to the continuation of every species.		
5 S 2.4.1	Evolution - Process of Biological Change	Classify animals and plants according to their physical characteristics.		
5 S 2.4.2	Evolution - Process of Biological Change	Investigate and describe how environmental changes allow some plants and animals to survive and reproduce, but others may die.		
5 S 2.4.3	Evolution - Process of Biological Change	Investigate and describe how individuals of the same kind differ in their characteristics and sometimes the differences give an advantage in surviving and reproducing.		
5 S 3	EARTH AND SPACE SCIENCES			
5 S 3.1.1	Earth Structures and Composition	Investigate and describe how rocks are composed of different combinations of minerals.		
5 S 3.1.2	Earth Structures and Composition	Investigate and describe how erosion and deposition rates can be affected by the slope of the land and by human activities.		
5 S 3.1.3	Earth Structures and Composition	Investigate and describe how the surface of Earth, including the ocean floor has a varied topography.		
5 S 3.1.4	Earth Structures and Composition	Investigate and describe how soil is made of many different biological and mineral materials, and varies from place to place.		
5 S 3.2.1	Earth Models	Identify compass directions on a map.		
5 S 3.2.2	Earth Models	Explain how the Montana state road map is a tool that can be used to navigate from one location to another.		
5 S 3.2.3	Earth Models	Explain how many things can be represented by two-dimensional maps and three-dimensional models.		
5 S 3.2.4	Earth History	Explain that the surface of Earth changes due to a variety of factors (e.g., some are abrupt like volcanoes and earthquakes, and others happen very slowly, such as the wearing down of mountains).		
5 S 3.2.5	Earth History	Investigate and describe how fossils are evidence of past life.		
5 S 3.3.1	Cycles of Matter and Energy	Explain that the sun is the main source of energy for people, which they use in many ways (e.g., fossil fuels derive their energy indirectly from the sun).		
5 S 3.3.2	Cycles of Matter and Energy	Investigate and describe various meteorological phenomena (e.g., flooding, thunderstorms, and drought).		

Identifier	Poplar - Grade 5 - Science		Introduced	Completed
5 S 3.3.3	Cycles of Matter and Energy	Investigate and describe the factors which affect the processes such as evaporation and condensation.		
5 S 3.3.4	Cycles of Matter and Energy	Investigate and describe how change is an ongoing process that can be seen throughout the natural world.		
5 S 3.4.1	Solar System and Universe	Investigate and describe the basic components of our solar system (e.g., planets, moons, asteroids, comets, and the sun).		
5 S 3.4.2	Solar System and Universe	Describe the apparent motion of celestial objects across the sky.		
5 S 3.4.3	Solar System and Universe	Describe how the stars in the sky are not scattered evenly, and they are not all the same in brightness or color.		
5 S 4	ENVIRONMENTAL SCIENCES			
5 S 4.1.1	Ecosystems	Investigate and describe how organisms interact with each other and with nonliving parts of their habitats.		
5 S 4.1.2	Ecosystems	Investigate and describe how, for any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.		
5 S 4.1.3	Ecosystems	Explain how the sun is the primary source of energy for nearly every ecosystem and that living things get what they need to survive from their environments.		
5 S 4.1.4	Ecosystems	Investigate and describe how the local ecosystem has unique characteristics.		
5 S 4.2.1	Natural Resources	Investigate and describe how resources have distinct properties which determine their usefulness.		
5 S 4.2.2	Natural Resources	Investigate and describe how technology can be used to extend resources (e.g., recycling).		
5 S 4.2.3	Natural Resources	Explain how Earth materials, including those found in Montana, provide many of the resources that humans use.		
5 S 4.2.4	Natural Resources	Explain that humans tend to use resources to meet more than their minimal needs for food, shelter and warmth.		
5 S 4.3.1	Conservation	Investigate and describe how consumptive patterns of people vary in different places.		
5 S 4.3.2	Conservation	Investigate and describe that ecosystems have components that can be observed to change, while other components appear to stay the same.		
5 S 4.3.3	Conservation	Explain that changes in environments can be natural events or influenced by human activities.		
5 S 5	THE NATURE AND HISTORY OF SCIENCE			
5 S 5.1.1	Scientific, Historical and Technological Perspectives	Explain that science is a systematic way of exploring the world.		
5 S 5.1.2	Scientific, Historical and Technological Perspectives	Develop explanations using observations (evidence) from investigations.		
5 S 5.1.3	Scientific, Historical and Technological Perspectives	Describe key scientists, classical experiments in science, and technological inventions that lead to a better understanding of the impact of science on society.		
5 S 5.1.4	Scientific, Historical and Technological Perspectives	Recognize and explain that science is an activity done by more than one person working together.		
5 S 5.1.5	Scientific, Historical and Technological Perspectives	Explain that technology enables scientists and others to study the motion of objects that are moving rapidly or that are hardly moving at all.		
5 S 5.1.6	Scientific, Historical and Technological Perspectives	Explain that science is an ongoing process of investigation (inquiry).		
5 S 5.2.1	Reasoning and Critical Response Skills	Explain that claims must be supported by evidence and logical argument.		
5 S 6	SCIENTIFIC INQUIRY: PROCESSES AND SKILLS			
5 S 6.1.1	Systems, Models, Risk, and Predictions	Develop a physical model to explain how something works or how something is constructed.		
5 S 6.1.2	Systems, Models, Risk, and Predictions	Predict that some events are more likely to happen than others.		
5 S 6.1.3	Systems, Models, Risk, and Predictions	Describe and compare the components and interrelationships of a simple system (e.g., trace the flow of water through an aquarium, a filter, and a pump).		
5 S 6.2.1	Scientific Values and Attitudes	Keep records of investigations and observations, without changing those records later.		
5 S 6.2.2	Scientific Values and Attitudes	Make careful observations and test things more than once.		
5 S 6.2.3	Scientific Values and Attitudes	Offer reasons for findings and consider the reasons suggested by others.		
5 S 6.3.1	Communication Skills	Give written or oral instructions that others are able to follow.		
5 S 6.3.2	Communication Skills	Organize information into charts, tables, and graphs.		
5 S 6.3.3	Communication Skills	Collaborate on a group project.		
5 S 6.4.1	Scientific Applications of Mathematics	Explain that sometimes changing one thing causes changes in another.		
5 S 6.4.2	Scientific Applications of Mathematics	Explain to other students how to go about solving numerical problems.		
5 S 6.4.3	Scientific Applications of Mathematics	Make quantitative estimates of familiar lengths, weights, and time intervals, and check them by measurements.		
5 S 6.4.4	Scientific Applications of Mathematics	Recognize the appropriate unit for a particular measurement (e.g., meters for length, seconds for time, and kilograms for mass).		
5 S 6.4.5	Scientific Applications of Mathematics	Recognize that repeated measurements of the same thing are likely to vary slightly.		
5 S 6.5.1	Laboartory Skills and Safety	Use safety equipment and attire.		
5 S 6.5.2	Laboartory Skills and Safety	Measure and mix dry and liquid materials safely in prescribed amounts.		
5 S 6.5.3	Laboartory Skills and Safety	Use provided materials to construct objects for a particular task.		
5 S 6.5.4	Laboartory Skills and Safety	Label measurements and diagrams properly.		
5 S 6.5.5	Laboartory Skills and Safety	Use appropriate technology in lab procedures for measuring and recording.		
5 S 6.5.6	Laboartory Skills and Safety	Manipulate objects and observe events in an experiment.		