

Bethlehem Lutheran School, Lakewood, CO
Science Curriculum Grade 1 (revised 4/01)

God created, rules and orders His universe. Science is the framework through which we discover, observe, analyze and synthesize the natural laws of God's creation. Understanding these laws and the systematic nature of the world assists and enhances the student's awareness and ability to be a better steward of God's earth and universe.

Science provides a conceptual framework for the understanding of natural phenomena and their causes and effects. Science study develops students who are scientifically literate, able to recognize that science is not value-free, and are capable of making ethical and moral judgments regarding science, social and technological issues.

To provide the student with an understanding of God's creation in the areas of Life Science, Physical Science, and Earth Science through facts, observation, and experimentation.

State Standard 1

Students understand the processes of scientific investigation and design, conduct, communicate about and evaluate such investigations.

Classroom objectives

- 1.1 The student will be able to identify the five senses and name the part of the body associated with each sense. Students will become aware of how their senses help them learn about the world around them. They will also discover that the information gathered by the senses can help keep people safe.
- 1.2 The student will learn what living things can do. Living things grow and change, respond to stimuli, move on their own, and reproduce. All living things are interdependent—animals need plants, and plants need animals.
- 1.3 Students will learn about animals and how they are different in size, shape, covering, and the ways they move. Students will learn which animals care for their young and which animals have babies that look like their parents. Also students will learn how animals are beneficial to people, and which animals make good pets.
- 1.4 Students will be introduced to the process of grouping or classifying by placing various objects in water and forming groups of objects that float and sink. Students will learn that objects can be grouped by other characteristics such as shape, color, length, mass, and texture. Students will learn the characteristics which distinguish three forms of matter.

- 1.5 Students will discover that light comes from many sources and that some things block light and produce shadows while other things reflect light. The student will also learn sources of sound and that sound travels in all directions and can vary in intensity. The student will investigate how sound is transmitted. In addition, students will learn that heat comes from various sources and can be measured through the use of a thermometer.
- 1.6 Students will explore movement, work, and how machines use motion and force to do work. The student will make a paper airplane and watch it move to discover that motion varies and objects take different positions as they move. The students will also learn that pushing, pulling, or lifting move objects. Gravity and magnets also cause objects to move. In addition, students will identify the work of different machine.
- 1.7 The student will describe the earth in general and focus on the characteristics of water, air, and land. Water on the earth is found in the oceans, and in streams, lakes, rivers, and frozen in ice. People need to have fresh water for drinking. Land is essential for building homes and raising crops. Land also supplies materials that people use as fuels and minerals. The blanket of air that surrounds the earth and our atmosphere provides gases that living things require. People need to keep land, water, and air resources clean and need to conserve the materials that come from them.
- 1.8 The student will learn that weather is whatever it is like outdoors, and they will identify five different kinds of weather. The students will learn about the four seasons and describe the weather changes

from season to season. In addition, the students will explore the concept that weather affects people in a variety of ways—what they do in work and play, and how they dress.

State Standard 2

Physical Science: Students know and understand common properties, forms, and changes in matter and energy.

Classroom objectives

- 2.1 Students will be introduced to the process of grouping or classifying by placing various objects in water and forming groups of objects that float and sink. Students will learn that objects can be grouped by other characteristics such as shape, color, length, mass, and texture. Students will learn the characteristics which distinguish three forms of matter.
- 2.2 Students will discover that light comes from many sources and that some things block light and produce shadows while other things reflect light. The student will also learn sources of sound and that sound travels in all directions and can vary in intensity. The student will investigate how sound is transmitted. In addition, students will learn that heat comes from various sources and can be measured through the use of a thermometer.
- 2.3 Students will explore movement, work, and how machines use motion and force to do work. The student will make a paper airplane and watch it move to discover that motion varies and objects take different positions as they move. The students will also learn that pushing, pulling, or lifting move objects. Gravity and magnet also cause objects to move. In addition, students will identify the work of different machines.

State Standard 3

Life Science: Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment.

Classroom objectives

- 3.1 The student will learn that they grow in size and shape, lose their baby teeth, acquire permanent teeth, learn new skills, and learn how to get along better with others as they grow.

- 3.2 The student will be able to differentiate between activities requiring more or less energy; explain that food is necessary for energy, growth and health; and identify feelings due to skipping meals, overeating, feeling healthy or unhealthy; and preparing snacks.
- 3.3 The student will learn the difference between boys and girls in a Christian context. The students will learn correct terminology such as uterus, vagina, and penis. The student will know that each one is wonderfully made.
- 3.4 The student will learn what living things can do. Living things grow and change, respond to stimuli, move on their own, and reproduce. All living things are interdependent—animals need plants, and plants need animals.
- 3.5 Students will learn that plants have roots, stems, leaves, and flowers. Students will observe leaves, and classify them by shape. They, also, will learn that some plants grow in a variety of habitats. Students will explore the ways plants can be useful to people.
- 3.6 Students will learn about animals and how they are different in size, shape, covering, and the ways they move. Students will learn which animals care for their young and which animals have babies that look like their parents. Also students will learn how animals are beneficial to people, and which animals make good pets.

State Standard 4

Earth and Space Science: Students know and understand the processes and interactions of Earth's systems and the structure and dynamics of Earth and other objects in space.

Classroom objectives

- 4.1 The student will describe the earth in general and focus on the characteristics of water, air, and land. Water on the earth is found in the oceans, and in streams, lakes, rivers, and frozen in ice. People need to have fresh water for drinking. Land is essential for building homes and raising crops. Land also supplies materials that people use as fuels and minerals. The blanket of air that surrounds the earth and our atmosphere provides gasses that living things require. People need to keep land, water, and air resources clean and need to conserve the materials that come from them.

- 4.2 The student will learn that weather is whatever it is like outdoors, and they will identify five different kinds of weather. The students will learn about the four seasons and describe the weather changes from season to season. In addition, the students will explore the concept that weather affects people in a variety of ways—what they do in work and play, and how they dress.

State Standard 5

Students know and understand interrelationships among science, technology and human activity and how they can affect the world.

Classroom objectives

- 5.1 Students will learn that plants have roots, stems, leaves, and flowers. Students will observe leaves, and classify them by shape. They, also, will learn that some plants grow in a variety of habitats. Students will explore the ways plants can be useful to people.
- 5.2 The student will learn that weather is whatever it is like outdoors, and they will identify five different kinds of weather. The students will learn about the four seasons and describe the weather changes from season to season. In addition, the students will explore the concept that weather affects people in a variety of ways—what they do in work and play, and how they dress.

State Standard 6

Students understand that science involves a particular way of knowing and understand common connections among scientific disciplines.

Classroom objectives

- 6.1 The student will be able to identify the five senses and name the part of the body associated with each sense. Students will become aware of how their senses help them learn about the world around them. They will also discover that the information gathered by the senses can help keep people safe.
- 6.2 The student will learn that they grow in size and shape, lose their baby teeth, acquire permanent teeth, learn new skills, and learn how to get along better with others as they grow.