

Bethlehem Lutheran School, Lakewood, CO
Science Curriculum Grade 3 (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 Predict what is missing and what will come next in sequence of objects and events and test his/her predictions.
- 1.2 Seek evidence to support ideas by asking "How does it work?" "How do we know?" "Why?"
- 1.3 Predict outcome of a simple investigation and compare results to the prediction.
- 1.4 Select and explore the use and accuracy of a variety of measuring devices.
- 1.5 Search for information from multiple sources.
- 1.6 Demonstrate alternate ways to display data.
- 1.7 Use numerical data in describing and comparing objects, events, and measurements.
- 1.8 Seek evidence to support opinions, statements, and conclusions.

State Standard 2

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

Classroom objectives

- 2.1 Explore light, electrical, mechanical, and sound energy. Understand the concepts of electric charges, electric current, magnetism, and the visible spectrum.
- 2.2 Define energy, work, and force. Understand the relationship of force and energy to friction, simple and compound machines, and gravity.
- 2.3 Explore the properties of matter and be able to describe three of its states. Examine how atoms join to form different kinds of matter. Identify and describe how matter can change physically and chemically.

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 Learn about basic plant structure and growth. Observe the movement of fluids through a vascular plant, learn about the

differences between various types of plants, and find out about the life cycle of a plant from seed dispersal to pollination.

- 3.2 Learn about the characteristics of birds, reptiles, amphibians, and mammals. Study the characteristics of the main groups of invertebrates and the life cycle of an insect that undergoes metamorphosis.
- 3.3 Recognize cells as the basis for all organisms. Explore the dependence of organisms on each other and the balance of organisms in a community. Understand the five kingdom classification and the concept of predator/prey, producer/consumer, and food chains.
- 3.4 Explore the humans' place in, and their effect on, the environment and other organisms' habitats. Discover ways of preserving habitats and protecting organisms.
- 3.5 Discover what causes sound, how sounds can vary, and how the body receives and interprets sound. Explores how sound travels through different kinds of matter.
- 3.6 Understand that cells are grouped into tissues, organs, and systems. Distinguish between voluntary and involuntary muscles. Explore the functions of bones and joints.
- 3.7 Understand the importance of proper nutrition, exercise, and sleep. Learn how some diseases spread. Realize the harmful effects of alcohol, tobacco, and other drugs.
- 3.8 Discover the wonder of God's plan for reproduction and for nurturing life through the family. Understand that a baby grows inside its mother's body.

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 Explore the sun and planets that make up our solar system. Learn about the moon's features, movements, and phases.
- 4.2 Discover some of the factors that change the earth, such as volcanoes, earthquakes, people, and animals. Examine the effects

of wind and water in weathering and erosion, and identify examples of weathering and erosion.

- 4.3 Understand basic weather conditions, cloud formations, and the concepts of evaporation and condensation. Learn about some types of severe weather, such as thunderstorms, hurricanes, and tornadoes.
- 4.4 Identify the three types of rock and discover how they are formed. Explore the relationship between rocks and soil, and examine the capacity of soil to transfer nutrients to plants.
- 4.5 Study the various uses of minerals and the importance of conserving and recycling these minerals.

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 Demonstrate alternate ways to display data.
- 5.2 Search for information from multiple sources.
- 5.3 Seek evidence to support opinions, statements, and conclusions.

State Standard 6

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

Classroom objectives

- 6.1 Predict what is missing and what will come next in a sequence of objects and events and test his/her predictions.
- 6.2 Explain and discuss various influences affecting observations and interpretations.
- 6.3 Use numerical data in describing and comparing objects, events, and measurements.
- 6.4 Seek evidence to support opinions, statements, and conclusions.