

**Science Curriculum
South Atlantic District
Wisconsin Evangelical Lutheran Synod**

Science is the study of all that God has created. God's gift of science leads to the continual discovery of the wonders of his creation. This knowledge will be used to prepare our students to appreciate, recognize, and care for the earth, its inhabitants and ourselves as faithful stewards in his kingdom.

The goals of this science curriculum seek to have the students:

- Recognize that the Earth and all creation comes from God.
- Understand that God preserves and sustains His creation through various means.
- Recognize their responsibility and role in preserving and sustaining God's creation through various means.
- Demonstrate their responsibility and role in preserving and sustaining God's creation through various means.
- Engage in scientific inquiry through hands-on activities, discovery opportunities, and direct instruction.

K-2

History and Nature of Science

The student will:

- Raise questions about the natural world.
- Make careful observations of natural world.

Earth and Space Science

The student will:

- Observe changes in weather.
- Investigate weather cycles.
- Recognize the changes that occur in the sky in a 24-hour period.
- Recognize basic Earth materials.

Life Science

The student will:

- Understand that there are living and nonliving things.
- Understand that people have five senses that can be used to learn about the environment.
- Observe plant and animal life cycles.
- Understand that organisms have basic needs.
- Understand that organisms live in different environments.
- Investigate the feeding relationships among organisms,
- Recognize that humans have basic needs.
- Know that the human body is made up of parts.
- Learn that some diseases are caused by germs.

Physical Science

The student will:

- Understand that objects have physical properties.
- Understand that forces can act at a distance.
- Understand that objects can be sorted and classified based on their physical properties.
- Know that objects can move in various ways.

3-5

History and Nature of Science

The student will:

- Understand the use of science as a tool to examine the natural world.
- Understand the nature of scientific investigation.
- Understand how science is used to investigate interactions between people and the world.
- Participate in a controlled science investigation.
- Understand that communication is essential to science.
- Understand the process of scientific investigations.

Earth and Space Science

The student will:

- Investigate weather conditions.
- Recognize that water on Earth cycle and exists in many forms.
- Understand the characteristics and relationships of objects in the solar system.
- Identify the patterns and movements of space objects.
- Explore the structures and functions of Earth systems.
- Investigate the impact humans have on the environment.

Life Science

The student will:

- Recognize that plants and animals have different structures that serve different functions.
- Understand that an organism's patterns of behavior are related to the nature of its environment.
- Understand that many characteristics of an organism are inherited from its parents, but that other characteristics result from an individual's interactions with the environment.
- Know that all organisms are composed of cells, which are the fundamental units of life.
- Know that living things can be sorted into groups in many ways according to their varied characteristics, structures and behaviors.
- Know the structures that serve various functions in the human body, including protection from disease.
- Know that biological populations change over time.

- Know that matter and energy flow into, out of, and within a biological system.

Physical Science

The student will:

- Explore the characteristics and properties of sound and light.
- Know that heating and cooling may cause changes to the properties of a substance.
- Understand basic electricity and its application in everyday life.
- Understand that a relationship exists between electricity and magnetism.
- Understand that changes in speed or direction of motion are caused by forces.

6-8

History and Nature of Science

The student will:

- Understand that scientific inquiry is used in systematic ways to investigate the natural world.
- Know that science and technology are human efforts that both influence and are influenced by society.
- Design and conduct scientific investigations.
- Understand how scientific discovery, culture, societal norms and technology have influenced one another in different time periods.

Earth and Space Science

The student will:

- Identify Earth's composition, structure and processes.
- Investigate the impact humans have on their environment.
- Investigate how the atmosphere interacts with the Earth system.
- Compare objects in the solar system and explain their interactions with the Earth.
- Describe the composition and structure of the universe.

Life Science

The student will:

- Understand that all organisms are composed of cells that carry on the many functions needed to sustain life.
- Understand that living systems, at every level of organization, demonstrate the complementary nature of structure and function.
- Understand that within ecosystems, complex interactions exist between organisms and the physical environment.
- Understand that heredity information is contained in genes which are inherited through sexual and asexual reproduction.
- Understand how the flow of energy and the recycling of matter contribute to a stable ecosystem.
- Understand human body systems and their relationship to disease.

Physical Science

The student will:

- Understand that matter is made of small particles and this explains the properties of matter.
- Differentiate between chemical and physical changes.
- Understand that energy exists in many forms and can be transferred in many ways.
- Describe the motion of objects.
- Understand that a variety of forces govern the structure and motion of objects in the universe.