



Archdiocese of Washington Catholic Schools

Academic Standards

Science

1st Grade

Standard 1 - The Nature of Science and Technology

Students are actively engaged in exploring how the world works. They explore, observe, count, collect, measure, compare, and ask questions. They discuss observations and use tools to seek answers and solve problems. They share their findings.

Scientific Inquiry

- 1.1.1 Observe, describe, draw, and sort objects carefully to learn about them.
- 1.1.2 Investigate and make observations to seek answers to questions about the world, such as “In what ways do animals move?”

The Scientific Enterprise

- 1.1.3 Recognize that and demonstrate how people can learn much about plants and animals by observing them closely over a period of time. Recognize also that care must be taken to know the needs of living things and how to provide for them.

Technology and Science

- 1.1.4 Use tools, such as rulers and magnifiers, to investigate the world and make observations.
 - observation: gaining information through the use of one or more of the senses, such as sight, smell, etc.

Standard 2 - Scientific Thinking

Students begin to find answers to their questions about the world by using measurements, estimation, and observation as well as working with materials. They communicate with others through numbers, words, and drawings.

Computation and Estimation

- 1.2.1 Use whole numbers*, up to 100, in counting, identifying, measuring, and describing objects and experiences.
- 1.2.2 Use sums and differences of single digit numbers in investigations and judge the reasonableness of the answers.
- 1.2.3 Explain to other students how to go about solving numerical problems.

*whole numbers: 0,1,2,3,etc.



Archdiocese of Washington Catholic Schools

Academic Standards

Science

Manipulation and Observation

- 1.2.4 Measure the length of objects having straight edges in inches, centimeters, or non-standard units.
- 1.2.5 Demonstrate that magnifiers help people see things they could not see without them.

Communication Skills

- 1.2.6 Describe and compare objects in terms of number, shape, texture, size, weight, color, and motion.
- 1.2.7 Write brief informational descriptions of a real object, person, place, or event using information from observations.

Standard 3 - The Physical Setting

Students investigate, describe, and discuss their natural surroundings. They question why things move and change.

The Earth and the Processes That Shape It

- 1.3.1 Recognize and explain that water can be a liquid or a solid and can go back and forth from one form to the other. Investigate by observing that if water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing.
- 1.3.2 Investigate by observing and then describing that water left in an open container disappears, but water in a closed container does not disappear.

Matter and Energy

- 1.3.3 Investigate by observing and also measuring that the sun warms the land, air, and water.

Forces of Nature

- 1.3.4 Investigate by observing and then describe how things move in many different ways, such as straight, zigzag, round-and-round, and back-and-forth.
- 1.3.5 Recognize that and demonstrate how things near Earth fall to the ground unless something holds them up.



Archdiocese of Washington Catholic Schools

Academic Standards

Science

Standard 4 - The Living Environment

Students ask questions about a variety of living things and everyday events that can be answered through observations. They become aware of plant and animal interaction. They consider things and processes that plants and animals need to stay alive.

Diversity of Life

- 1.4.1 Identify when stories give attributes to plants and animals, such as the ability to speak, that they really do not have.
- 1.4.2 Observe and describe that there can be differences, such as size or markings, among the individuals within one kind of plant or animal group.

Interdependence of Life

- 1.4.3 Observe and explain that animals eat plants or other animals for food.
- 1.4.4 Explain that most living things need water, food, and air.

Standard 5 - The Mathematical World

Students apply mathematics in scientific contexts. They begin to use numbers for computing, estimating, naming, measuring, and communicating specific information. They make picture graphs and recognize patterns.

Numbers

- 1.5.1 Use numbers, up to 10, to place objects in order, such as first, second, and third, and to name them, such as bus numbers or phone numbers.
- 1.5.2 Make and use simple picture graphs to tell about observations.

Shapes and Symbolic Relationships

- 1.5.3 Observe and describe similar patterns, such as shapes, designs, and events that may show up in nature, such as honeycombs, sunflowers, or shells. See similar patterns in the things people make, such as quilts, baskets, or pottery.

Standard 6 - Patterns in Science

Students begin to understand how things are similar and how they are different. They look for what changes and what does not change and make comparisons.

Models and Scale

- 1.6.1 Observe and describe that models, such as toys, are like the real things in some ways but different in others.



Archdiocese of Washington Catholic Schools Academic Standards Science

Constancy and Change

- 1.6.2 Observe that and describe how certain things change in some ways and stay the same in others, such as in their color, size, and weight.