



# Southmoreland School District

## Second Grade Science Curriculum Overview

### **Second Grade Science Overview:**

The second grade science curriculum is divided into three modules: (1) Life Science, (2) Physical Science, and (3) Earth and Space Science. Second grade students develop and practice classifying, analyzing, observing, categorizing, and record keeping skills to demonstrate grade appropriate proficiency in planning and carrying out investigations and developing and using models. They experience science through the active construction of ideas while developing inquiry skills that are central to helping them think as scientists. Students investigate the world around them by asking questions that help develop scientific concepts and vocabulary. In addition, students use their observations to construct reasonable explanations of cause and effect and structure and function as organizing concepts for these disciplinary core ideas. The students demonstrate scientific reasoning and logic as they begin making detailed observations, drawing conclusions from data, and making use of the information they gather. Finally, students extend their scientific knowledge and communicate their learning as they describe and summarize scientific processes, both orally and in writing, as a result of the inquiry process. The Pennsylvania Integrated Standards for Science, Environment, Ecology, Technology and Engineering (Grades K-5) guide the elementary level study of the natural and human-made world through inquiry, problem-solving, critical thinking, and authentic exploration. The integration of these disciplines in the elementary standards highlights the interconnectedness of scientific study, the integral relationship between humans and the environment, and the importance of integrating the teaching and learning of science with other disciplines.

### **Module Titles:**

**Module 1:** Life Science

**Module 2:** Physical Science

**Module 3:** Earth and Space Science

### **Module Overviews:**

#### **Module 1: Life Science**

The goal of this module is for students to identify the interactions, energy, and dynamics of ecosystems. Second grade students make observations about plants and animals and compare the diversity of life in different habitats. They investigate if plants need sunlight and water to grow. Finally, students mimic the function of an animal in dispersing seeds or pollinating plants.



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### **Module 2: Physical Science**

The goal of this module is for students to investigate different forms of matter (solid, liquid, and gas) and its interactions. Second grade students investigate and classify different kinds of materials by their observable properties. They analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. Students make observations to construct an evidence based account of how an object made of a small set of pieces can be disassembled and made into a new object. Finally, students construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.

### **Module 3: Earth and Space Science**

The goal of this module is for students to explore the Earth, its systems, and its place in the universe. Second grade students use information from several sources to provide evidence that Earth events can occur quickly or slowly. They compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. Students develop a model to represent the shapes and kinds of land and bodies of water in an area. Finally, students identify where water is found on Earth and that it can be a liquid, solid, or gas.