

Intermediate Science Fair





Unit Overview

Intermediate Science Fair

This unit explores scientific inquiry and the scientific method. Students learn about a simplified scientific method and use it to participate in a variety of scientific investigations, including a project for a class science fair.

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Instructional Target

Standards for Scientific Inquiry

- Identify questions that can be asked about the natural environment.
- Plan and conduct simple investigations.
- Use tools to gather data.
- Analyze data to reach an explanation.
- Communicate with others about investigations



Differentiated Tasks

Level 3 Students will...

- Follow steps of a scientific process related to grades 3-5 science topics.

Level 2 Students will...

- With support, follow steps of a scientific process related to grades 3-5 science topics.

Level 1 Students will...

- Actively participate in a scientific process related to grades 3-5 science topics.



Standards Connection



The Scientific Method

The scientific method is the process scientists use to learn and study the world around us. It can be used to study anything from a rock, to a person, to a planet. In Lesson 5, students are introduced to a simplified five-step version of the scientific method through the article, "Using the Scientific Method." These steps are then used in a variety of activities throughout the unit. As you work through this unit's lessons, encourage students to use the scientific method to think like scientists. Encourage them to observe, ask questions, and to make and check predictions.



Life Science

Life science is the study of living things. It includes the study of plants, animals and humans. In this unit, students participate in a variety of investigations that deal with the life sciences. In Lesson 17, students investigate the number of seeds in various foods. In Lesson 25, students use a diagram to learn about the parts of a flower. In Lesson 29, students learn about the life cycle of a frog. Throughout the unit, talk with students about living and nonliving things and help them classify the activities they participate in as life science or physical science.



Physical Science

Physical science is the study of nonliving materials. It includes the study of objects, as well as their properties. In this unit, students participate in a variety of investigations that deal with the physical sciences. In Lesson 1, students read about and investigate magnets and the objects they attract. In Lesson 21, students observe chemical changes as they make ice cream. In Lesson 26, students make Oobleck, a material that is both a solid and a liquid. And in Lesson 27, students participate in a variety of activities exploring force and motion. Physical science is best understood through hands-on exploration. Throughout the above activities, allow time for both guided and unguided exploration. Talk with students about what is happening and the changes they observe.



Let's Have a Science Fair

A science fair is a fun way to have students apply their learning from this unit. In Lesson 6, students are introduced to the idea of creating a science fair project through the article, "How to Make a Science Fair Project." In Lessons 27 and 28, students choose and complete a science fair project. Throughout the unit, work with students to plan a class science fair. Choose a date, make plans for how and when students will work on their projects and talk with students about ways they might present their projects. When the day of the fair arrives, invite parents or other classes to come see the students' projects.

The **n2y Library** has several books that may build understanding of life science and physical science concepts.

- **Simon Goes to a Science Fair** (Level E) describes a science fair and what Simon sees there.
- **What Is a Magnet?** (Level F/G) introduces how magnets work and what they are attracted to.
- **How Does It Move?** (Level H/I) follows Simon as he learns about forces, motion and gravity.
- **A New Plant!** (Levels E and F/G) follows Simon as he learns about the life cycle of a plant.
- **What Is Gravity?** (Level F/G) follows Simon as he learns about gravity.
- **Exploring Solids and Liquids** (Level H/I) explores solids and liquids through foods and cooking.
- **Push and Pull** (Level H/I) describes how motion is created by pushing and pulling.
- **Force and Mass in Motion** (Level H/I) presents the concepts of force and mass and how they affect speed.
- **Life Cycle of a Person** (Level H/I) presents the life cycle of a human from baby to old age.

