Grade 1 Science Overview (PA STEELS Standards) [August 2025]

A Guide to learning Science in Grade 1@OJRSD

Grade 1 science promotes curiosity, creativity, and problem-solving. Students learn through exploration, hands-on activities, and making connections to their own lives and communities. These learning experiences help children develop the foundational scientific thinking skills they will use in later grades.

FALL UNITS: Natural Resources, Local Environments & Living Things

Natural Resources: How People Use Earth's Materials
Students categorize how people collect, share, and use natural resources such as water, soil, plants, and minerals. They begin to think about making responsible choices for the future.

Solving Local Environmental Problems
Students plan and carry out a simple investigation about an environmental issue in their school or community—such as litter, water use, or habitat protection—and explore ways to help.

Understanding Places and Their Meaning
Children learn that places are unique. They investigate how physical features, cultural importance, and personal experiences make places special.

Parents and Offspring: How Young Living Things Grow
Students observe plants and animals to learn that young living things are similar to, but not exactly the same as, their parents.

Patterns in Animal Families
Through books and media, students explore how animal parents help their young survive by feeding, protecting, or teaching them.

Engineering Inspired by Nature
Students use materials to design a solution to a human problem by mimicking structures or behaviors found in plants or animals—for example, using burrs to inspire Velcro.

Engineering & Design
Students continue to refine their ability to plan, build, test, and improve designs across the spring learning experiences.

WINTER UNITS: Light, Sound & Communication

Light Helps Us See
Students observe that objects can only be seen when light is present. They explore shadows, reflections, and what happens in the dark to build evidence-based explanations.

Vibrations and Sound
Students investigate how sound is made and how it travels. They experiment with objects that vibrate to make noise and discover that sound can also make objects move.

Engineering & Design
Students apply what they learn about light and sound to solve simple design challenges—for example, creating a device to communicate over a distance.

SPRING UNITS: Weather, Landforms, Culture & Living Things

Climates Around the World
Students learn that different places have different types of weather and climate. They compare warm, cold, wet, and dry regions to understand how weather shapes daily life in different parts of the world.

Solving Weather-Related Problems
Children explore weather hazards—like strong winds or heavy rain—and look at simple design solutions that help keep people safe. They make a claim about which solution works best using evidence from class investigations.

Land and Water Models
Students create simple models to show basic landforms—such as hills, valleys, and mountains—and bodies of water like lakes, rivers, and oceans.

How People Connect With Nature
Students discover how people from many cultures, including their own families, relate to nature. They compare traditions, celebrations, and everyday interactions with the environment.

How Living Things Meet Their Needs
Students use models to show how plants, animals, and people depend on their environment to survive. They learn that different living things need different kinds of places to live.

Engineering & Design
Throughout the fall, students practice identifying problems, planning ideas, building simple models, and improving their solutions.