

Haddon Township Science  
Grade Three

In third grade science classes, students will use a hands-on curriculum to investigate land and water, the solar system, and chemistry. The New Jersey Core Content Standards will be explored using a variety of instructional strategies with an emphasis on scientific inquiry, observation, and discovery. Science knowledge will be communicated through discussion and written evaluation. Students will communicate their developing understandings about science through discussions, projects, and written evaluations.

**ESSENTIAL LEARNINGS:** All third grade students will demonstrate an understanding of the following NJ Core Curriculum Content Standards:

**Scientific Practices (NJ 5.1)**

- Use outcomes of investigations to build and refine questions, models, and explanations.
- Use scientific facts, measurements, observations, and patterns in nature to build and critique scientific arguments.
- Design and follow simple plans using systematic observations to explore questions and predictions.
- Measure, gather, evaluate, and share evidence using tools and technologies.
- Formulate explanations from evidence.
- Communicate and justify explanations with reasonable and logical arguments.
- Monitor and reflect on one's own knowledge regarding how ideas change over time.
- Revise predictions or explanations on the basis of learning new information.
- Present evidence to interpret and/or predict cause-and-effect outcomes of investigations.
- Demonstrate how to safely use tools, instruments, and supplies.

**Physical Science (NJ 5.2)**

- Categorize objects based on the ability to absorb or reflect light and conduct heat or electricity
- Identify common solids, liquids, or gases.
- Identify objects that are composed of a single substance and those that are composed of more than one substance using simple tools found in the classroom.
- Plan and carry out an investigation to distinguish among solids, liquids, and gases.
- Explore changes in liquids and solids when the substances are combined, heated, or cooled.
- Generate accurate data and organize arguments to show that not all substances respond the same way when heated or cooled, using common materials, such as shortening or candle wax.
- Predict and explain what happens when a common substance is heated to melting and then cooled to a solid.

**Life Science (NJ 5.3)**

- Investigate and compare physical characteristics of plants, humans, and other animals.
- Observe similarities and differences in the needs of various living things, and differences between living and nonliving things.
- Group living and nonliving things according to the characteristics that they share.
- Begin to develop and use evidence-based criteria to determine if an unfamiliar object is living or nonliving.
- Explain the consequences of rapid ecosystem change (e.g., flooding, wind storms, snowfall, volcanic eruptions) and compare them to consequences of gradual ecosystems change (e.g., gradual increase or decrease in daily temperatures, change in yearly rainfall)

**Earth Systems Science (NJ 5.4)**

- Determine a set of general rules describing when the Sun and Moon are visible based on actual sky observations.
- Identify patterns of the moon's appearance and make predictions about its future appearance based on observational data
- Generate a model with explanatory value that explains both why objects roll down ramps as well as why the moon orbits the Earth.
- Formulate a general description of the daily motion of the Sun across the sky based on shadow observations. Explain how shadows can be used to tell the time of day.
- Create a model to represent how soil is formed
- Categorize unknown samples as either rock or minerals
- Identify patterns in data collected from basic weather instruments
- Trace a drop of water that might follow through the water cycle
- Model how properties of water can change as water moves through the water cycle