Haddon Township Science
Grade Two

In second grade science classes, students will use a hands-on curriculum to investigate air and water, rocks and minerals, and their respective changes. The New Jersey Core Contents 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 second grade students will demonstrate an understanding of the following NJ Core Curriculum Content Standards:

Scientific Practices (NJ 5.1)

- Design and follow simple plans using systematic observations to explore questions and predictions.
- Communicate and justify explanations with reasonable and logical arguments.

Physical Science (NJ 5.2)

- Identify common objects as solids, liquids, or gases.
- Identify objects that are composed of a single substance and those that are composed of more than one substance using the simple tools found in the classroom.
- Plan and carry out an investigation to distinguish among solids, liquids, and gases.
- Determine the weight and volume of common objects using appropriate tools.
- Generate accurate data and organize to show that not all substances respond the same way when cooled, using common materials, such as shortening or candle wax.
- Predict and explain what happens when a common substance, such as shortening or candle wax. Is heated to melting and then cooled to a solid.
- Sort and describe objects based on the materials of which they are made and their physical properties.
- Investigate and model the various ways inanimate objects can move.
- Predict an object's relative speed, path, or how far it will travel various forces and surfaces.
- Demonstrate through modeling that motion is a change in position over a period of time.
- Identify the force that starts something moving or changes it's speed or direction of motion.

Life Science (NJ 5.3)

- Group living and nonliving things according to the characteristics that they share.
- Describe the requirements for the care of plants and animals related to meeting their energy needs.
- Compare how different animals obtain food and water.
- Explain that most plants get water from soil through their roots and gather light through their leaves.
- Describe the ways in which organisms interact with each other and their habitats in order to meet basic needs.
- Identify the characteristics of a habitat that enable the habitat to support the growth of many different plants and animals.
- Communicate ways that humans protect habitats and/or improve conditions for the growth of the plants and animals that live there, or ways that humans might harm habitats.
- Record the observable characteristics of plants and animals to determine the similarities and differences between parents and their offspring.
- Determine the characteristic changes that occur during the life cycle of plants and animals by examining a variety of species, and distinguish between growth and development.
- Describe similarities and differences in observable traits between parents and offspring.
- Describe how similar structures found in different organisms (e.g., eyes, ears, mouths) have similar functions and enable those organisms to survive in different environments.

Earth Systems Science (NJ 5.4)

- Determine a set of general rules describing then the Sun and Moon are visible based on actual sky observations.
- Describe Earth materials using appropriate terms, such as hard, soft, dry, wet, heavy, and light.
- Describe the relationship between the Sun and plant growth.
- Observe and document daily weather conditions and discuss how the weather influences your activities for the day.
- Observe and discuss evaporation and condensation.
- Identify and use water conservation practices.
- Identify and categorize the basic needs of living organisms as they relate to the environment.
- Identify the natural resources used in the process of making various manufactured products.
- Identify patterns of the moon’s appearance and make predictions about its future appearance based on observational data.
- Identify patterns in data collected from basic weather instruments.
- Observe daily cloud patterns, types of precipitation and temperature, and categorize the clouds by the conditions that form precipitation.