

## Course/Grade Level: Third Grade Science Curriculum

### S.3.1 Students will develop the skills to do *full inquiry*. *Full inquiry* involves asking a simple question, completing an investigation, answering the question, and sharing the results.

Students will...

- S.3.1.1 ▲ ask questions that they can answer by investigating. (3-4.1.1.1)
- S.3.1.2 ▲ plan and conduct a simple investigation. (3-4.1.1.2)
- S.3.1.3 ▲ employ appropriate equipment, tools, and safety procedures to gather data. (3-4.1.1.3)
- S.3.1.4 ▲ begin developing the abilities to communicate, critique, analyze their own investigations, and interpret the work of other students. (3-4.1.1.4)

**Vocabulary:** equipment, evaluate, evidence, injury, interpret, investigate, investigation, predict, problem, procedure, risk, and safety procedure

**Tools:** hand lens, meter stick, tape measure, measuring cups, balance, thermometer, spring scale, graduated cylinder, dropper, stopwatch, beaker, and safety goggles

## S.3.2 Students will identify and describe the properties of objects and materials in their daily lives. They will also experiment with sound and magnets.

Students will...

- S.3.2.1 ▲ describe and classify objects by more than one property (e.g., mass, shape, volume, color, and temperature using balances, thermometers, and other metric measurement tools). (3-4.2.1.2)
- S.3.2.2 ▲ observe and record how one object interacts with another object. (3-4.2.1.3)
- S.3.2.3 ▲ recognize and describe the differences between solids, liquids, and gases. (3-4.2.1.4)
- S.3.2.4 ▲ move objects by pushing, pulling, throwing, spinning, dropping, and rolling; and describe motion. (3-4.2.2.1)
- S.3.2.5 ▲ describe the change in position of objects when moved (e.g., describe the objects new position as being above, below, to the right or left, or in front or behind its original position). (3-4.2.2.2)
- S.3.2.6 ▲ identify that the source of sound is vibrations. (3-4.2.3.1)
- S.3.2.7 ▲ demonstrate that magnets attract and repel. (3-4.2.4.1)
- Instructional Examples:
- explore the interactions between two magnets
  - design an experiment with two magnets to show that they attract or repel

**Vocabulary:** analyze, attract, characteristics, gas, graph, interact, liquid, magnet, matter, motion, observe, poles, property, pull, push, record, repel, solid, texture, throw, tools, and vibration

**S.3.3 Students will observe, then compare and contrast organisms in their environment. They will also experiment with sound and magnets.**  
Students will...

S.3.3.1 ▲ observe different organisms and compare and contrast how similar functions are served by different structural characteristics. (3-4.3.1.1)

Instructional Examples:

- compare the structures of movement of a guppy to an insect
- compare a leaf structure of a bean plant to a leaf structure of a corn plant

S.3.3.2 ▲ compare basic needs of different organisms in their environment. (3-4.3.1.2)

Instructional Example: compare the basic needs of an animal to the basic needs of a plant

S.3.3.3 ▲ discuss ways organisms use their senses to survive in their environment (e.g., find food, seek shelter, defend themselves, camouflage). (3-4.3.1.3)

S.3.3.4 ▲ compare, contrast, and ask questions about life cycles of various organisms. (3-4.3.2.1)

Instructional Example: mealworms

**Vocabulary:** basic needs, compare, contrast, habitat, metamorphosis, organism, and structure

**S.3.4 Students will observe objects, materials, and changes in their environment. They will then explain their observations.**  
Students will...

S.3.4.1 ▲ collect, observe properties, and classify a variety of earth materials in environment. (3-4.4.1.1)

Instructional Examples:

- bring in samples of earth materials to observe and classify by their colors, textures, and other physical properties
- describe properties of different kinds of rocks
- bring in rocks to observe colors and textures as well as immersing them in water and acids such as vinegar

S.3.4.2 observe the moon and stars. (3-4.4.2.1)

S.3.4.3 observe and compare the lengths of shadows. (3-4.4.2.2)

S.3.4.4 ▲ discuss that the sun provides light and heat to maintain the temperature of earth. (3-4.4.2.3)

**Vocabulary:** critique, design, function, invent, technology, and tools

### **S.3.5 Students will develop a simple design plan to solve a problem. They will investigate tools.**

Students will...

- S.3.5.1 ▲ identify a simple design problem (design a plan, implement a plan, evaluate the results, make changes to improve the product, and communicate the results). (3-4.5.1.1)

Instructional Examples:

- use different kinds of tools for making the biggest bubble or longest lasting bubble
- design a paper airplane

- S.3.5.2 understand that the design process produces knowledge that can be used to solve a problem and improve our world. (3-4.5.2.1)

Instructional Examples:

- What problem has a zipper solved; how has it improved our lives?
- How is Velcro like a zipper; how has it improved our lives?

- S.3.5.3 investigate how scientists use tools to observe (e.g., learn about the tools veterinarians, dentists, doctors, etc. use). (3-4.5.2.5)

**Vocabulary:** hygiene, nutrition, nutritional value, pollution, recycle, reduce, reuse, and survive

### **S.3.6 Students will demonstrate personal health and environmental practices.**

Students will...

- S.3.6.1 ▲ discuss the nutritional value of various foods and their contribution to health (food labels). (3-4.6.1.1)

Instructional Examples:

- read and compare nutrition information found on labels
- discuss healthy foods, identify or make a healthy snack

- S.3.6.2 discuss that safety involves preventing injury by avoiding inappropriate risks and dangers (e.g., bike safety, water safety, weather safety, etc.). (3-4.6.1.2)

- S.3.6.3 identify responsibility for their own health, and the health and well being of others (at least one body system should be discussed, e.g., digestive, skeletal, circulatory, nervous). (3-4.6.1.3)

- S.3.6.4 define pollution. (3-4.6.2.1)

- S.3.6.5 demonstrate reducing, reusing, and recycling. (3-4.6.2.3)

**S.3.7 Students will identify themselves as scientists. They will also examine the lives of scientists in history.**

Students will...

S.3.7.1 identify that they participate in science inquiry by asking questions. (3-4.7.1.1)

S.3.7.2 examine the lives of people that have made scientific contributions. (3-4.7.1.2)