

## Course/Grade Level: Second Grade Science Curriculum

### S.2.1 Students will demonstrate skills necessary to conduct scientific inquiries.

Students will...

- S.2.1.1 identify the properties of objects using direct observations (use touch, sight, hearing, taste, smell, and/or measurement. (K-2.1.1.1)
- S.2.1.2 classify and arrange groups of objects by a variety of properties. (K-2.1.1.2, K-2.2.1.2)
- Instructional Examples:
- group seeds by color, texture, and size
  - group objects by whether they sink or float
  - group rocks by texture, color, hardness
- S.2.1.3 use age-appropriate materials, tools, (e.g., hand lenses, balance scales, goggles, thermometers, and metric measurement tools), and safety procedures to collect, measure and record information. (K-2.1.1.3, K-2.2.1.1, K-2.5.1.2)
- S.2.1.4 ask and answer questions about objects, organisms, and events in their environment. (K-2.1.1.4)
- S.2.1.5 describe an observation orally or pictorially. (K-2.1.1.5)

**Vocabulary:** balances, describes, explore, graph, hand lens, objects, observe, safety, scales, thermometer, and tool.

### S.2.2 Students will observe and manipulate common objects and materials in their environment.

Students will...

- S.2.2.1 compare solids, liquids, and gases (e.g., water is a liquid, ice is a solid, water vapor is a gas). (K-2.2.1.3)
- S.2.2.2 recognize and describe how forces impact motion (e.g., pushes and pulls, friction, gravity).
- S.2.2.3 observe how simple machines work (e.g., ramps, levers, fulcrums, pulleys).

### **S.2.3 Students will develop an understanding of the characteristics and needs of living things.**

Students will...

- S.2.3.1 learn that animals and plants can live only in environments in which their needs can be met (e.g., plants need sunlight, water, air, and nutrients; animals need air, water, food, and shelter; and appropriate habitats). (K-2.3.1.1)
- S.2.3.2 observe life cycles of different living things (e.g., plants and butterflies - egg, larva, pupa, adult). (K-2.3.1.2)
- S.2.3.3 identify the structures/parts of plants and animals (e.g., basic human body organs - heart, lungs, stomach, etc.; plant parts - roots, stems, leaves, flowers, seeds). (K-2.33.1.4)
- S.2.3.4 identify the characteristics of animals and classify them as mammals, reptiles, insects, birds, amphibians, and fish.

**Vocabulary:** habitat, life cycle, metamorphosis, organism, structure

### **S.2.4 Students will observe and identify the objects and materials in their environment.**

Students will...

- S.2.4.1 observe, compare, and sort earth materials. (K-2.4.1.1)  
Instructional Example:
  - describe, compare, and sort pebbles and rocks by size, shape, and color
  - observe earth materials around the playground, on a field trip, or in their own yard
- S.2.4.2 identify how fossils are formed and why they are important to understanding the past.
- S.2.4.3 describe the properties of water and the water cycle.  
Instructional Example: observe a water drop using a hand lens to notice the shape of the drop (surface tension) and that water is transparent, odorless, colorless liquid)
- S.2.4.4 label a diagram of the water cycle to identify evaporation, condensation, and precipitation.
- S.2.4.5 observe and record weather changes (e.g., use Celsius thermometer and rain gauge). (K-2.4.3.1, K-2.4.3.2)
- S.2.4.6 discuss weather safety procedures (e.g., tornados, severe weather). (K-2.4.3.3)

**Vocabulary:** properties, texture, weather

**S.2.5 Students will demonstrate responsibility for their own health and the environment.**

Students will...

- S.2.5.1 engage in personal care (e.g., proper hand washing techniques, dental care, daily exercise, and personal hygiene). (K-2.6.1.1)
- S.2.5.2 make healthy food choices and understand why those choices are beneficial to their health. (K-2.6.1.2)  
Instructional Example: use the food pyramid to classify foods and plan a meal that meets the daily requirements
- S.2.5.3 engage in safety practices (e.g., crosswalks, swimming, riding bicycles, and the danger of strangers and unknown animals). (K-2.6.1.3)
- S.2.5.4 demonstrate an awareness of the environment and its needs.  
Instructional Examples:
- develop an awareness of the effect of pollution and littering on the environment
  - practice reducing, reusing, and recycling
  - conserve energy by turning off lights, water, etc. when not being used

**Vocabulary:** health, nutrition

**S.2.6 Students will be involved in investigations that make their minds wonder and know they are "Thinking like a Scientist".**

Students will...

- S.2.6.1 explore the scientific process (e.g., observe, measure, compare, classify, infer, communicate put things in order, predict, investigate, and draw conclusions with various investigations). (K-2.7.1.1)
- S.2.6.2 examine the lives of people that have made a contribution to science. (K-2.7.1.2)  
Instructional Examples:
- guest speakers
  - read appropriate books
  - view videos
  - field trip to hospital or similar institution

**Vocabulary:** predict, scientist