Second Grade

Second-grade students begin the school year equipped with prior knowledge and skills that enhance their awareness of scientific concepts and serve as a foundation for continued exploration of the world around them. These young scientists engage in science-related challenges that encourage various levels of inquiry. They are actively involved in hands-on science investigations that are teacher-selected but often self-guided.

The classroom environment stimulates the natural curiosity of students. Investigating materials and situations, asking questions, communicating findings, and seeking meaning from everyday activities and experiences are vital instructional components for all students in Grade 2.

The second-grade curriculum provides opportunities for students to develop awareness of simple machines and changes in the states of matter. Students identify characteristics of animals, become aware of the impact of weather on society, and integrate scientific processes with technology as a basis for inquiry. It pairs a dynamic classroom environment with a challenging curriculum designed to extend the natural curiosity of students and encourage the development of scientific knowledge and skills.

Physical Science

Students will:

1. Identify states of matter as solids, liquids, and gases.
   - Describing objects according to physical properties, including hardness, color, and flexibility
   - Describing changes between states of matter
     Examples: solid to liquid—melting,
     gas to liquid—condensing,
     liquid to gas—evaporating,
     liquid to solid—freezing
   - Measuring quantities of solids and liquids

2. Identify properties of motion, including change of position and change of speed.

3. Recognize that light travels in a straight line until it strikes an object.
   - Recognizing that light can be reflected

4. Describe observable effects of forces, including buoyancy, gravity, and magnetism.
   Examples: buoyancy—boat floating on water,
   gravity—apple falling from tree,
   magnetism—magnets adhering to metal

- Identifying simple machines, including the inclined plane, lever, pulley, wedge, screw, and wheel and axle

5. Define force and motion.
   - Identifying forces that change an object's position or motion
     Examples: lifting, pushing, pulling
   - Identifying sources of friction
     Examples: rubbing hands together, applying sandpaper to wood
   - Describing the force of gravity

6. Identify the relationship of simple machines to compound machines.
   Example: pencil sharpener composed of a wheel and axle, incline plane, and wedge

Life Science

7. Identify characteristics of animals, including behavior, size, and body covering.
   - Comparing existing animals to extinct animals
     Examples: iguana to stegosaurus, elephant to wooly mammoth
   - Identifying migration and hibernation as survival strategies

Earth and Space Science

8. Identify geological features as mountains, valleys, plains, deserts, lakes, rivers, and oceans.
   - Identifying local landforms and bodies of water

9. Identify evidence of erosion and weathering of rocks.

10. Describe evaporation, condensation, and precipitation in the water cycle.

11. Identify the impact of weather on agriculture, recreation, the economy, and society.
    - Recognizing the importance of science and technology to weather predictions

12. Identify basic components of our solar system, including the sun, planets, and Earth's moon.

13. Describe the position of Earth, the moon, and the sun during the course of a day or month.
    - Describing various forms of technology used in observing Earth and its moon