

Springfield Public Schools
K-5 SCIENCE

COURSE DESCRIPTION

Science in second grade is taught on a daily basis for 30 – 45 minutes within a regular self-contained classroom. The second grade student will be introduced to different objectives within the area of science processes, the environment, matter and energy, earth science, and life science. The program emphasizes a hands-on approach to learning and scientific inquiry.

SECOND GRADE
MAJOR INSTRUCTIONAL GOALS

The intent of the Springfield R-12 Science Program is:

1. **The student will conduct simple hands-on science investigations and use tools to gather data.**
 - a. Use simple metric tools to accurately measure objects (length, mass, capacity and temperature) then record data. (SC 7;14.; **1.8**).
 - b. Make observations and demonstrate the distinction between actual observation and speculations. (SC 7 **1.3; 1.5; 1.8**; 3.3)
 - c. Use words, pictures, models, numbers, graphs, charts, and maps to organize and communicate observations and ideas. (SC 7;1.4; **1.8; 2.1; 4.1**)
 - d. Predict or hypothesize the outcome of a simple process or event. (SC 7 1.1; 1.2; **1.3**)

2. **The student will demonstrate knowledge of the impact that science has on people and the environment.**
 - a. Predict problems that might occur to people, organisms, and the environment and a technological solution for each. (SC 8; 1.4; **1.6**; 3.1; 3.3)
 - b. Plan relevant strategies using tools to solve simple environmental and social problems that a school and community encounter. (SC 8; 1.2; 1.3; 3.1; 3.3)

3. **The student will understand that women and men of all ages, backgrounds and groups engage in a variety of scientific work.**
 - a. Explain the ways in which science and technology impact a variety of careers and occupational areas. (SC 8; 1.10; 4.8)
 - b. Discuss recent increases in technological advances and identify resulting cause and effect relationships. (SC 8; 1.2; 2.4 ; **4.1**)

4. **The student will explore the needs and characteristics of living organisms, their life cycles and their interdependence with the environment.**
 - a. List a variety of resources from the living and nonliving environment, that humans depend on to meet the needs and wants of a population. (SC 4; 1.6;1.8)
 - b. Make and record observations of the phases in the life cycle of different types of organisms. (SC 3; 1.2; **1.3; 1.8**)
 - c. Discuss changes that living organisms have on their environment and other living things over time. (SC 4; 1.2; **1.6**; 2.1)
 - d. Explain that an organism's ability to survive is dependent on its physical characteristics and the space and condition of the environment. (SC 3; 1.1; **1.3; 1.5; 1.6**; 2.4)

- e. Organize information and ideas for body structures in relationship to growth and survival. (SC 3; 1.2; 2.4)
5. **The student will investigate earth's physical features and natural forces and observe patterns in the solar system.**
- a. Determine through research and information ideas about the uses and abuse of the earth's natural resources. (SC 5; 1.1; 1.2; 1.4)
 - b. Classify a variety of rocks, soil types, and minerals according to their usefulness as natural resources. (SC 5; **1.3; 1.8**)
 - c. Diagram the motion of an object by tracing its position over time (for example; pattern and relationship of the earth and sun during the day/night cycle. (SC 2; **1.6; 3.5**)
 - d. Investigate and evaluate weathering processes and changes in the earth's surface over time. (SC 5; **1.3;3.5**)
 - e. Identify and label the sequence of the water cycle and describe forms of precipitation. (SC 5; **1.6; 1.8; 2.1**)
 - f. Measure and predict weather changes over time. (SC 5; 1.6; 2.7)
6. **The student will investigate the properties of matter and energy.**
- a. Identify and classify objects according to the properties of the materials from which they are made. (SC 1; **1.3; 1.4; 1.6**)
 - b. Separate, sort, and group the components of a mixture by their properties. (SC 1; 1.8)
 - c. Predict the effects of light, heat and cooling on a variety of objects in the environment and conduct a simple investigation to test predictions. (SC 1; **1.3; 1.6**)
 - d. Conduct and record an investigation to show that light can be reflected by a mirror, refracted by a lens and absorbed by an object. (SC 1; 1.2; 1.4)
 - e. Investigate the properties of sound. (SC 1; 1.2; 1.4; **1.6**)

*Processing skills in **bold print** are assessed by the Missouri Assessment Program at this grade level.