

Grade Two

The second-grade standards continue to focus on using a broad range of science skills in understanding the natural world. Making detailed observations, drawing conclusions, and recognizing unusual or unexpected data are stressed as skills needed for using and validating information. Measurement in both English and metric units is stressed. The idea of living systems is introduced through habitats and the interdependence of living and nonliving things. The concept of change is explored in states of matter, life cycles, weather patterns, and seasonal effects on plants and animals.

Scientific Investigation, Reasoning, and Logic

- 2.1 The student will conduct investigations in which
- observation is differentiated from personal interpretation, and conclusions are drawn based on observations;
 - observations are repeated to ensure accuracy;
 - two or more attributes are used to classify items;
 - conditions that influence a change are defined;
 - length, volume, mass, and temperature measurements are made in metric units (centimeters, meters, liters, degrees Celsius, grams, kilograms) and standard English units (inches, feet, yards, cups, pints, quarts, gallons, degrees Fahrenheit, ounces, pounds);
 - pictures and bar graphs are constructed using numbered axes;
 - unexpected or unusual quantitative data are recognized; and
 - simple physical models are constructed.

Force, Motion, and Energy

- 2.2 The student will investigate and understand that natural and artificial magnets have certain characteristics and attract specific types of metals. Key concepts include
- magnetism, iron, magnetic/nonmagnetic, poles, attract/repel; and
 - important applications of magnetism including the magnetic compass.

Matter

- 2.3 The student will investigate and understand basic properties of solids, liquids, and gases. Key concepts include
- mass and volume; and
 - processes involved with changes in matter from one state to another (condensation, evaporation, melting, and freezing).

Life Processes

- 2.4 The student will investigate and understand that plants and animals undergo a series of orderly changes in their life cycles. Key concepts include
- some animals (frogs and butterflies) undergo distinct stages during their lives, while others generally resemble their parents; and
 - flowering plants undergo many changes, from the formation of the flower to the development of the fruit.

Living Systems

- 2.5 The student will investigate and understand that living things are part of a system. Key concepts include
- a) living organisms are interdependent with their living and nonliving surroundings; and
 - b) habitats change over time due to many influences.

Interrelationships in Earth/Space Systems

- 2.6 The student will investigate and understand basic types, changes, and patterns of weather. Key concepts include
- a) temperature, wind, precipitation, drought, flood, and storms; and
 - b) the uses and importance of measuring and recording weather data.

Earth Patterns, Cycles, and Change

- 2.7 The student will investigate and understand that weather and seasonal changes affect plants, animals, and their surroundings. Key concepts include
- a) effects on growth and behavior of living things (migration, hibernation, camouflage, adaptation, dormancy); and
 - b) weathering and erosion of the land surface.

Resources

- 2.8 The student will investigate and understand that plants produce oxygen and food, are a source of useful products, and provide benefits in nature. Key concepts include
- a) important plant products (fiber, cotton, oil, spices, lumber, rubber, medicines, and paper);
 - b) the availability of plant products affects the development of a geographic area; and
 - c) plants provide homes and food for many animals and prevent soil from washing away.