

SCIENCE

Science Grade 4

S.4.A Physical Science

A.1. Students will know the structure and properties of matter.

- a) They will become aware that matter is made up of small particles.
- b) They will understand that energy can cause matter to change states.
- c) They will understand that energy can come from different sources, exist in different forms, and that the forms and sources can change.

S.4.B Earth and Space

B.1. Students will understand that the features and basic process of the Earth change over time.

- a) Know how the features of the Earth's surface are constantly changed by a combination of slow and rapid processes (weathering, erosion, earthquakes, and volcanoes).
- b) Know that the Earth's crust is divided into plates that move at extremely slow rates in response to movement in the mantle.
- c) Know that fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.

S.4.C Life Science

C.1. Students will classify living and nonliving things and explore life processes and life cycles.

- a) Illustrate the different ways that organisms grow through life stages and survive to produce new members of their type.
- b) Understand that plants and animals have certain structures with specific functions that help them survive, grow, and reproduce.
- c) Explain food chains and webs, ecosystems, and habitats in nature.

S.4.D Nature of Science

D.1. Students will:

- a) Conduct science investigations and will pose questions based on their observations.
- b) Define and formulate hypothesis to focus or further investigation.
- c) Use ongoing observations to answer questions.
- d) Collect, organize, and analyze data to note change and constancy in nature.
- e) Use simple science equipment including rulers, balances, graduated cylinders, hand lenses, thermometers, and microscopes to collect relevant data.
- f) Show how the major developments of scientific knowledge in the earth and space, life, environmental, and physical sciences have changed over time.

- g) Select multiple sources of information to help answer questions selected for classroom investigations.
- h) Communicate and analyze results of investigations using charts, graphs, drawing, written descriptions, and various other means.

S.4.E Current Events in Science:

E.1. Students will:

- a) Identify local and state issues that are helped by science and technology, such as recycling.
- b) Identify how science and technology can also cause a problem, such as air and water pollution.
- c) Discuss social effects of science in communities.