

THIRD GRADE SCIENCE

THEME: CHANGE

Goal

The third grade science program continues to build upon the concepts taught in the primary grades. Students in third grade discover that change is around us all the time.

The best approach to teaching concepts about change is through in-depth study of natural settings, which illustrate a change of events. Because all things change over time, it will be important to visit and revisit selected sites to observe differences that take place over time. Students will continue to need time to explore and manipulate objects in their environment.

Science Processes and Inquiry

1. The student will engage in investigations that lead to the discovery of science concepts.

- a. Use numerical data to describe and compare objects, events, and measurements.
- b. Predict the outcome of a simple investigation and compare the results to the prediction.
- c. Collect and analyze the data in an investigation to develop a logical conclusion.
- d. Practice safety procedures in all science investigations.

Physical Science

1. Energy– The student will observe that energy has multiple forms and can be changed from one form to another.

- a. Identify the sources and forms of energy:
 - *Heat
 - *Light (solar)
 - *Electricity
 - *Mechanical Motion
- b. Analyze the interaction and transformation of the forms of energy.
- c. Determine that sources of stored energy take many forms, such as food, fuel, and batteries.
- d. Assess the needs, benefits, distribution, pollution, and cost associated with society's use of energy.

2. Light – The student will discover that light has a source and travels in a direction.

- a. Determine that objects are seen when light traveling from the object enters the eye.
- b. Analyze the reflection of light.
- c. Explore prisms and the color spectrum.

3. Sound – The student will determine that sound is produced by vibrating objects.

- a. Explore how sound travels in waves through solids, liquids, and gases.
- b. Identify different qualities of sound (e.g. pitch, volume).

Life Science

1. Adaptations – The student will determine that an organism’s chance of survival is improved with adaptations in physical structure and/or behavior.

- a. Determine that plants and animals have structures that serve different functions in growth, survival, and reproduction in different habitats.
- b. Evaluate living and non-living things that affect plant and animal life:
 - *Other Plants/Animals
 - *Resources
 - *Climate
 - *Water
 - *Air
 - *Location
- c. Explain how behavioral and physical adaptations allow animals to respond to life needs (e.g. finding shelter, defending themselves, hibernation, and camouflage).
- d. Determine that some plants and animals survive and reproduce, despite environmental changes, while others die, or move to new locations.
- e. Compare/contrast a variety of fossils.
- f. Explain reasons for the disappearance of extinct species.
- g. Describe ways humans impact air, water, and habitat quality.

2. Nutrition – The student will recognize that food provides fuel for energy.

- a. List food nutrients:
 - *Minerals
 - *Vitamins
 - *Carbohydrates
 - *Protein
 - *Fiber
- b. Describe basic food groups.
 - *Dairy
 - *Meat
 - *Fruit/Vegetables
 - *Bread/Cereal
- c. Plan a balanced meal.

Earth Science

1. The student will observe that objects in the sky move in regular and predictable patterns.

- a. Describe how night and day are caused by the rotation of the Earth on its axis.
- b. Using shadows, observe that the position of the sun in the sky changes during the course of the day and from season to season.
- c. Observe how the moon’s appearance changes during the four-week lunar cycle.
- d. Observe stars in relation to the Earth and the universe (number, brightness, basic constellations).
- e. Observe that different stars can be seen in different seasons.
- f. Determine that the Earth orbits the sun, while the moon orbits the Earth.
- g. Observe and identify the basic components of the solar system (sun, planets).

Experiential Location Suggestions:

Area Fields
Parks
Backyards
Agricultural Fields
Preschools
Nursing Homes
Senior Centers
Ecosystems
P.S.O.

Other Theme Suggestions:

Patterns

Adaptation

Change