

4th Grade Living Environment Unit

Unit Overview

The Living Environment unit, taught using SCIS 3+ *Environments*, provides students opportunities to investigate animals' responses to environmental factors and conduct experiments. Experiments testing the effects of light, temperature, and water guide students in their understanding of how major environmental factors can influence organisms. Within each activity, the students observe, collect, record, and interpret data from their own organisms during controlled experiments that they have helped design. In this way, they become intimately involved with and aware of the interactions between organisms and their environments. (SCIS 3+, p. 5)

Essential Questions:

1. Why do only certain plants and animals live in a particular environment? Why can't all plants and animals live in the same environment?
2. What are good scientific practices?

Unit Questions:

1. In what ways can living things be sorted into groups? How should categories be determined?
2. What is the original source of almost all kinds of animals' food?
3. How do changes to an organism's habitat affect its survival?
4. How do experiment results help determine an optimal environment for an organism?
5. What is a "fair" experiment? Why should experiments be "fair?"
6. How can observations be made more accurate?
7. Why are results to the same experiment seldom exactly the same? When results are different, what should be done?

Lesson Summary (Excerpted from SCIS 3+, pp. 8 & 124)

Chapter 1: Review Populations

The students review [or learn] the concepts of population, plant-eater, animal-eater, predator-prey, food chain, food web, barrier, and dispersal as depicted in the Everglades picture.

Chapter 3: Environmental Factors

The concept of environmental factor is invented in this chapter. Students distinguish between biotic and abiotic environmental factors. They also explore the concept of response.

Chapter 12: A Place to Live

The students prepare terrariums by planting seeds under optimum environmental conditions according to what they have learned so far in this unit. In planning their terrarium, they consider such factors as light, water, and temperature.

Chapter 13: Temperature and Isopods

The students investigate the response of isopods to various temperatures. Students use their mathematical skills to graph the behavior and responses of the isopods to temperature.

Chapter 14: The Best Environment for Isopods

The students extend their knowledge and gain new skills in planning and carrying out experiments to determine the responses of isopods to the environmental factors of light and moisture. They learn new techniques for conducting experiments.

Chapter 15: The Environment of Hermit Crabs

Students ... determine the responses [of hermit crabs] to light, moisture, and temperature. As in earlier activities, the students record, graph, and interpret the results of their own experiments. The concept of variation is reviewed [or introduced].