

Plant and Animal Needs

Strand	Life Processes
Topic	Investigating basic needs of plants and animals
Primary SOL	K.7 The student will investigate and understand basic needs and life processes of plants and animals. Key concepts include a) animals need adequate food, water, shelter, air, and space to survive; b) plants need nutrients, water, air, light, and a place to grow to survive.
Related SOL	K.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which k) objects are described both pictorially and verbally. K.6 The student will investigate and understand the differences between living organisms and nonliving objects. Key concepts include b) living organisms have certain characteristics that distinguish them from nonliving objects, including growth, movement, response to the environment, having offspring, and the need for food, air, and water. K.7 The student will investigate and understand basic needs and life processes of plants and animals. Key concepts include c) plants and animals change as they grow, have varied life cycles, and eventually die; d) offspring of plants and animals are similar but not identical to their parents or to one another.

Background Information

Plants and animals change as they grow. Animals need adequate food, water, shelter, air, and space to survive. They can be terrestrial, aquatic, or both. Terrestrial animals get their oxygen from the air they breathe, and some aquatic animals extract oxygen from water. In order to survive, plants need nutrients, water, air, light, and a place that has adequate space for them to grow. Plants provide food for people and animals. Plants can be terrestrial and aquatic.

Materials

- Small pictures of familiar plants and animals
- Drawing paper
- Crayons

Vocabulary

plants, animals, life needs, food, water, shelter, air, space, nutrients, light

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Let students brainstorm answers to the following questions, and record responses:
 - What do you need to stay alive?

- What do your pets need to stay alive?
 - What do plants need to stay alive?
2. Discuss the basic needs of animals (food, water, shelter, air, and space to survive) and plants (nutrients, water, air, light, and a place to grow). Explain how they obtain these basic needs.
 3. Show students a picture of an animal, and discuss where that animal lives. Explain how the animal obtains its life needs, and discuss what will happen to the animal if it is unable to obtain one of its life needs. Repeat with a picture of a plant. Discuss scenarios such as, “What happens when trees are cut down?” and “What would happen if the rain stopped falling?”
 4. Give each student a small picture of either a plant or animal that would be familiar to him/her. Have each student glue his/her picture on drawing paper and add the animal’s or the plant’s habitat, making sure to include the things that the animal or plant needs to live. For example, a bird may need a tree to build a nest for shelter, and a deer might need to have a stream for water.

Assessment

- **Journal/Writing Prompts**
 - Complete a basic needs chart by drawing and labeling the basic needs of plants and animals.

Strategies for Differentiation

- Given a sheet of paper with pictures of needs and wants, have students circle the life needs of animals.
- Given a sheet of paper of various pictures, including plant needs, have students circle the life needs of plants.
- Experiment to test the basic needs of plants. Use flats of inexpensive flowers, and test them to see how they react without water, without a place to grow, or without light.
- Experiment to test what happens if plants do not have adequate space in which to grow. Plant one seed in a small cup, 10 seeds in a second cup, and 20 seeds in a third cup. Observe, record, and compare results.