

Living and Nonliving

Strand	Life Processes
Topic	Investigating differences between living organisms and nonliving objects
Primary SOL	K.6 The student will investigate and understand the differences between living organisms and nonliving objects. Key concepts include a) all things can be classified as living or nonliving; 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.
Related 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; c) plants and animals change as they grow, have varied life cycles, and eventually die. K.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which a) basic characteristics or properties of objects are identified by direct observation.

Background Information

The term *living* is used to describe anything that is or has ever been alive (e.g., dog, flower, seed, log). It might help to also include the category of once-living. The term *nonliving* is used to describe anything that is not now nor has ever been alive (e.g., rock, mountain, glass, watch). All living things grow, breathe, reproduce, excrete, respond to stimuli, and have basic needs. Animals need food, water, shelter, air, and space. Plants need water, air, light, and a place to grow.

Materials

- Live plant
- Artificial plant
- Stuffed animal
- Picture of a real animal
- Pictures of living and nonliving things
- Computers equipped with a drawing program appropriate for kindergarten students
- Magazines for cutting out pictures

Vocabulary

living, nonliving

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

1. Show students a live plant and an artificial plant. Ask students, “What is the difference between these two plants?” Make a list of the differences they name. Repeat the activity with a stuffed animal and a picture of a real animal. If students do not mention that one is alive and one is not, ask leading questions that will guide them to this conclusion. Sample questions might include, “Do I need to water both of these plants? Why, or why not? Do both of these plants need sunlight? Will both of these plants grow? Do both of the animals eat food? Why, or why not? Can both of these animals move?”
2. Show students pictures of various organisms. Let them talk with a partner to discuss whether each organism is living or nonliving. Ask partners to discuss their conclusions and to explain why they chose their answers. Ask the class if they agree or disagree with each answer (using thumbs up/thumbs down). Sort the pictures into living and nonliving as students classify them.
3. Ask students what the living things and nonliving things have in common. Write the words “Living” and “Nonliving” on a T-chart. Record the student responses. Focus on the basic characteristics of living things: growth, movement, response to the environment, having offspring, and the need for food, air, and water.
4. Have students draw two pictures, either using a computer or paper. The first one will be a picture of a living organism. Review the characteristics of living things. Students may add to the picture they drew by inserting pictures from the software program or by drawing other pictures of living organisms. Review the characteristics of nonliving things, and ask students to draw a picture of a nonliving thing.
5. Monitor student work, and share their work with the class.

Assessment

- **Other**
 - Have students share their pictures with the class, and explain what makes the item they drew living or nonliving.
 - Have students cut out pictures from magazines and sort them into living and nonliving groups.

Strategies for Differentiation

- Take students on a walk outside, and have them identify living and nonliving things. Use a camera to take pictures. Have students classify the pictures, using a graphic organizer.
- Give each student a necklace with a picture of a living or nonliving thing on it. Have students sort themselves into the correct group (living/nonliving) based on the pictures they are wearing.
- Find living and nonliving things in stories, poems, and nursery rhymes.
- Take students on a walk around the schoolyard, and collect a few items. Label a two-column graphic organizer: “Living” and “Nonliving.” With input from students, glue the collected items onto the two-column graphic organizer under the correct heading. Display the organizer in the classroom.