Living or Nonliving

Summary

Students look for living and nonliving elements on the playground.

Main Core Tie

Science - 3rd Grade
Standard 2 Objective 1:

Time Frame

1 class periods of 30 minutes each

Group Size

Pairs

Materials

For each group of 2:
Yarn for circle, 1 1/2 ft.
Hand lens
Thermometer.
Student drawn data chart

Background for Teachers

An organism's habitat is the specific place that an organism lives. All habitats contain living and nonliving elements. Animals and plants are common living elements. Rocks and soil are common nonliving elements. Soil is comprised of many living bacteria and organisms. For the purpose of this activity, it will be considered nonliving. Other nonliving parts of a habitat include temperature, humidity, amount of sunlight and shade, shelter from or exposure to wind, and air quality. All of these features influence how an organism lives. Living elements change to nonliving elements through natural and unnatural processes. An example of this would be a tree. It is living if it continues to grow, however, if it dies or is harvested and turned into paper, it is nonliving. A sheep is living and wool yarn is nonliving.

Student Prior Knowledge

This activity can begin study of living and non-living things in an environment.

Intended Learning Outcomes

1. Observe simple objects and patterns and report observations.
2. Conduct a simple investigation.
3. Sort and sequence data.
4. Distinguish between examples and non-examples.

Instructional Procedures

Step 1. List the characteristics of living (i.e., growth, movement, reproduction) and non-living things in an environment.
Step 2 On the overhead or chalkboard, make two vertical columns. Label the columns living and non-living. Tell the students that all things in their habitat fit into one of these two categories.

Step 3. Use these headings and have the students list things in the classroom environment, classifying them as either living or non-living. Discuss the characteristics that identify them this way. (The chalkboard can't reproduce so it is not living. The plants on the window grow so they must be living.)
Step 4. Have each group of two students draw a T chart like the one on the board and label the columns living and non-living. Give a yarn circle to each pair. Explain that each pair will use the yarn circle on the playground. They will place the yarn circle in an area (flower bed, sandbox, tree, grass) and will record the living and non-living things they find inside the yarn circle. They should find four living and four non-living things within the circle. If necessary, they may move their circle to other locations. If they have to move their circles to other locations, they must record their move on their data sheets. Generate a list of potential organisms that the students may find. Remind students that both plants and animals are living organisms and may be used in this field research.
Step 5. Model examples of some things that might be collected on the board or overhead. Remind students that an important rule of the data collection process includes the careful observation of the organism and its habitat. There should be no digging in the soil or uprooting of plants. Hand lenses and thermometers are valuable tools for this activity.
Step 6. Prior to going outside, have students predict if they will find more living or nonliving elements on the playground. Record this information on the board..
Step 7 Take the students outside and give them 10-15 minutes to observe their organisms and collect their data.
Step 8 Encourage students to ask questions about their observations. (Are there more organisms in the shade or sun? Do plants grow bigger in shady areas?)
Step 9. Return to the classroom and compare and compile the data the students collected. Compare the results obtained with student predictions.
Step 10 Discuss why and where they found more living elements. Were there areas that the number of living and nonliving elements were similar? Why? What were some of the interesting or unusual elements the students found in the areas? Were they natural or man-made?

Extensions

Students could take the questions they asked from their outdoor investigations and create a simple inquiry based hypothesis that could be answered with experimentation and data taking. For example, students who wonderred about plant growth in sunshine and shade could take soil and air temperatures in different locations and compare plant growth in those areas, coming to some simple conclusions.

Assessment Plan

Having each group create their own chart could be used for assessment. Each team member will need to be able to give reasons why their information is in the given colum using the science language for this topic.

Authors

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