



RESOURCES AND THE ENVIRONMENT

# Is It Natural or Transformed?

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from *Resources and the Environment Teacher's Guide* and for *Tillena Lou's Big Adventure*.

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This activity is part of the Resources and the Environment teaching unit. The *teacher's guide* may be used alone or with integrated unit components. The Resources unit is comprised of the guide, *Tillena Lou's Big Adventure* (storybook), and two supplements: *The Reading Link* and *The Math Link*. For more information on this and other educational programs, contact the Center for Educational Outreach at 713-798-8200, 800-798-8244, or visit <http://www.bioedonline.org/>

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The activities described in this book are intended for school-age children under direct supervision of adults. The authors, Baylor College of Medicine and the publisher cannot be responsible for any accidents or injuries that may result from conduct of the activities, from not specifically following directions, or from ignoring cautions contained in the text.

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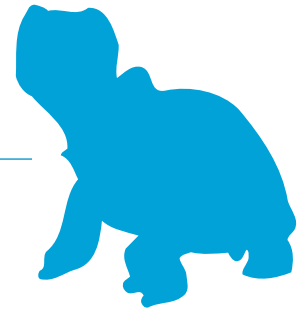
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# Is It Natural or Transformed?



Students examine, compare, discuss and sort materials as natural or transformed (changed or processed by humans).

**R**esources are the materials people and other organisms obtain from the environment. Resources provide for the needs and wants of a population (group of the same kind of organism). All plants and animals depend on the resources in their environments to live, grow, and reproduce.

A variety of resources are used by people without much modification. Some resources that are used in their natural state include air for breathing (although it often is filtered in buildings), fresh fruits and vegetables for eating, and some spring water for drinking. People transform other resources to solve problems. Changed resources include cut timber and manufactured bricks for homes, cooked or prepared foods derived from raw goods, and water made drinkable by processing surface water. “Processed” means that something has been prepared or converted by a special treatment.

## SETUP

Prepare 6 large bags, each containing four different pairs of materials for students to observe and sort. Make sure that each of the four pairs contains one natural item and its designed/processed companion.

### EXAMPLES OF PAIRS OF OBJECTS

Natural	Transformed
sand (in container)	glass marble
tree twig	craft stick, pencil, clothespin
cotton boll	cotton fabric or cotton ball
seashell	shell button
wheat shaft	breakfast cereal, wheat flour
clay	clay pot or clay brick
limestone	chalk

## PROCEDURE

1. Have students sit in a circle. Explain that the class will conduct a sorting activity and, that to demonstrate sorting, you will sort the students according to one attribute (e.g., shirt color, shoe type, etc.). Do not identify the attribute you plan to use. Have two or three of the students matching that attribute stand and move to one side of the circle. After a few minutes, ask the rest of the students having the same attribute to stand with the first group. Next, have the remaining students stand up and form a separate group. Ask the class to figure out how they have been sorted. Repeat the procedure using several different attributes.

## CONCEPTS

- Anything that an organism obtains from its environment is a “resource.”
- Resources can be nonliving or living. Some nonliving resources, come from objects or materials that once were living, such as trees and wood.
- People and other animals use some resources just as they occur in nature. Other resources are transformed into something else before they are used.
- Objects can be classified as natural or designed/processed.

## SKILLS

- Observing
- Sorting and classifying
- Comparing
- Generalizing

## TIME

**Setup:** 30 minutes

**Class:** 30 minutes

## MATERIALS (see Setup)

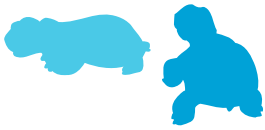
### Materials per Student Group

- Large bag containing four different pairs of materials. Each of the four pairs should contain one natural item and its matching designed/changed companion. Place loose materials, such as sand, in smaller, sealed plastic bags.

### Materials per Student

- Hand lens
- Student sheet





### EXTENSION

Encourage students to bring items from home to add to the materials. Use these materials in a sorting center in the classroom.

2. Arrange the students in groups of four. Pass out the bags of materials for sorting.
3. First, encourage each group to sort the materials in any way they like. Have them use hand lenses to observe the materials as they sort.
4. Next, tell students they will sort the materials into two groups: Materials that are natural (how they are found in nature) and materials that have been processed (products not occurring naturally, but transformed or combined with something else). Ask students about their groupings, making sure that they understand the difference.
5. Let each student share one item and explain why she/he thinks it is natural or processed. Have the student describe where the item might be found, and if it has been changed from its original state.
6. Have students match the two items belonging to each of the four pairs received by their group. Distribute the student sheets, and have each student draw and describe the pair of items.
7. Have students match the two items belonging to each of the four pairs received by their group. Distribute the student sheets, and have each student draw and describe one pair of items.
8. Distribute the worksheets. Have students draw a picture and write about the item.

# Is It Natural or Processed?

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Name \_\_\_\_\_

Date \_\_\_\_\_

Natural

Processed

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