

# Renewable/Nonrenewable Resources Classification Game



## *Materials for Instructor*

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**Summary (for instructor):** This file contains materials for a tag-like game that has students classify natural materials as renewable resources, renewable ecosystem services, or non-renewable. Use alone, or with lessons such as "Introduction to Ecosystem Services" or "Sustainability vs. Overshoot: Regeneration of Renewable Resources." (15 min.)

- **Contents:** Directions and materials for a 'tag' game to help students classify renewable and non-renewable resources, including renewable ecosystem services.

### **Activity Directions**

1. Print the cards that appear on the following pages.
1. Assign three student one shaded card each; these students are "it" and should stand on one side of the room.
2. Have the other students form pairs and assign each pair an unshaded card. (Students can hold the card together. You can also print more cards so that each student has one, and/or make your own cards with terms that fit the categories. Students can also pin the cards to their shirts.) Instruct these students to stand on the opposite side of the room.
3. Have students review their cards; tell students with non-shaded cards to decide (to themselves) whether their card represents a renewable material, a renewable ecosystem service, or a non-renewable material.
4. Explain that the goal is to form a team of renewable resources, renewable ecosystem services, or non-renewable resources. Tell students that when you will give the signal, they should quickly run and form a group with their respective "it" (shaded card person) as well as other students whose card fits that category. Instruct teams to raise their hands when they are done so that you can check responses. Only correctly-formed teams will "win."
5. After the game is played and teams are formed, the instructor will check for correct responses (see below). Teams should be ready to discuss explain their category.

### **Correct responses (additional notes):**

- Renewable resource: crop of vegetables | solar energy | herd of cattle | hardwood forest ("renewability" depends on the ability to maintain the biodiversity of the forest) | school of fish
- Renewable ecosystem services: replenishment of rivers | solar energy (can be a "renewable resource" as well) | pollution-absorbing ability of a wetland | beauty provided by a mountain | ability of the ocean to trap CO<sub>2</sub>.
- Non-renewable resources: Iron ore | crude oil (non-renewable in human time scale) | coal (same) | metals (Metals cycle within the rock/mineral cycle, but they do not regenerate. They can, however, be recycled.)

*RENEWABLE  
RESOURCE*

*RENEWABLE  
ECOSYSTEM SERVICE*

*NONRENEWABLE  
RESOURCE*

A crop of vegetables

The replenishment of rivers  
through the water cycle

Solar energy

Pollution-absorbing ability of a  
wetland

Iron Ore

A herd of cattle

Crude Oil

A hardwood forest

Beauty provided by a mountain

A school of tropical fish

Ability of the ocean to traps  
CO<sub>2</sub>

Coal

# Metals