Non-Renewable Resources

Contributors

Derek Tucker
Graduate Student
Georgia Southern University, GA

Lynne Burkhalter
Partner Teacher
Claxton High School, GA

Intended Audience

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>K-4</td>
<td></td>
</tr>
<tr>
<td>5-8</td>
<td></td>
</tr>
<tr>
<td>9-12</td>
<td>X</td>
</tr>
</tbody>
</table>

Activity Characteristics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Setting</td>
<td>X</td>
</tr>
<tr>
<td>Requires special equipment</td>
<td></td>
</tr>
<tr>
<td>Uses hands-on manipulatives</td>
<td>X</td>
</tr>
<tr>
<td>Requires mathematical skills</td>
<td></td>
</tr>
<tr>
<td>Can be performed individually</td>
<td></td>
</tr>
<tr>
<td>Requires group work</td>
<td>X</td>
</tr>
<tr>
<td>Requires more than one (45 min class) period</td>
<td></td>
</tr>
<tr>
<td>Appropriate for special needs student</td>
<td>X</td>
</tr>
</tbody>
</table>
Introduction

Description
This is a short activity that introduces the concepts of renewable and non-renewable resources.

Abstract
Two different items are placed in a paper bag to represent nonrenewable resources; one being something the students will like (candy) and an undesirable object like paper clips. There are enough items so that each student can withdraw 2 items from the bag (roughly half candy and half paper clips). The bag is then passed around the classroom with the rule that each student must take any 2 items from the bag.

Core Themes Addressed

<table>
<thead>
<tr>
<th>Microbial Cell Biology</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Microbial Genetics</td>
<td></td>
</tr>
<tr>
<td>Microorganisms and Humans</td>
<td></td>
</tr>
<tr>
<td>Microorganisms and the Environment</td>
<td></td>
</tr>
<tr>
<td>Microbial Evolution and Diversity</td>
<td>X</td>
</tr>
<tr>
<td>Other –Natural resources</td>
<td></td>
</tr>
</tbody>
</table>

Keywords
nonrenewable, renewable, natural resources

Learning Objectives
At completion of this activity, learner will

1. Explain the difference between renewable and nonrenewable resources
2. Explain the importance of conserving natural resources.

National Science Education Standards Addressed

Standard A: Science as Inquiry
- Abilities necessary to do scientific inquiry

Standard F: Science in personal and social perspectives
- Natural resources
Teacher Background Information

Renewable Resources: resource that replenishes itself quickly enough so that it will not be used faster than it can be produced.

Nonrenewable Resources: natural resource that is used more quickly than it can be formed.

Class Time

This activity will require a minimum of one twenty minute class period

1. Pass bag around class (10 minutes)
2. Class discussion (10 minutes)

Teacher Preparation Time

This lesson will require approximately five minutes of preparation time.

1. Place items in a bag

Materials and Equipment

1. 1 Bag
2. 35 pieces of candy
3. 35 pieces paper clips

Methods

1. Place 2 different items in a paper bag, one being something the students will like (candy) and an undesirable object like paper clips. Have enough items so that each student can withdrawal 2 items from the bag (roughly half candy and half paper clips).
2. Pass it around the classroom with the rule that each student must take any 2 items from the bag.
3. After it gets through the entire class ask the following questions and have a short discussion.
Discussion Questions
1. For those of you who received the bag first, what did you think about as you picked your 2 items?

2. Why did you select certain items and not others?

3. For those students at the end, what do you think about the choices of the students that took the good items?

4. What kind of resource does the candy represent?

Tips/Suggestions
1. The number of candy pieces and paper clips should be adjusted depending on the size of your class.