

“What Am I Made Of?”

Earth and Human Activities

6th grade Pre-Sly Park Experience Activity

Content Standards:

- NGSS 4-ESS3-1 Earth and Human Activity: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

Anticipatory Set:

What are the ‘things’ of modern life made of? A table, a plastic bottle, a basketball, a zip lock bag? This simple question has a remarkable and often surprising answer. Investigations into the natural resources that source our things will help us all take better care of our environment.

Learning Objectives:

The student will be able to:

- Identify the natural resources contained in common objects used every day.
- Assess the impacts of the extraction of these resources.
- Connect consumer practices to the health of the natural environment.

Background Information:

The source of materials used in everyday life is often very complex, and unknown to us. The materials may come directly from natural resources, such as wood or plant fiber, but often are man made, using petroleum products. This lesson will investigate where common items come from, and whether the source is renewable or non-renewable, as well as how much impact its extraction causes the natural environment.

Vocabulary: Resource Petroleum Mineral Aluminum Renewable Non-renewable

Materials:

Pencils
Plastic water bottle
Soda can
Nylon backpack
Plastic trash can
Book
Computer

Time: ½ hour -45 minutes

Procedures:

Assemble the common items on a table at front of room. One by one create a list on the class projector, with student guesses to the material used to create the products. After brainstorming, correct the student work, most likely noting the use of fossil fuels (petroleum products) in the creation of much of modern material.

Have the class divide the ingredients of materials into renewable or non-renewable sources. What are the problems with a great deal of common objects being sourced from non-renewable resources? What practices can the students enact to help protect the environment, and what other sources can we use for these common objects?

<u>Every Day Item</u>	<u>Material Used to Create Items</u>	<u>Renewable or Non-Renewable?</u>
Pencil	<i>Incense Cedar trees (found at Sly Park!) Graphite a carbon based element</i>	Renewable
Plastic Water Bottle	<i>Petroleum (fossil fuel)</i>	Non-Renewable
Soda Can	<i>Aluminum (mineral)</i>	Recyclable! But non-renewable
Nylon Backpack	<i>Petro-chemicals, steel (iron and carbon) or aluminum</i>	Non-Renewable
Plastic Trash Can	<i>Petro-chemicals</i>	Non-Renewable
Book	<i>Trees</i>	Renewable
Computer	<i>Wide selection of petro-chemicals and minerals (quartz, silicon, etc.)</i>	Non-Renewable

Assessment:

Have students bring additional items to class the next day, with information gathered at home about the source of the object. Try food resources as an extension.