Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Peanut Mining

Objective: The objective of this lab is for students to understand the results of using a *nonrenewable resource*, as well as some of the problems associated with *mining* an *ore.*

Background Information: Before you begin the lab, define the terms below:

* *Nonrenewable resource: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* *Mining: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

- *Ore: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*- Reclamation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

 *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

Materials:

* Ten PAST cards
* Ten PRESENT cards
* Ten FUTURE cards
* Peanuts in the shell
* Paper towel or napkin

Procedure:

1. Class is divided into three groups by passing out PAST, PRESENT, and FUTURE cards. You will receive one card. You are a miner in this group.
2. Beginning with PAST miners, you will be given one minute to locate as many peanuts as you can find in the room. Keep your peanuts with you.
3. At the end of one minute, tally and record the number of peanuts the group found in the data table.
4. Repeat the process with PRESENT miners. You will be given one minute to locate as many peanuts as you can find in the room. Keep your peanuts with you.
5. At the end of one minute, tally and record the number of peanuts the group found in the data table.
6. Repeat the process with FUTURE miners. You will be given one minute to locate as many peanuts as you can find in the room. Keep your peanuts with you.
7. At the end of one minute, tally and record the number of peanuts the group found in the data table.
8. Think of a reason the number of peanuts collected changed with each group search.
9. Think of how the peanuts are a model of a *nonrenewable resource*.
10. Think of how the peanuts are a model of an *ore.*
11. Remove the peanuts from the peanut shell, being careful not to destroy the shell or the skin covering the peanut. Separate the shells, skins, and peanuts into separate piles.
12. Once the peanuts are shelled, try to rebuild the peanut shells to their initial structure. Is this easy? Is this difficult? Is it possible?

Results:

|  |  |
| --- | --- |
| **miner** | **number of peanuts** |
| PAST |  |
| PRESENT |  |
| FUTURE  |  |

Conclusion: Use ***complete sentences*** to answer the following conclusion questions:

1. How were the peanuts like a *nonrenewable resource*?
2. How could the peanuts in the activity be compared to an ore?
3. Why did the number of peanuts collected by each group change?
4. What part did the peanut shells represent in the mining process?
5. Was it difficult or easy to rebuild the peanut shells and skins once the peanut was removed?
6. What are some things a mining company must consider when mining an ore?
7. What can be done with the waste products (i.e. the shells and skins) when mining an ore is finished?
8. What can we do to slow down the use of *nonrenewable* resources?