Cookie Mining Lab

Objective: The purpose of this activity is to simulate a mining operation. In order to make the simulation economically valid, many of the costs associated with real mining operations will be considered.

Several of the economic considerations in this simulation follow.
- A land area will be purchased from the bank, surveyed and quantified.
- Mining equipment will be purchased from the bank.
- A mining operation will be undertaken, with the cost for each minute of the mining operation included in the total operating costs.
- The ore that was mined will be sold back to the bank to offset the start-up costs of the mining operation.

Materials: 1 chocolate chip cookie, Mining tools, Graph paper

Pretlab Question-
1. How is a cookie with chocolate chips similar to ore?

2. What is reclamation and what law required that mines complete reclamation.

Postlab Questions—Respond to the following questions. Be sure to include the question in your answer.


4. Why is mine reclamation necessary?
Cookie Mining Lab

**Objective:** The purpose of this activity is to simulate a mining operation. In order to make the simulation economically valid, many of the costs associated with real mining operations will be considered.

Several of the economic considerations in this simulation follow.
- A land area will be purchased from the bank, surveyed and quantified.
- Mining equipment will be purchased from the bank.
- A mining operation will be undertaken, with the cost for each minute of the mining operation included in the total operating costs.
- The ore that was mined will be sold back to the bank to offset the start-up costs of the mining operation.

**Materials:** 1 chocolate chip cookie, Mining tools, Graph paper

**Prelab Question**-
1. How is a cookie with chocolate chips similar to ore?

2. What is reclamation and what law required that mines complete reclamation.

**Postlab Questions**—Respond to the following questions. Be sure to include the question in your answer.


4. Why is mine reclamation necessary?
Mining Data

Land Area
Type of cookie __________________________
Cost of cookie=__________________________
Initial size of the cookie (in squares) = _____
Final size of the cookie (in squares) = _____

Mining Equipment Costs
Paper Clip _______ x $800 = _____
Round Toothpick _____ x $500 = _____
Flat toothpick _______ x $200 = _____
Total Mining Equipment costs = _____

Time Cost
Minutes spent Mining _ x $100 = _____

Cost of Mining Operations
Cookie + Mining Equipment + Time = _____

Reclamation Cost
Final Size of cookie – Initial Size of the cookie x $100 = ________________

Mining Revenue
# of Whole Chips Removed _____ x $500 = _____
# of “Dirty” Chips Removed _____ x $200 = _____
# of Partial Chips* Removed _____ x $100 = _____
* To sell partial chips, the partial chips must be amassed so that their total size includes at least the amount of chocolate as an intact whole chip.

Your Profit or Loss (The Bottom Line)
Mining Revenue – Cost of Mining Operations – Reclamation Cost =
______________________________
Mining Data

**Land Area**
Type of cookie ______________________
Cost of cookie=____________________
Initial size of the cookie (in squares) =____
Final size of the cookie (in squares) =_____ 

**Mining Equipment Costs**
Paper Clip ______x$800 =_____
Round Toothpick______x$500 =_____
Flat toothpick ______x$200 =_____
Total Mining Equipment costs =_____

**Time Cost**
Minutes spent Mining __x$100 =_____ 

**Cost of Mining Operations**
Cookie + Mining Equipment + Time = _____

**Reclamation Cost**
Final Size of cookie – Initial Size of the cookie x $100 =____________

**Mining Revenue**
# of Whole Chips Removed _____ x $500 =____
# of “Dirty” Chips Removed _____ x $200 =_____
# of Partial Chips* Removed _____ x $100 =____
* To sell partial chips, the partial chips must be amassed so that their total size includes at least the amount of chocolate as an intact whole chip.

**Your Profit or Loss (The Bottom Line)**
Mining Revenue – Cost of Mining Operations – Reclamation Cost =

________________________