# 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.

3. Was your mining company profitable? Explain why.

4. Why is mine reclamation necessary?

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**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 =
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