**Mining Data Sheet**

1. Name of Cookie (mine area) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. Price of Cookie $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. Size of Cookie \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ squares.

4. Mass of cookie \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ grams.

5 Mass of chips \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ grams.

6. Mining Equipment rental:

a. Flat toothpick \_\_\_\_\_\_ x $2.00 = \_\_\_\_\_\_

b. Round toothpick \_\_\_\_\_\_ x $5.00 = \_\_\_\_\_\_

c. Paperclip \_\_\_\_\_\_ x $6.00 = \_\_\_\_\_\_

d. Broken equipment charge \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e. Total Equipment Costs = $\_\_\_\_\_\_\_\_\_\_\_

7. Mining and Reclamation time costs \_\_\_\_\_\_ minutes x $2.00/minute = \_\_\_\_\_\_\_\_\_.

8. Total costs of mining = $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

9. Income from chip sales: mass of chips \_\_\_\_\_\_\_\_ x $10.00/gram = \_\_\_\_\_\_\_\_\_\_\_.

10. Profit = value of chips - cost of mining: \_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_.

11. Reclamation costs \_\_\_\_\_\_\_\_ extra squares x $1.00/square = \_\_\_\_\_\_\_\_\_\_.

12. Profit after reclamation = \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

13. Calculate the % lead in your mine. Show work.

**Questions:**

1. Was the lead evenly distributed throughout the cookie mines? Is this a good model for a real mine?

2. Did you leave any chips behind in the cookie? Why or why not? Is this a good model for a real mine?

3. Were you able to restore the land? Why or why not?

4. Do you think the mining process is faster when you know in advance that the land must be restored? Explain.

5. Do you think that legislation requiring the restoration of the land makes mining more expensive?

6. What changes in your mining techniques would have resulted in more profit?