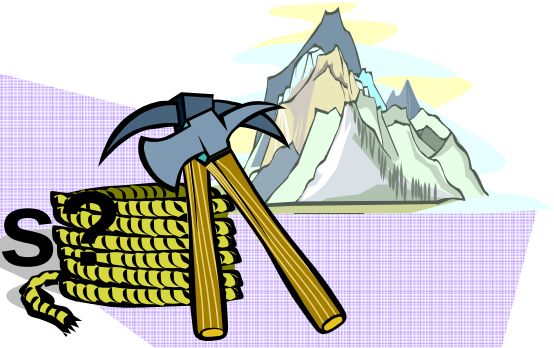

How Hard Is This?

QUESTION: How can the hardness of a mineral be used to identify it?

MATERIALS:

aluminum pan
glass plate
mineral assortment
penny
putty knife

PROCEDURE:

1. Look at each of the minerals in the assortment you have. Predict the hardness of each sample by ranking them in order from softest (#1) to hardest (#10). Record your prediction in the Data section.
2. Now begin to test the hardness of each sample.
3. Test Sample A to see if it can be scratched by your fingernail. Record the results.
4. Test Sample A to see if it scratches the penny. Record the results.
5. Test Sample A to see if it scratches the putty knife.
6. Finally, test sample to see if it scratches the glass plate. Record the results
7. Repeat steps 2 - 5 with the remaining samples (B - J).

DATA: **See next page**

QUESTIONS:

1. What is a mineral?

2. How are rocks and minerals different?

3. What are some of the properties used to identify rocks and minerals?

4. Which of your samples were harder than the penny?

5. Which of your samples were harder than the putty knife?

6. Which of your samples were harder than the glass?

7. Which sample was the softest? Which was the hardest?

ES – Activity #11

DATA:

SAMPLE	PREDICTED HARDNESS	SCRATCHES FINGERNAIL	SCRATCHES PENNY	SCRATCHES PUTTY KNIFE	SCRATCHES GLASS	ACTUAL HARDNESS
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						