• The Rock Cycle

Analyzing Rocks

Materials

paper and pencil
goggles
metric ruler
rock hammer
streak plate
rock samples
hand lens
glass slide
steel file
towel

Procedure

1. On a piece of paper, copy the table heading shown in "Data and Observations." Make your table ten rows long to provide space for recording information about the ten rock samples.
2. Examine the rock samples. Observe characteristics such as minerals present, the size and shape of mineral grains, and the arrangement of grains. Record your observations in the table you make. An example of what you might observe has been done for you in "Data and Observations."
3. Group all the rocks that have a common characteristic. Make at least three categories. In the last column of the table, record the common characteristics on which you based your groupings.
4. Compare your system of classification with those devised by your classmates.
5. Crush bits of the rocks. **CAUTION:** *Wrap rock samples in a towel before hitting them with the hammer. Always wear goggles when using a rock hammer.*
6. Examine the crushed samples with the hand lens. Record any observable characteristics not seen in the larger specimen.

Data and Observations

Sample	Minerals present	Size/Shape of minerals	Arrangement of grains	Other information	Common characteristic
1	Quartz Feldspar Diorite	0.5 cm, rectangular			grain size similar to samples 3 and 7

Analyze and Conclude

1. Was there any characteristic common to all rock samples? _____

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2. What feature was most useful in grouping the rocks? _____
3. What feature was least helpful in grouping the rocks? _____
4. Was there a characteristic observed in the crushed rocks that aided or changed your system of grouping? Explain. _____
5. Was your system of grouping different from those of your classmates? Why might different classification systems be devised? _____

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