

# SAMPLE LAB REPORT

**NOTE: THIS IS A SAMPLE THAT YOU CAN USE AS A FORMAT FOR WRITING YOUR PROJECT REPORT. FOLLOW THE FORMAT, BUT SUBSTITUTE YOUR DATA AND INFORMATION.**

## IDENTIFYING COMMON MINERALS

[NAME]

SUBMITTED: [DATE]

### PURPOSE:

To identify unknown minerals using their physical properties and a classification key.

### HYPOTHESIS:

If I run tests to determine the physical properties of a mineral and apply those properties to a dichotomous key, then I will be able to identify five different unknown mineral samples. [NOTE: cause & effect]

### PROCEDURE:

First, I recorded the colors of the mineral samples. Next, I ran a streak test on each sample by scratching each against a white porcelain tile to see if it produced a colored powder. Then.... [NOTE: Some teachers allow this to be presented in list form....]

### DATA:

As I collected my data, I wrote it into my lab book on the table provided or on my own data and calculations sheet. This sheet is attached to this report. A table (if any) may look something like this:

color	mass (g)	vol (ml)	streak	hardness	luster	cleavage/fracture
orange	11.50	2.3	white	6	non-metal/dull	fracture
golden	4.95	4.95	rust	3.5	metal/gold	cubic clvg.
purple	7.6	3.1	none	7	non-metal/ glassy	shell-frac.

### CALCULATIONS (IF ANY):

To compute density, I took the mass divided by the volume for each mineral. For example, for mineral #1, I took  $11.50\text{g}/2.3\text{ ml} = 5.0\text{ g/ml}$ . This is also a specific gravity (SG) of 5.0 (with no label). I did the same thing for my other minerals (mineral #2 and mineral #3).

**DISCUSSION:**

- Identify what you investigated and list the results. Talk about at least two of the physical properties that you found for each mineral.
- What tests that you ran caused some difficulty or problems?
- Where could you possibly have made errors that could give you poor or incorrect results?
- Compare what you found with the descriptions given in the lab book or other sources. Use percent error (if appropriate):

$$\%E = \frac{\text{theoretical} - \text{experimental}}{\text{theoretical}} \times 100$$

- This shows how close your results were to an accepted value; usually a 5%-10% error or less is acceptable.
- For example, for mineral #1, my SG was 5.0 and, theoretically, for the same mineral it should have been 2.7 (from a reference book).  
So, my % error is:  $[2.7 - 5.0]/2.7 \times 100 = 85\%$  error

**CONCLUSION:**

Summarize your results. List each with two specific properties.