

Worksheet 1-1
Scientific Method*Glencoe Chemistry pp.2-17*

Name _____

Period _____

You are responsible for reading the assigned sections of your textbook. Some questions on the worksheet will come from the textbook and will not be directly discussed in class.

1. What is chemistry?

2. Match each activity below to one of the five branches of chemistry.
 - a. determining the boiling point (a physical property) of a liquid _____
 - b. finding out how much nitrogen is in a sample _____
 - c. learning about the chemistry of iron ore _____
 - d. studying the process of photosynthesis _____
 - e. synthesizing sucrose, a substance that contains carbon _____

3. How is a hypothesis different from a theory?

4. A report in the media states that a specific diet will protect individuals from cancer. However, no data are reported to support this statement. Is this statement a hypothesis or a conclusion? Explain your answer.

5. Scientists often learn as much from an incorrect hypothesis as they do from one that is correct. Explain this statement.

6. Describe the scientific process. Use the Kaleidoscope Milk Lab as your example.

7. You are asked to study the effect of temperature on the volume of a sealed balloon. The balloon's size increases as it is warmed.
 - a. What is the independent variable? _____
 - b. What is the dependent variable? _____
 - c. What factor is controlled? _____

8. You record the following in your data table. Underline the quantitative data and circle the qualitative data.
 A liquid is thick and has a density of 4.58 g/mL.

9. What are the fundamental units of scientific measurement for:

Length: _____ Mass: _____ Volume: _____