

Scientific Method Study Guide (Ch. 1, sec. 2)

Name _____

Period _____

Your goal is to learn to use the scientific method: to be able to apply it to real problems in order to find real answers. First, you need to learn some of the vocabulary we will use in discussing the scientific method. It is important you understand these vocab words before we go on to discussing how to use the scientific method.

1. What is the scientific inquiry process?

2. Scientific inquiry often involves a series of steps that are used to solve a problem or answer a question. This series of steps is most often called the **scientific method**. The book lists six steps of the scientific method (look at the blue headings to find these), and we will learn a seventh step not listed in the book. List the steps of the scientific method.

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|------------------|----|
| 1) | 5) |
| 2) (not in book) | 6) |
| 3) | 7) |
| 4) | |

3. What is a hypothesis?

4. What is a variable in an experiment? Why is it important to change only one variable in an experiment?

5. What is a controlled experiment ?

6. What is a manipulated or independent variable? What is a responding or dependent variable?

7. What are data?

9. What are qualitative observations? What are quantitative observations? (Look on page 7)

10. The scientific method is a series of steps used to answer a question or solve a problem. Do the steps of the scientific method always need to be used in the same order? Explain.