

**PRACTICE OF SCIENCE STUDY GUIDE**

1. Study the following vocabulary terms:

- Analyze
- Bias
- Confirmation
- Control Sample
- Data
- Evidence
- Hypothesis
- Prediction
- Repetition
- Replication
- Science
- Variable

2. What is the format of an effective research question?

3. What characterizes a controlled experiment?

4. How can you identify the independent variable (*test variable*) in an experiment?

How can you identify the dependent variable (*outcome variable*) in an experiment?

How can you identify controlled variables (*constants*) in an experiment?

5. Why is it important to control all variables except for the independent variable?

6. How do scientists use predictions?

7. How are a hypothesis and a prediction related?

8. What is the difference between “data” and “evidence”?

9. What are some ways to analyze data?

10. What is the purpose of repetition and replication in science?

11. How do you know if you’ve performed enough trials in your investigation?

12. Identify the three parts of a scientific argument and briefly describe each one.

13. Why is it improper to use words such as “prove”, “proof”, or “proven” in science?

What phrase(s) should we use instead of these words?