

## Scientific Investigation Study Guide Questions

1. Make a flash card for each of the following:
  - What is the first step of the Scientific Method?
  - What is the second step of the Scientific Method?
  - What is the third step of the Scientific Method?
  - What is the fourth step of the Scientific Method?
  - What is the fifth step of the Scientific Method?
2. What is the name of the factor that does NOT change in a scientific investigation?
3. What is the name of the factor that is manipulated or changed in a scientific investigation?
4. What is something that is measured, observed, and recorded in a scientific investigation?
5. Tell whether the examples are an independent, dependent or control variable (one example per flashcard):
  - All the plants receive the same amount of water
  - The size of the ball changed for each trial
  - The temperature of the liquid was collected for each trial
6. Which type of data is collected by observation and using the 5 senses?
7. Which type of data is collected by numerical measurements?
8. Tell whether the examples are qualitative or quantitative data (one example per flashcard):
  - The slime was bright pink
  - The snake was 7 feet long
  - The chemicals fizzled when mixed together
  - The weight of the walrus was 5 tons
9. How many independent variables are acceptable during a scientific investigation?
10. How does a scientific investigation always begin?
11. A hypothesis is based on what?
12. What is a prediction that can be tested?
13. What is determined with the data that has been collected?
14. A hypothesis statement contains what 3 words?

15. Name the information that the hypothesis statement provides.
16. What is a series of steps scientists use to solve a problem?
17. What is the process of gathering information through your 5 senses?
18. What is a factor that is tested in an experiment?
19. When designing an experiment or a scientific investigation, what is the first step?
20. What is something that is helpful in forming a conclusion and is supported by data?
21. Once a scientist has completed an experiment, the next step is to\_\_\_\_\_.
22. Scientists can communicate findings through oral and written reports as well as which of the following?
23. Predictions should be tested using which of the following?