

## Guided Reading Chapter 2 Sections 1 & 2

1. What is inquiry?
2. Draw figure 2.1 on page 58.
3. For a theory to be accepted as true, it must meet three important criteria. Name these criteria.
4. Scientific evidence includes numbers, tables, graphs, words, pictures, and \_\_\_\_\_  
\_\_\_\_\_.
5. Scientific evidence must be objective and \_\_\_\_\_.
6. What does it mean to say that data is objective?
7. A \_\_\_\_\_ theory is an explanation supported by much evidence over a long period of time that attempts to describe a natural law.
  - a) scientific
  - b) ordinary
  - c) human
8. Scientists \_\_\_\_\_ by coming up with a possible explanation that can be **tested** by comparing scientific evidence. Usually, the first few attempts are rarely correct and need modification as time passes.
9. Generally speaking, what is the scientific method?
10. An \_\_\_\_\_ is a situation that is set up to analyze the relationships between variables.
11. When experimenting, it is important to change \_\_\_\_\_ variable(s) at a time.
  - a) two
  - b) one
  - c) all

12. Explain the difference between the experimental variable and the control variable in an experiment.
13. A \_\_\_\_\_ is the number of times an experiment is tried.
- a) control                      b) procedure                      c) trial
14. Your \_\_\_\_\_ is the manner in which you perform the experiment; the step by step collection of techniques you use to do an experiment.
- a) procedure                      b) experimental technique                      c) trial
15. "What happens to the speed of a car if I release it down a ramp at different angles?" pertains to what aspect of the scientific method process?
16. "The car seems to go faster when I change the angle of the ramp." is a statement based on experimentation, and pertains to what aspect of the scientific method process?
17. Creating a data table of information during an experiment is an important part of what part of the scientific process?
18. Who was Michael Faraday and what important experiment is he famous for conducting?
19. What did NASA scientists want to know about Earth in their 1996 mission STS-75?
20. How long was the cable that was used in the NASA experiment, and how fast was the cable dragged?