

### Guided Reading Chapter 16 Section 3

1. \_\_\_\_\_ is a measure of how strongly a wire or other object resists the flow of current.
2. Sketch Figure 16.11 to express the idea of resistance to flow.
3. Name an object with a high resistance to current flow and an object with low resistance to current flow.
4. What happens to the current flow through a circuit if you add resistors to the arrangement?
5. Electrical resistance is measured in \_\_\_\_\_.
  - a) amperes
  - b) ohms
  - c) volts
6. Voltage and current are \_\_\_\_\_ related.
  - a) inversely
  - b) directly
  - c) not
7. Resistance and current are \_\_\_\_\_ related.
  - a) inversely
  - b) directly
  - c) not
8. Copy the chart at the bottom of the page to understand the relationship between the variables current, voltage, and resistance.
9. Why is it that a 100 – watt light bulb will not light when connected to a 1.5 – volt battery?
10. What is the resistance of dry skin, and the amount of current that nerves in your body can feel?

11. What does water do to the resistance of current flow through your body?
12. A \_\_\_\_\_ carries current easily, while a \_\_\_\_\_ blocks the flow of current.
- a) conductor, insulator      b) insulator, conductor      c) insulator, semiconductor
13. Using Figure 16.15, name a good conductor, insulator, and semi-conductor.
14. Fixed resistors are found in a \_\_\_\_\_ in a computer or other electrical device and have a resistance that cannot be changed.
15. A variable resistor is called a \_\_\_\_\_ and can be adjusted to have resistance within a certain range.