**Current Electricity Study Guide**

**Date of test:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. a. What is a circuit? A complete loop in which electricity flows

b. How do you make a *complete* circuit? The wire must be connected to both ends of the battery

1. What has to be true for electricity to flow through a circuit? There must be a complete loop and a power source
2. What does each part of a circuit do?

Battery- source of electrical current

Wire- carries electrical current

Light bulb- receives electrical current

Switch- opens or closes circuit

1. What is electric current? the flow of electric charges
2. Why does an electrical cord have two bundles of wires inside it? one bundle carries the electricity to the appliance, and the other bundle carries electricity away from the appliance
3. What effects are produced by electric current? Hint: there are at least 5!

* light
* heat
* sound
* motion
* magnetic effects

1. a. What is a conductor? a material that allows electricity to flow easily

b. Which materials make good conductors? metal, water

1. a. What is an insulator? a material that does not allow electricity to flow

b. Which materials make good insulators? plastic, rubber, cotton, glass

1. Can human beings conduct electric current? Why or why not? yes; our bodies are made up of over 70% water and water is a conductor
2. What is an electrical hazard? dangers/risks that electricity can create
3. Name two electrical hazards that can be inside a house and two that can be outside a house.

INSIDE OUTSIDE

1. pulling on a cord of an appliance 1. climbing a tree near a power line
2. having too many things plugged 2. playing near a high-voltage fence

in at once

1. Name three things that you can do to use electricity safely.

* answers vary