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Study Guide: Electricity and Magnetism

1. Something that allows electrons to flow **easily** through it is called a Conductor.
   - **Examples:**

2. Something that **SLOWS** the flow of electrons is called an insulator.
   - **Examples:**

3. **Current** electricity is the flow of electrons.

4. There are two types of circuits: Series and parallel

5. Electric current flows great through Copper wires.

6. A complete circuit is made of 3 things: something to use electricity, a source of electrons, and a path.

7. A build up of charges in one place is called static electricity.

8. A path for an electric current is called a circuit.

9. A battery is also called an _____.

10. Opposite/Unlike charges (+ -) attract.

11. Like charges repel.

12. A compass always points north. Direction of the compass needle is affected by the direction of the earth's magnetic field.

Examples of **STATIC** electricity:

- lightning
- rubbing a balloon on your hair and sticking it to the wall.
- walking across the carpet and getting shocked when you touch the door knob.

Examples of **CURRENT** electricity:

- Plugging in a hair dryer.
- using a flashlight with a battery.
- Computer
- Tv

Series Circuits: circuits with only one path for current to flow.

- In a series circuit, if a bulb goes out, all the other bulbs will go out.

Parallel Circuits: circuits with more than one path to flow.

Electricity is a form of energy that can produce light, heat, and magnetism.

Electromagnets and Magnets

Electromagnets are not permanent magnets.

The number of times a wire is wrapped around the nail affects the strength of the electromagnet.

Electric current creates magnetism. Example: a magnet can move a compass needle. A wire carrying electric current will also make a compass needle move. This proves that electric current creates magnetism.

What can be done to weaken a magnet?

Dropping, heating, rubbing two magnets together.