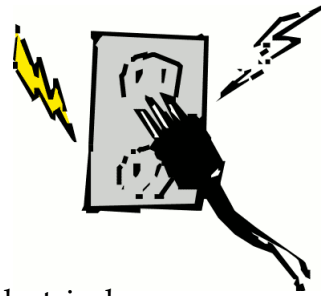


# CURRENT ELECTRICITY



- Static electricity forms when charges remain on an object for a while.
- Current electricity forms when electrons flow through a circuit.
- Current is formed when a device changes other forms of energy into electrical energy.

## CURRENT ELECTRICITY:

- Results from the movement of electrons
- The movement has TWO components:

A. \_\_\_\_\_ - **measured in Volts (v)** - similar to water pressure

B. \_\_\_\_\_ - **measured in Amperes (A)** - similar to water flow

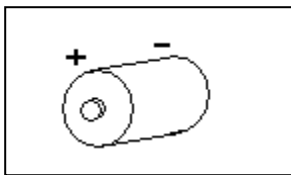
(how much water past a certain point in one second)

## VOLTAGE (V):

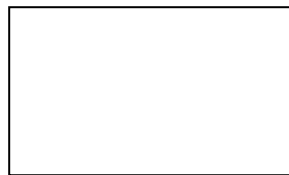
- To make electrons move, they have to be **pushed**. They are forced along a metal in one direction.
- This push is called voltage or **potential difference**.
- Measured in \_\_\_\_\_ by a device called a \_\_\_\_\_.
- It can be described as a measure of the electrical pressure produced by battery or power supply.

We get electrical energy from a \_\_\_\_\_.

Two or more chemical cells joined together is a battery.



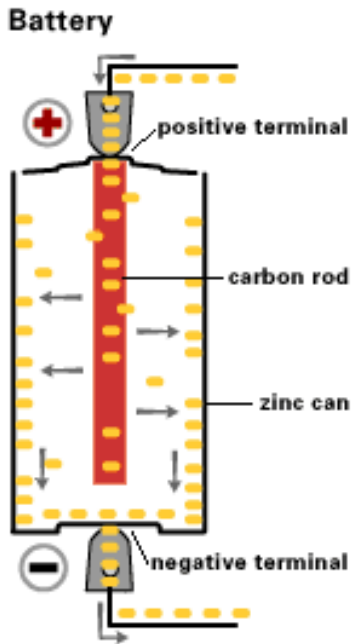
Cell



(symbol in schematic diagrams)

## BATTERIES:

Batteries produce a \_\_\_\_\_ by using \_\_\_\_\_ to produce a difference in electrical potential energy between the positive and negative terminals.

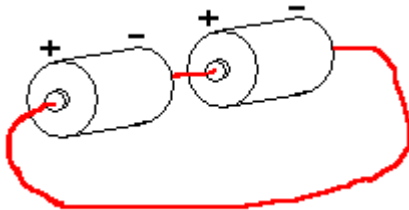


- Electrons are pushed from the \_\_\_\_\_ terminal to the \_\_\_\_\_ terminal.
- ❖ The size of the \_\_\_\_\_ is called \_\_\_\_\_
- ❖ Electrons at the negative terminal are crowded and therefore have \_\_\_\_\_ (pressure) and want to get away from each other.

Batteries can be connected in **TWO** ways:

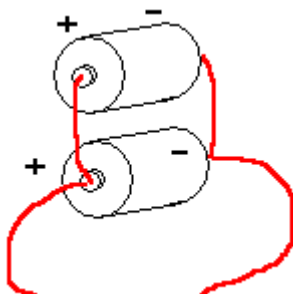
1) **SERIES:** \_\_\_\_\_.

Schematic Diagram:



2) **PARALLEL:** \_\_\_\_\_.

Schematic Diagram:



## SHORT CIRCUIT:

If a circuit is interrupted allowing a current to travel down an **unintended** path, it causes too much **current** in a wire. This is called a \_\_\_\_\_.



The excessive current can either cause the power source (like a battery) to heat up, “short” and be destroyed; or a \_\_\_\_\_ (if it is doing its job) to blow, breaking the flow of current in the circuit.



At home, a short circuit can be dangerous and harmful to your appliances and electronic devices. The most common cause of a short circuit in the home is \_\_\_\_\_ touching when they shouldn't.

