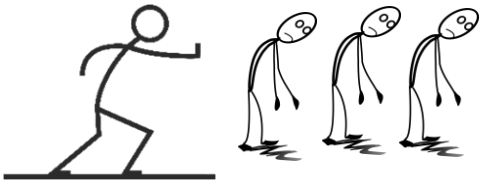
Current Electricity, Voltage, and Resistance

Recall:

Circuit Electricity is when electrons are flowing along in continuous movement without interruption. The number of electrons that pass a certain point in one second is called/measured as AMPERES (Amps….A).

Those electrons need to be supplied with the energy to keep moving.



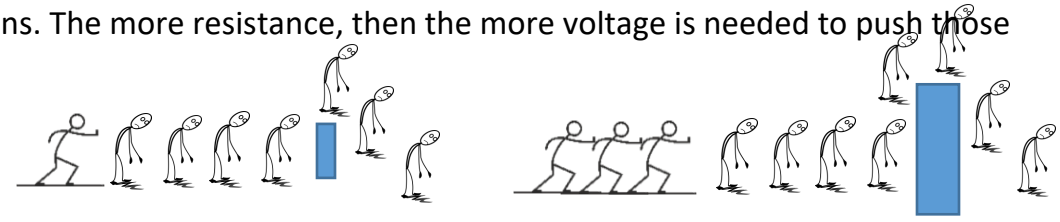
We have been doing this using cells (batteries).

VOLTAGE (V – volts) is the energy supplied to electrons in an electric current.

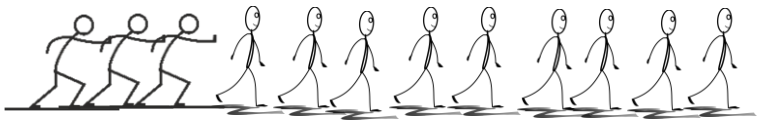
A battery provides the voltage. A voltage is like an electrical pressure. A small battery might only apply a few volts of electrical pressure (AA is 1.5 V). The mains in our house apply 240 V of electrical pressure and that makes wires connected the breaker box (mains) deadly to touch. When you apply voltage to a circuit, it pushes electrons through the wires.

SOOO……..

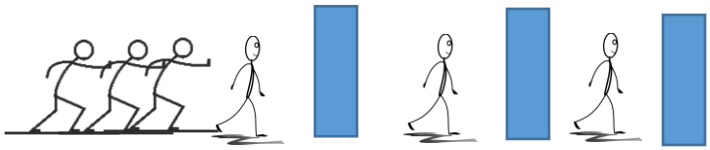
When you have a resistor in the circuit that resists the flow of the current, it is taking energy from those electrons. The more resistance, then the more voltage is needed to push those electrons along.



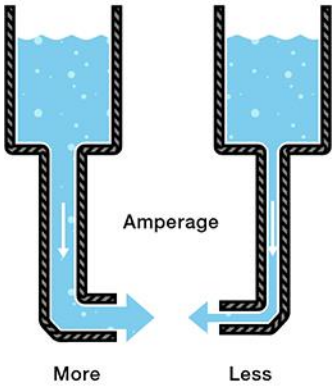
If a bigger voltage is applied to the circuit, then we expect more current to flow.



If there is more resistance, we expect less current to flow.



Consider water:



The greater resistance (bc of the smaller hose, the less current….

Or

A beaver dam= more twigs and rocks and sticks, the more resistance and less flow.