GAM160-COMP140 Creative Computing Project

FALMOUTH
UNIVERSITY

Register Attendance

Figure 1: Attendance monitoring is in place. It is your responsability to ensure that you have signed yourself in.

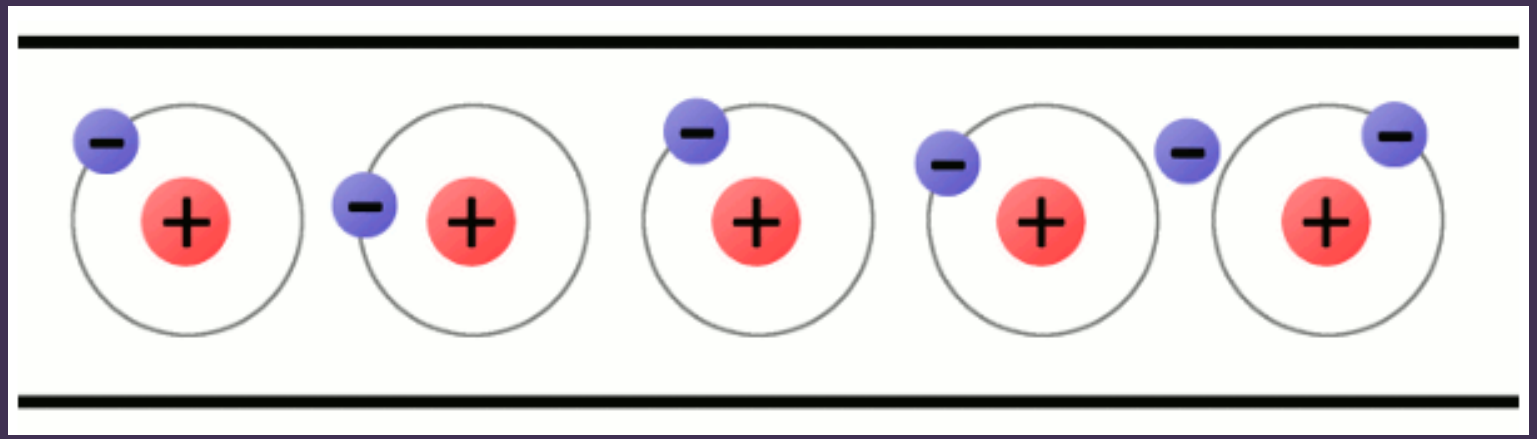
Learning Outcomes

After this session you will be able to:

- **Exlain** the difference between current, voltage, and resistance
- **Predict** the characteristics of basic circuits using simple formulas
- **Choose** components based on their purpose and characteristics

What is current electricity?

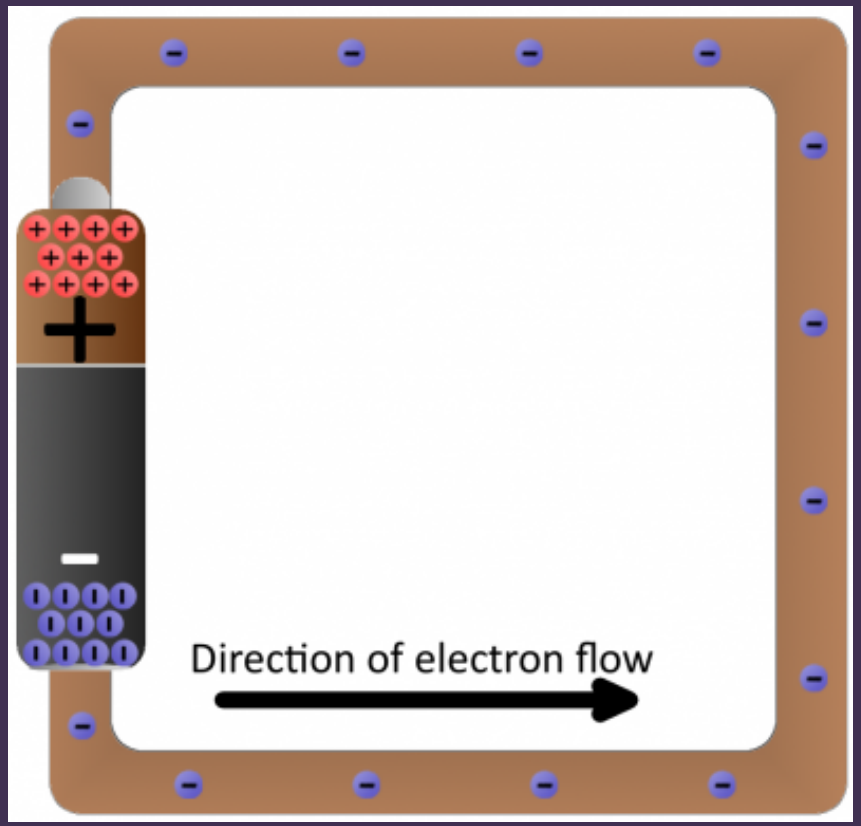
(the stuff that makes our gadgets tick)



source:https://learn.sparkfun.com/tutorials/what-is-electricity/allrmar

- The flow of electrons through
- a closed circuit (wire, components, etc)
- Induced by an electric field (battery)

Battery Example



source:https://learn.sparkfun.com/tutorials/what-is-electricity/allrmar

Basic characteristics

- **Voltage (V)** - The relative level of electrical energy between any two points in a circuit. Voltage is measured in *volts*.
- **Current (I)** - The amount of electrical energy passing through any point in a circui. Current is measured in *amps*
- **Resistence (R)** - The amount that any component in the circuit resists the flow of current. Resistence is measured in *ohms*

Water Analogy

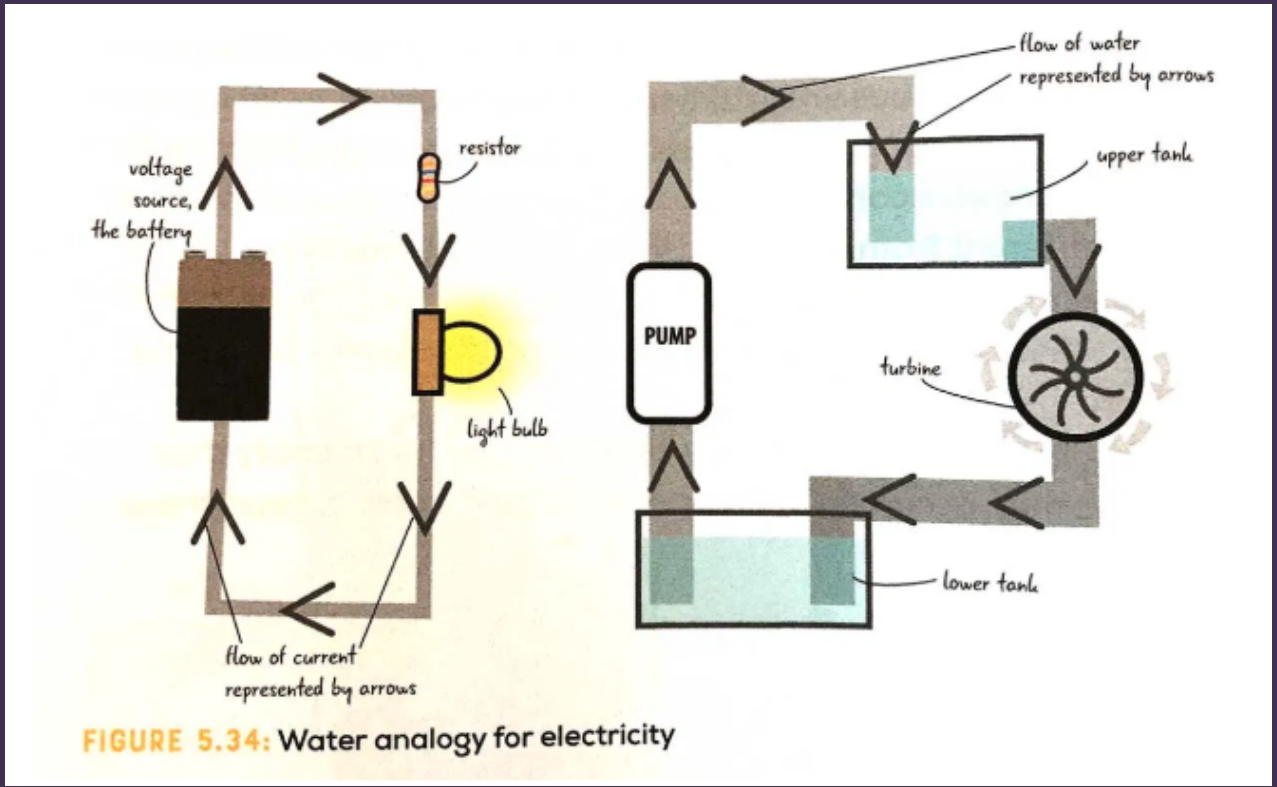


FIGURE 5.34: Water analogy for electricity

Hagan,J.(2017). Learn Electronics with Arduino. Maker Media, Inc.

Ohms Law

$I = V / R$