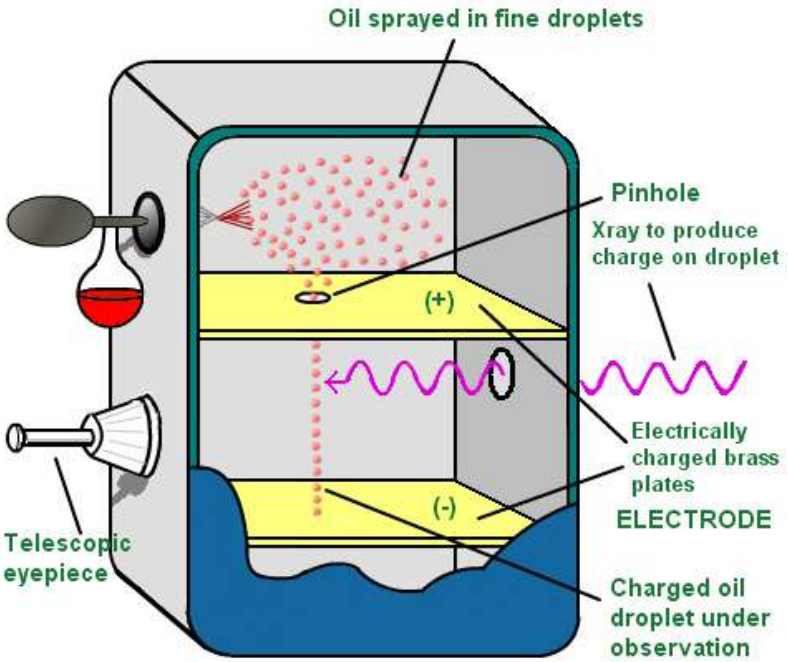
Unit 8 Physics

Electric Fields: Monday and Tuesday

- Section 1 of Practice Problems
- Finish and turn in Electric Boy (Cosmos Episode 10) and turn in
- Complete your Flipped Lesson on Electric Fields
- PhET Charges and Fields Assignment
- Section 2 of Practice Packet

Millikan's Oil Drop Experiment



Freebody Diagram of Experiment

$$F = qE$$

Section 2 #13

An oil drop has a mass of 4.5x10^-15 kg. It is suspended in an electric field of 1.65x10^3 N/C. What is the charge on the drop?

How many excess electrons does it carry?

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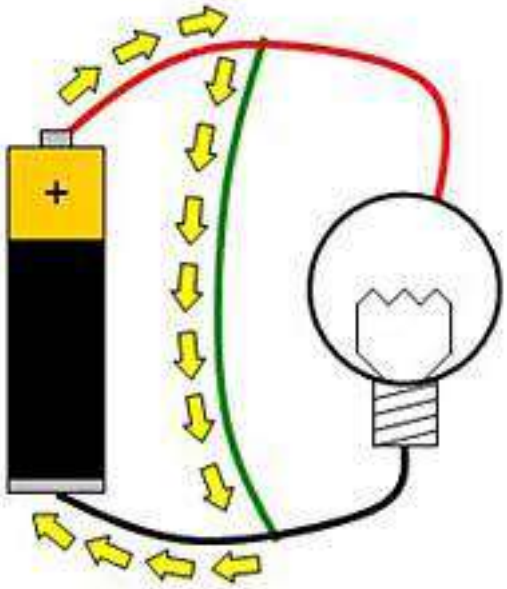
- Section 2 of Practice Packet- **Due by the end of class**
- Check MiStar- Do you have any missing work?

Electric Circuits

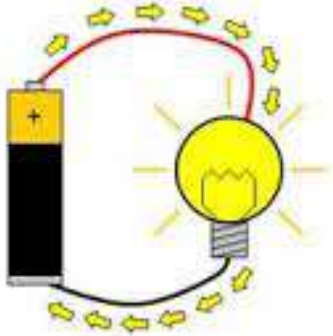
Groups of 2-3 students are best!

We have 10 groups available in the lab

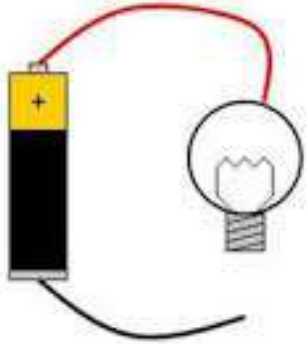
Short circuit

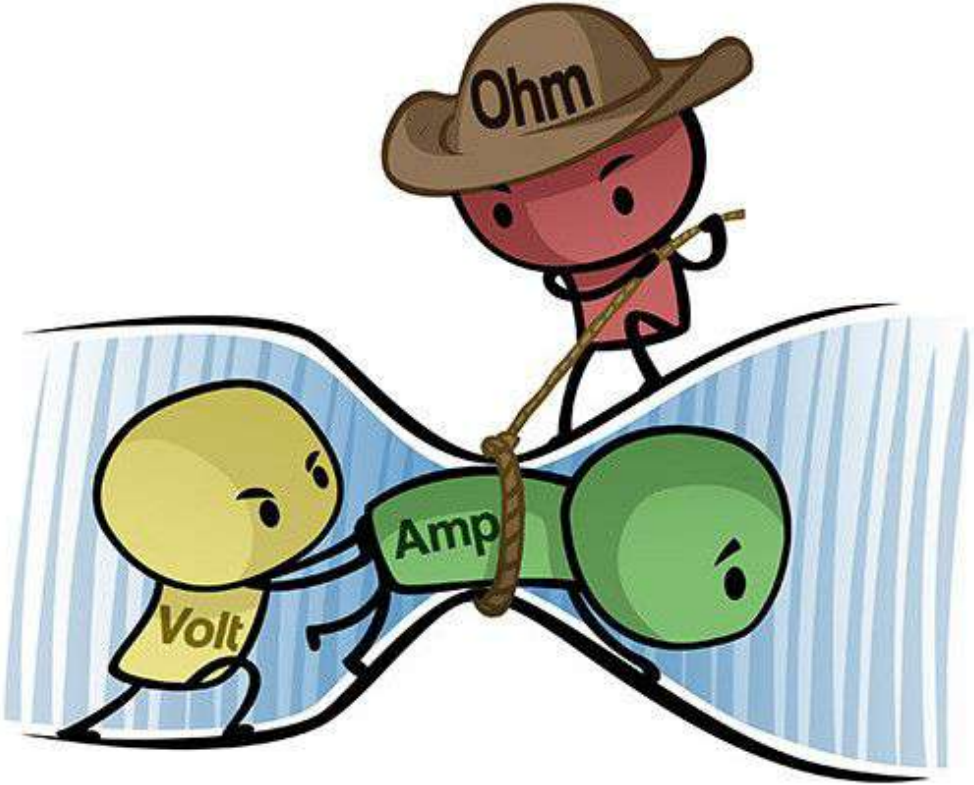


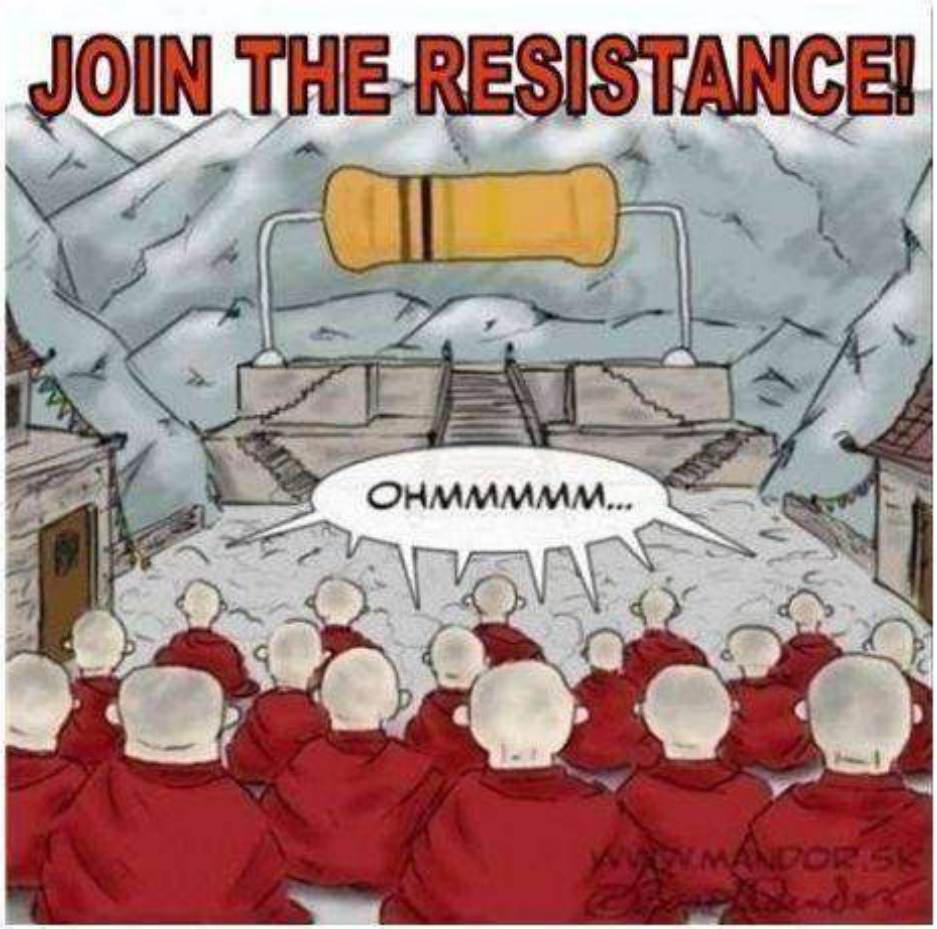
Closed circuit



Open circuit




Ohm
Amp
Volt


JOIN THE RESISTANCE!
OHMMMMM...
WWW.MANDOR.SK

Ohm's Law and Power

V = IR

V = Voltage (Volts or V)

I = Current (Amps or A)

R = Resistance (Ohms or Ω

How can I rewrite this equation?

P = IV

P = Power (Watts or W)

I = Current (Amps or A)

V = Voltage (Volts or V)

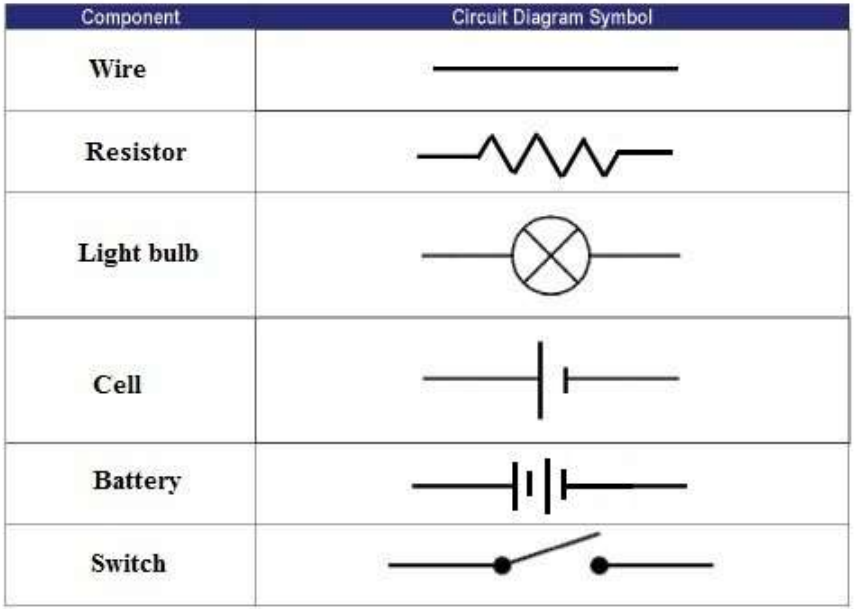
Friday

- Part 2 Computer Simulation from your lab (use link on Google Classroom)
- “Homework” Page #1-#6
- Complete and turn in any missing work or flipped lessons

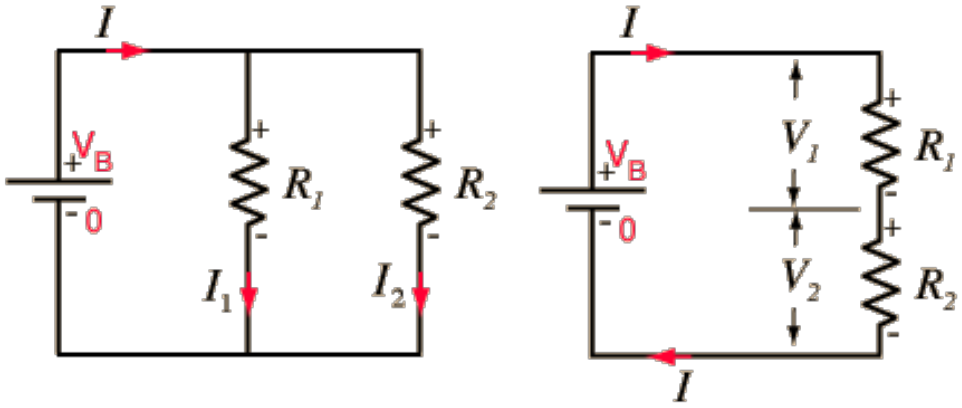
Circuit Diagrams

Create a diagram with a resistor and light bulb in parallel.

Create a diagram with resistor and light bulb in series.



Series vs Parallel- Resistance



Parallel resistors

$$\frac{1}{R_{equivalent}} = \frac{1}{R_1} + \frac{1}{R_2}$$

Series resistors

$$R_{equivalent} = R_1 + R_2$$

Tuesday

- Complete Part 3 and Part 4 PhET labs
- Complete #7-#11 of practice problems
- Turn BOTH in!

Physics

Have you turned in….

- Electric Circuits Lab
- Electric Circuits Practice Packet

Cedar Point Field Trip

WHO - 10th and 11th graders only from Physics (sorry seniors)

WHEN - Wednesday, May 24th (Meet at school at 6:30am and return at 8:30pm)

HOW MUCH

- Cost: $70.00 (CHECK ONLY)
- You must pay to reserve your spot

HOW MANY

- There are 107 spots available so the trip fills in a first come basis

WHY

- The trip will be associated with a project we will start working on when the seniors leave

Design Challenge

Groups of 1-3 students ONLY and 1 sheet per group!

Due Thursday at the end of class- This is a test grade!

- Create the circuits
- Create the circuit diagram
- Raise hand to get approved
    - I will circulate around the room the whole hour