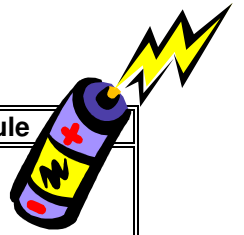


Unit 13 Plan: **Current Electricity**
 Physics1 Honors@ PalmHarborUniversityHigh



Day	Date	Topic	Assignments Due / Schedule
1		Chapter 22.1 Notes CW# 1: p. 598: 6 – 10	Read all of Section 22.1
2		Video: <i>Electricity Shorts #4,5,6</i>	HW# 1: p. 594: 1-5
3		Resistance, Circuits, Pre-lab CW# 2: p. 600: 12-16	HW# 2: p. 611: 61,62,68,70,81
4		Ohm's Law Lab	
5		Finish/Review Lab	Read Section 22.2
6		Using Electrical Energy Notes CW# 3: p. 603: 23-26 p. 605: 28 – 29	Finish classwork
7		Review problems Worksheet	HW# 3: p 610: 39,44,45,46,47,49,52-57,59
8		Review concepts	Appliance Homework Due
9		Unit Test	

Note: Homework is due on the day following the assignment, unless otherwise noted.

Objectives / Essential Learnings: (key terms in bold)

- Describe the flow of electric charge. Define an electric **current** and the **ampere**.
- Give examples of voltage sources that can maintain a potential difference in an electric circuit.
- Describe the factors that determine the **resistance** of a wire.
- Describe **Ohm's Law**. Solve problems involving **current (I)**, **potential difference (V)** and **resistance (R)**
- Explain why wet skin increases the likelihood of receiving a damaging electric shock when a faulty electrical device is touched.
- Distinguish between **direct current** and **alternating current**.
- Compare the motion of electrons in a wire carrying alternating current to the flow of energy through the wire.
- Relate the **electric power** used by a device to current and voltage.
- Differentiate between **power** and **energy** in an electric circuit.
- Diagram simple electric circuits.
- Define the **kilowatt hour**; solve problems involving the use and cost of electrical energy.
- Explain how heaters convert electrical energy to thermal energy.
- Describe the reason for the use of high-voltage lines for transmitting electrical energy.

Elementary charge (one electron (e))
 = $1.60 \times 10^{-19} \text{C}$

Ohm's law $I = \frac{V}{R}$ $R = \frac{V}{I}$ $V = IR$

Power (P) = IV = I²R = $\frac{\text{energy}}{\text{time}}$

Energy (E) = Power (P) x Time (t)

Current Event due May 6th

Electrical Quantity	Symbol	SI unit	Symbol
Force			
Charge			
Field strength			
Electric potential energy			
Electric potential			
Current			
Resistance			
power			
Electric energy			