

4) Resistance

GOALS: 10, 11

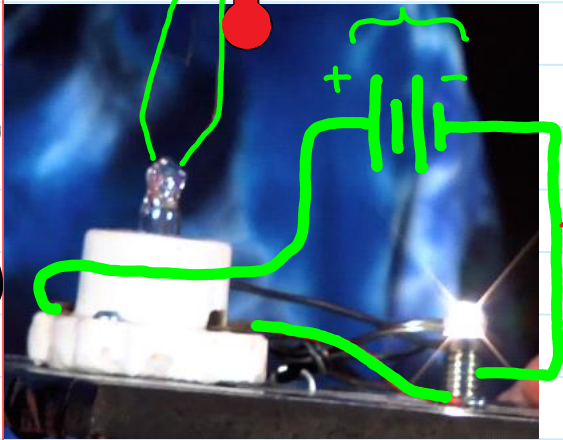
1) MORE EMF

battery

2)

3)

4)



I_1

$$5) \Delta V = V_f - V_i = \mathcal{E}$$

blow

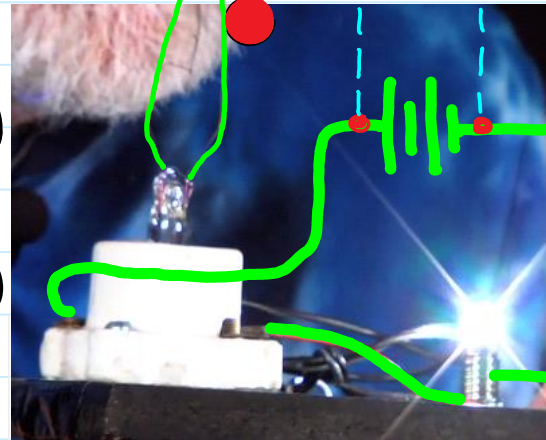
V_f

V_i

6)

7)

8)



I_2

9) review: brighter bulb implies... $I_2 > I_1$

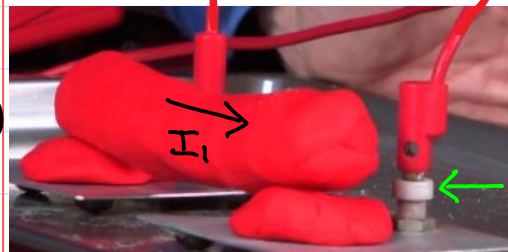
10) FALSE: a battery produces constant... current

11) TRUE: batteries (use internal chemical reactions to) maintain constant... $\Delta V = \mathcal{E}$

12) RESISTANCE (VIDEO)

13) $\mathcal{E} = 13V$ $0V$ I_1

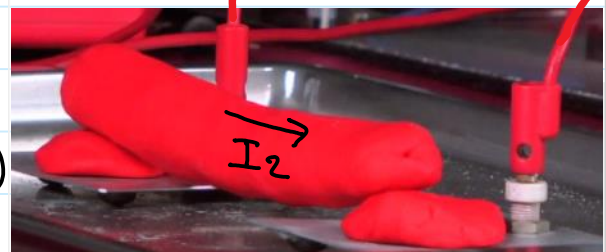
14)



I_1

15) $\mathcal{E} = 13V$ $0V$

16)



I_2

17) video: for the same potential difference ($\Delta V = \mathcal{E} = 13V$) a longer, thinner cylinder carries... less current