

# Current and Resistance - Notes 5

Potential difference

$$\hookrightarrow \text{Voltage} = \frac{\text{charge separation [PE]}}{\# \text{ charges in coulombs}} = \text{Volts } V$$

Current: the amt of nrg passing a point in a conductor  $\bar{e}$  second

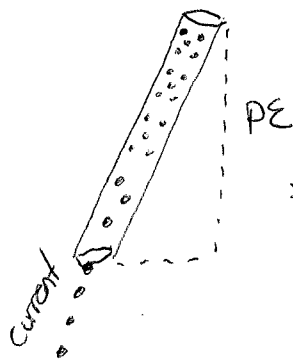
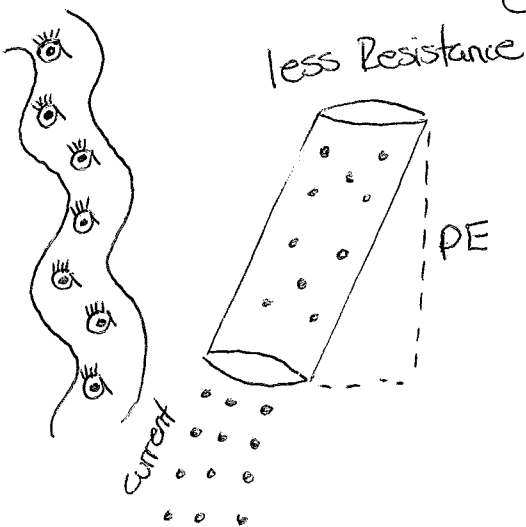
: measured in amperes (A) by an ammeter

\* Conventional Current [backwards to the truth]

current flows from +  $\rightarrow$  -  
[but in reality  $\bar{e} \rightarrow +$ ]

\* used to calculate Voltage and it's shown on circuit diagrams

Resistance: slows the flow of  $\bar{e}$  and converts electrical nrg  $\rightarrow$  other nrg



Same PE  
Same charge  
 $\therefore$  Same Voltage

\* But less Resistance = greater current

More Resistance = less current

R: resistance (ohms)  $\Omega$

I: current (amps)

V: Voltage (volts)

$$R = \frac{V}{I}$$

$$V = IR$$