

Resistance

- This site will help you visualize resistance.

<http://phet.colorado.edu/en/simulation/battery-resistor-circuit>

Factors affecting Resistance in a wire (pHet)

<http://phet.colorado.edu/en/simulation/circuit-construction-kit-dc>

Use the site above (and read 13.7 in textbook) to determine how the following affect resistance in a wire.

- 1) type of material (play with 'p' dial) – does type of material affect amount of resistance? _____
- 2) cross-sectional area – what happens as you INCREASE the area? _____
- 3) length – what happens as you INCREASE the length? _____

Temperature and resistance

What happens to temperature as the resistance increases? _____

Measuring Resistance

Use an Ohmmeter and connect in parallel (like voltmeter)

What is a superconductor?

A superconductor is a conductor (wire) in which there is NO resistance and NO loss of energy due to heat. This is very efficient! Currently this only occurs if we cool conductors to VERY VERY low temperatures and thus is too expensive to do ordinarily.

Homework:

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