

Materials Required

Experiment 1:

1. Ohmmeter - digital autoranging preferred such as the VWR brand Digital Autorange Multimeter P/N 26983-175. Call VWR at 800-932-5000. List price: \$29.95. Ohmmeters/Multimeters are also available at Radio Shack.
2. 100 W light bulb.
3. Other wattage light bulbs.

Experiment 2:

1. Ohmmeter.
2. 100 W light bulb.

Experiment 3:

1. Ohmmeter.
2. 50 W - 100 W - 150 W 3 way light bulb.
3. 3 way switch socket available at Home Depot and most other hardware stores.

Experiment 4:

No special materials are necessary

Experiment 5:

1. Light bulb 100 W or 50 W - 100 W - 150 W 3 way bulb
2. Hammer
3. Newspaper
4. Safety goggles
5. Gloves

Experiment 6:

1. Variac transformer or power supply or voltage source with 100 V capability.
2. Copper wires - standard hook up wire available at hardware stores or Radio Shack.

3. 0.010 inch diameter Kanthal AF, Kanthal A1 or Hoskins 875 heater wire - available from California Fine Wire Company 805-4895144. Nichrome heater wire will also work.

4. 0.003 inch diameter Kanthal AF, Kanthal A1 or Hoskins 875 heater wire - available from California Fine Wire Company 805-4895144. Nichrome heater wire will also work.

A kit containing items 2, 3, and 4 is available through the GA Sciences Education Foundation as item GASEF # 013. Go to www.sci-ed-ga.org/modules/materialscience/color/materials.html for details about the kit and www.sci-ed-ga.org/modules/materialscience/color/orderform.html for ordering information.