

NOTE: Experiments using these materials can be done on a chair desk top, so it's possible to do in a lecture-style classroom. However, the use of hands-on materials is optional. There are movies that show all the experiments and so the hands-on experiments are not necessary.

Materials for each group for each unit (or module) could be included in a plastic bag that can be distributed at the beginning of class and collected at the end of class.

Optional Materials for Unit M: Developing a Model for Magnetism

Instructor will need a device to demagnetize nails (e.g. a solenoid connected to a Variac).

Each group would need the following:

- Bar magnet
- A few small disc magnets (or any other type of small magnet)
- 6-10 nails that are not magnetized (8d, 2.5 inches long is a good size)
- Deep-dish bowl or aluminum pie plate
- Disc of Styrofoam (about 2-in in diameter, 3/8 in high, cut from bottom of 8-oz Styrofoam cup)
- An envelope containing several small items: for example, wood strip, steel paper clip, small piece of plastic, aluminum foil or strip, iron nail, copper wire, nickel strip or wire.
- Small magnetic compass
- Several paper clips
- Piece of tape

Optional Materials for Unit SE: Developing a Model for Static Electricity

Instructor will need several large showcase bulbs (long, tubular clear bulbs with straight line filaments) to mount around the room so students can look at bulbs through their spectral glasses.

Each group would need the following:

- Roll of sticky tape

- Pen or permanent marker
- An envelope containing several small items: for example, wood strip, steel paper clip, small piece of plastic, aluminum foil or strip, iron nail, copper wire, nickel strip or wire. These are the same materials that are used for the magnetism unit.

Optional Materials for Unit L: Light and Color

Each group would need the following:

- 2 Mini- Maglite™ flashlights
- Black card with tiny hole (pinhole) in its center
- Stand (dry eraser pen) and small black card to use as blocker
- White cardboard screen
- Nail with glob of clay to hold small black card for shadow experiments
- Envelope with six color gels (red, green, blue, magenta, yellow and cyan)
- Two or more pairs of Spectral glasses