

Introduction

Lab Options

This course includes the option of hands-on or dry lab activities.

- Dry labs have no required materials.
- Hands-on labs require the materials listed below.

Lab Manual

Each lab contains complete instructions – there is no lab manual for this course. It is strongly recommended that students keep a detailed notebook of their work.

Disclaimer

Apex Learning® has no liability whatsoever regarding any hands-on laboratory activities. The personnel at the school at which the student conducts the hands-on lab activities, or the student's parent or guardian if the lab activities are completed at home, are responsible for all such hands-on lab activities, including ensuring that qualified personnel are available to supervise the activities.

Questions

Contact Apex Learning Support by phone at 1-800-453-1454 or by email at support@apexlearning.com.

Hands-On Lab Materials

Transfer of Thermal Energy

Semester 1: 2.2.3

- 2 plates of similar sizes, one of a material that is a thermal insulator and one of a material that is a thermal conductor
- A pencil
- A ruler
- A fan (a small battery-powered fan or a room fan)
- Ice cubes
- 3 250-mL beakers
- 2 thermometers
- Water
- Plastic and plastic foam cups
- Aluminum foil
- Cloth, felt, cotton, foam, plastic, rubber, or other insulation

Electromagnetism

Semester 1: 4.2.3

- Full coil of lightly insulated copper wire (for part 1)
- About 1 m of loose insulated copper wire (for part 2)
- Wires with alligator clips on the ends
- Wire-stripping pliers or sandpaper
- Ammeter or multimeter
- Bar magnet

- Fresh batteries or battery packs
- Electrical circuit on/off switch (optional)
- Light sewing pins
- Possible cores: thin cardboard tube; plastic rod; steel nail, bolt or screw

Properties of Matter

Semester 2: 2.2.4

- Safety goggles
- Small vial or jar
- 3 small beakers (100mL), one for each liquid
- 3 eyedroppers (optional)
- Water, plain
- Salt
- Soap
- Vegetable oil
- Isopropyl alcohol (optional)
- Spoon
- Towel (for cleaning spills from counter)
- Small nails or pins (optional)
- Camera (optional)
- Hot plate
- Beakers or pots
- Ring stand and clamp
- Thermometer
- Graphite
- Blackboard chalk (amorphous gypsum)
- Quartz (crystalline)