

Equipment List for Chapter 7:

Materials needed for each group per activity.

Activity 1

- Paper and pencil

Activity 2

- Small jars containing:
 - Magnesium
 - Aluminum
 - Iron
 - Copper
 - Zinc
 - Silicon
 - Sulfur
 - Iodine
- Electrical conductivity tester with probes (Flinn's AP 1493 would work)
- The conductivity tester shown in the diagram in the textbook uses a 9-volt battery/battery adaptor, 4 wires with alligator clamps on both ends, 330-ohm resistor, and an LED light
- 1 M HCl (83.3 mL of conc. HCl added to 916.7 mL of water slowly)
- Small scoopula or tweezers
- 8 test tubes
- Test-tube rack
- Index cards

Activity 3

- Aluminum foil
- Scissors
- Balance (class)
- Copper (II) chloride (can be anhydrous or dihydrate)
- Filter paper

- Funnel
- Ringstand/ring
- 50 mL beaker
- 100 mL beaker

Activity 4

- Cathode-ray tube
- High-voltage power supply to power cathode-ray tube
- Horseshoe magnet
- Paper with 8×10 grid (at least two per student)

Activity 5

- Hydrogen gas discharge tube
- High-voltage power supply to power hydrogen gas tube (Suggest that you use a commercial spectrum tube power supply (Flinn AP 1327))
- Spectroscopes (one per student) or diffraction grating lens
- Scissors

Activity 6

- High-voltage power supply for gas discharge tubes.
- Gas discharge tubes (Helium, neon, argon and others would help in this section)
- Spectroscope or diffraction grating lens
- Graph paper

Activity 7

- None

Activity 8

- None

Activity 9

- Rolls of Magic-Tape® or any transparent tape equivalent: however, this activity does not work with cellophane tape