

Activity 2 Overview

Student Objectives

Students begin the activity by establishing a definition for a chemical element. They then examine some physical and chemical properties of several elements.

Safety Requirements

In the margins of the student pages you will find safety warnings that should be rigorously followed.

- Goggles
- Apron

Preparation and Materials Needed

Preparation

You will need to gather the materials required for each lab group ahead of time. Also, you will need to prepare enough 1M HCl for all lab groups. See **Chemicals needed**. We also recommend that you test the procedure before class.

Materials/Chemicals needed

For each lab group

- 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 scoopa or tweezers
- 8 test tubes
- Test-tube rack
- Index cards