

## Ionic and Covalent Bonding Activity

**Purpose:**

To use several models to find a formula for an ionic compound and covalent molecule.

**Materials:**

Paper and pencil

**Procedure:****Ionic Bonds**

- 1] Draw a diagram of a lithium atom.
- 2] Next to it draw a diagram of a chlorine atom.
- 3] Draw an arrow to show that the outer electron of lithium moves to the outer energy level in chlorine.
- 4] Draw a diagram of a calcium atom.
- 5] Next to it draw a diagram(s) of a bromine atom.
- 6] Draw an arrow to show that the outer electrons (of calcium) moves to the outer energy level in bromine.

Answer the questions that follow . . .

**Covalent Bonds**

- 1] Draw a diagram of a hydrogen atom.
- 2] Next to it draw a model of a fluorine atom . . . draw them so that their outer energy levels overlap. One electron from hydrogen should be paired so they belong to either hydrogen or fluorine.
- 3] Indicate on your diagram which electrons are being shared between the two atoms.
- 4] Draw a diagram to show how carbon can form four bonds with four hydrogen atoms.

Answer the questions that follow . . .