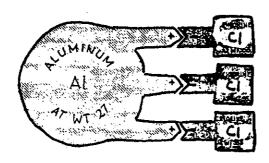
CP Chemistry Activity Ionic Bonding

In this lab you will investigate how ions form chemical bonds and how to determine the resulting chemical formula and name.

- 1. Cut out each of the ion symbols that are provided by your instructor.
- 2. Separate your cards into anions (negative ions) and cations (positive ions). Notice that each ion card has a certain number of positive or negative "arms" attached to it. These represent the number of electrons that an atom loses or gains to form the ion.
- 3. It is your job to make ten different ionic compounds by combining anions and cations until you have a neutral compound. Fill in the data table for each compound created. For this lab use only one type of anion and one type of cation for each compound. An example is shown below.



Name of Positive Ion	Number of Positive Ions	Name of Negative Ion	Number of Negative Ions	Chemical Formula	Name of Compound
aluminum	1	chloride	3	AlCl ₃	Aluminum chloride

Name of Positive Ion	Number of Positive Ions	Name of Negative Ion	Number of Negative Ions	Chemical Formula	Name of Compound
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Questions/Analysis

- 1. Explain the significance of equalling the "arms" or charges on the cards.
- 2. What is the purpose of using subscripts?
- 3. Write the formula and name of five more compounds not already appearing on the two data tables. Use the polyatomic and common ion tables in your textbook and the periodic table.
- 4. How would you explain the process of writing chemical formulas to someone unfamiliar with the process? Be specific in your response.