Activity: Bond with a Classmate

Summary
In this activity, students are assigned an ion and form bonds with their classmates, recording the formula and name of the compound they created.

Resource Type       Grade Level
Activity            Middle school

Objectives
By the end of this lesson, students should be able to
- correctly write compound formulas in correct ratios by balancing charges on ions.
- correctly write compound names using ionic naming rules with correct endings.

Chemistry Topics
This lesson supports students’ understanding of
- Ionic bonding
- Naming compounds

Time
Teacher Preparation: 1 hour
Lesson: 15 minutes

Materials
- Student handouts
- Bonding cards

Safety
- No specific safety precautions are needed for this experiment.

Teacher Notes
This sections includes any information the teacher might need, including
- Print and laminate the bonding cards prior to class. You may also want to attach strings to the cards so the students can wear them around their necks.
- Make sure there are enough bonding cars for each student to have one.
- It is helpful to have an equal number of cations and anions so that every student will have a partner.

FOR THE STUDENT

Student Activity Sheet: Bond with a Classmate

Lesson
Procedure
1. You will need your periodic table for this activity.
2. Select ONE tag from the front of the room.
3. Are you a cation (+) or an anion (-)? Record your answer in the table provided.
4. Record your element symbol and oxidation number in the table provided.
5. Are you a metal, nonmetal, or metalloid? Record this in the table provided.
6. Find a person with an ion with an opposite charge.
7. Record your partner’s element symbol and oxidation number in the table provided.
8. Record whether their element is a metal, nonmetal, or metalloid.
9. You and your classmate have now “bonded”! Write the compound formula for your bonded elements with correct subscripts.
10. Write the name of your new compound with the correct –ide ending.
11. Find new partners. Repeat this procedure 2 more times.
12. After your third bond, check your work and get a new tag. Repeat this process with your new element.

### Results/Observations

<table>
<thead>
<tr>
<th>Cation (+)</th>
<th>Metal Nonmetal Metalloid</th>
<th>Anion (-)</th>
<th>Metal Nonmetal Metalloid</th>
<th>Formula</th>
<th>Compound Name</th>
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Get a new bonding card