

Bond with a Classmate Lab

Purpose: To understand how two elements bond to become ionic compounds and to write chemical formulas correctly using chemical symbols and subscripts

Problem: What is an ion? When you become an ion, will you be able to form bonds with every other student in the room, why?

Hypothesis: (complete before you begin):

Procedure:

1. Obtain one tag from the teacher. Are you a positive (+) or negative (-) ion?
2. Find an ion with the **opposite** charge.
3. In the data table, write your element symbol and charge, along with your partner's element and charge.
4. Write the compound into the data table. Remember, the positive ion is written first.
6. Find a new partner.
7. After your 5th bond, get a new tag and repeat steps 1 – 6. **Do this 2 times (total of 10)**

Data Table

Positive Ion	Negative Ion	Compound	Compound Name
Na ⁺	Cl ⁻	NaCl	Sodium Chloride
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Analysis and Results:

1. What is a compound?
2. What is an ionic compound?
3. If Magnesium and Oxygen were to form a compound, which would be the positive ion and which would be the negative ion?
4. Draw the electron dot diagram for Magnesium Oxide
5. Why can't two negative ions or two positive ions bond together? Explain.
6. How are ionic compounds named?

Conclusion: Was your hypothesis correct or incorrect, explain.

Na⁺

Mg²⁺

Al³⁺

K⁺

I⁻

N³⁻

Cl⁻

P³⁻

B³⁺

Be²⁺

Ca²⁺

Li⁺

O²⁻

F⁻

S²⁻

Br⁻

Na⁺

Mg²⁺

Al³⁺

K⁺

I⁻

N³⁻

Cl⁻

P³⁻

B³⁺

Be²⁺

Ca²⁺

Li⁺

O²⁻

F⁻

S²⁻

Br⁻