

Worksheet 11 Properties of ionic bonds

Date: \_\_\_\_\_

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**Objectives:**

- Be able to explain how ionic compounds are formed from a combination of positive and negative ions.
- Be able to explain why different quantities of ions combine in different compounds.
- Be able to explain the purposes for superscripts and subscripts in chemical formulas.
- Be able to name and write the formulas for binary and ternary ionic compounds.

**Instructions:** Get an envelope containing the Yellow and Green cards.

1. Sort the cards into two piles by color. What are the common characteristics of the cards in each pile?
2. Sort the cards into three piles by card size. What are the common characteristics of the cards in each pile?
3. By now you've noticed that the cards represent charged ions. If you want to combine these ions to make a stable material, what does the total charge need to be on the final product?
4. Fill in the table on the next page for all of the possible combinations of positive and negative ions.
5. What characteristics would all of these compounds have in common?
  - a)
  - b)
  - c)
  - d)
6. For each of the characteristics listed above, what are the electrons doing to cause this behavior?
  - a)
  - b)
  - c)
  - d)

[illegible]