Name _____ Date _____

Binary Ionic Compounds

- Recall that ionic compounds are formed when electrons are transferred from a metal atom to non-metal atoms and the _____ _____ _____ form an _____ _____.
- Compounds formed by ionic bonds are called _____ _____ and have different properties than their individual atoms.
    - Ionic compounds form _____
    - Ionic compounds _____ _____ and _____ _____
    - Ionic compounds _____ easily _____ _____.
    - When ionic compounds dissolve in water, the charged ions can _____ _____ and are called _____.
        - Electrolytes are _____ to human _____.

Counting Atoms

- _____ _____ are used to express they _____ of atoms and _____ of individual _____ are present in a compound.
- _____, written after the element, identify the _____ of atoms there are of each element.
    - The number 1 is not written in chemical formulas.
- Some compounds have _____ of _____ that always stay together and are placed inside _____ with a subscript outside the parentheses.
    - _____ _____ _____ in parenthesis by the subscript outside of the parenthesis.

Writing Formulas

- _____ ionic compounds have only _____ _____ of _____. (metal and non-metal)
    - Even though the ions carry a charge, the _____ themselves, are _____.
    - Therefore, the number of negative ions must equal the number of positive ions.

- Write the symbol and positive oxidation numbered element first (metal)
    - Magnesium Nitride

- Write the symbol of the element that has the negative oxidation number (non-metal)
    - Magnesium Nitride

- Write oxidation numbers of each element, without the charge, as the subscript for the other element. (Criss Cross)
    - Magnesium Nitride

- Once this is done, the compound will have the same amount of positive ions and negative ions.

Naming Compounds

- Write the full name of the positive ion
    - NaCl

- Write the root name of the negative ion
    - NaCl

- Add the ending ide to the root
    - NaCl

Endings for Non-metal Ions

- Nitride
- Phosphide
- Oxide
- Sulfide
- Fluoride
- Chloride
- Bromide
- Iodide