Sc9 Notes Chem Unit Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**IONIC COMPOUNDS WITH POLYATOMIC IONS**

* Covalent & ionic bonds ***can*** be found in the **same** compound!
* It is possible for some **molecules** (i.e. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ) to gain or lose electrons (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **bonding**) as their atoms combine to form a molecule(\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **bonding**)
* In doing so, they become a ***molecular ion***, called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Chart, diagram

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* Polyatomic ions often have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ names, so if you do not see the word listed as an element on the periodic table, chances are it is a polyatomic ion so refer to the table of common polyatomic ions
* Because a polyatomic ion carries an electric charge, it **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** exist on its own.
  + It is always paired up with ions that carry an **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** charge.
  + The charges need to cancel out. Compounds are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**!!

A picture containing maraca

Description automatically generated**Example** **: CO3**

* When **carbon** (*non-metal*) bonds with **oxygen** (*non-metal*), they form a **\_\_\_\_\_\_\_\_\_\_\_\_** bond
  + - *It takes 3 oxygen atoms and 1 carbon atom to create one molecule.*
* Like many covalent compounds, it takes a common name, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* CO3 carries an electric charge of **\_\_\_\_\_\_\_\_**, so it **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** exist on its own. It **needs**

to be paired up with a **\_\_\_\_\_\_\_\_\_\_\_\_ *(because, +)*** to make the compound **neutral**

**Part A: Writing Formulas of Compounds with Polyatomic Ions**

*Examples*:

Sodium chromate Tin(II) hydroxide

**Part B: Naming Compounds with Polyatomic Ions**

*Examples*:

NaCH3COO Cr(OH)3 Ba3(PO3)2