**Polyatomic Ions and Compounds**

**Polyatomic Ions**

* The prefix \_\_\_\_\_\_\_\_\_\_\_ means many or much.
* Ions that are made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Created when atoms of two or more elements are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_bonded so that all of the atoms have a full octet of valence electrons.
* Each polyatomic ion has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Polyatomic Cations**

* Ammonium: NH4+

**Polyatomic Anions: suffix “ate”**

*(Greatest Number of Oxygens)*

* Nitrate: NO3-
* Carbonate: CO32-
* Sulfate: SO42-
* Phosphate: PO43-

**Polyatomic Anions: suffix “ite”**

*(One less Oxygen than “ate”)*

* Nitrite: NO2-
* Sulfite: SO32-
* Phosphite: PO33-

**Other Polyatomic Anions**

* Cyanide: CN-
* Hydroxide: OH-

**Polyatomic Anions: Hydrogen prefix**

* Bicarbonate: HCO3-
* Hydrogen Sulfate: HSO4-
* Hydrogen Sulfite: HSO3-
* Dihydrogen Phosphate: H2PO4-
* Hydrogen Phosphate: HPO42-

**Caution:**

* If ions are written as a group, use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to represent multiple \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Ex:
* The net charge of the compound must be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Ex:

|  |  |
| --- | --- |
| **Flowchart for Naming** | **Practice Drawing Polyatomic Ions:** |

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