

Filling My Summer with CHEMISTRY!!!

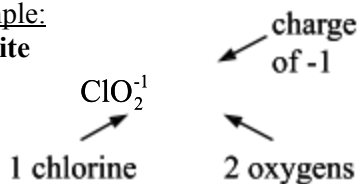
Learn the **names and formulas of the ions** in the tables below. Spelling is important. Correctly using subscripts and superscripts is important. The charge is the superscript, while the subscript indicates the number of atoms of that particular element in the ion. Watch the video and use the following mnemonic device to memorize six of the ten ions in set 1:

Nick the Camel ate a Clam Supper and Crepes (for dessert) in Phoenix

Things to notice about ions

- *Ions are made of elements
- *Both the sign and numerical value of a charge are important
- *The non-oxygen element in the ion is usually part of the ion's name
- *Ions that end in -ite have one less oxygen than its corresponding -ate
- *Hypo has one fewer oxygen
- *Per has one more oxygen
- *Hydro means water
- *Di means two

Example:
chlorite



Polyatomic Ions – Set 1

| | |
|------------------------------------|-----------|
| NH_4^+ | ammonium |
| OH^- | hydroxide |
| NO_3^- | nitrate |
| CO_3^{2-} | carbonate |
| ClO_3^- | chlorate |
| SO_4^{2-} | sulfate |
| CrO_4^{2-} | chromate |
| PO_4^{3-} | phosphate |
| $\text{C}_2\text{H}_3\text{O}_2^-$ | acetate |
| CN^- | cyanide |

Polyatomic Ions – Set 2

| | |
|------------------------------|--------------|
| ClO^- | hypochlorite |
| ClO_2^- | chlorite |
| ClO_4^- | perchlorate |
| NO_2^- | nitrite |
| SO_3^{2-} | sulfite |
| PO_3^{3-} | phosphite |
| HSO_4^- | bisulfate |
| HCO_3^- | bicarbonate |
| $\text{Cr}_2\text{O}_7^{2-}$ | dichromate |
| MnO_4^- | permanganate |

NOTE: A superscript of -1, 1-, or just a negative sign can mean a charge of negative one on the ion. Also a superscript of +1, 1+, or just a positive sign can mean a charge of positive one on the ion. Usually charges greater than one are written with the value of the charge followed by the sign (2- for negative two).