# **IPC Cycle Sheet**

March 30, 2020 thru April 3, 2020

Goals: TLW learn and demonstrate how to write

formulas and name compounds.

Watch the Chemical Formulas Videos Monday:

> Do worksheet Homework:

> > Chemical Formulas

Tuesday: Watch the Writing Ionic Formulas Video

Watch the Writing Covalent Formulas Video

Homework: Warm Up #66 and 67

Wednesday: Watch the Chemical Naming Videos

> **Homework:** Do worksheet

> > Naming Compounds

Thursday: Class @9:00 AM

> Homework: Check your work (score keys)

> > Warm Up #61 and 62

Friday: Watch Naming Ionic Compounds Video

Watch Naming Molecular Compounds Video

Homework: Warm Up #63 and 64

Vocabulary

anion ionic bond polyatomic ion cation covalent bond chemical bond salt metallic bond chemical symbol

molecule

polar/non polar

chemical formula

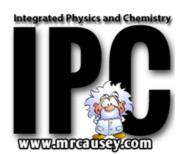
Know the following

chemical bonding oxidation numbers

prefixes element roots

predicting bonds determining charge polyatomic ions

updated 3/27/2020



## **Contact Info**

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## **Chemical Symbol**

A symbolic representation of the elements.

Examples: gold

Au silver Ag

hydrogen Η

# **Binary Compound**

A binary compound consists of two parts, usually a cation and an anion.

# **Kevs to Chemical Formulas**

The keys to writing and naming chemicals are learning to use the periodic table, knowing the polyatomic ions and knowing the prefixes.

#### **Chemical Formula**

A symbolic representation of a chemical substance.

**Examples:** NaOH is sodium

hydroxide

H<sub>2</sub>O is water

## Polyatomic Ion

A covalently bonded group of atoms that have a positive or negative charge.

## **Chemical Reaction**

It's the process in which substances undergo physical and chemical changes to produce new substances.

#### **Reactants**

Reactants are the starting substances in a chemical reaction.

## Products

Products are the new substances formed in a chemical reaction.

## **Conservation of Mass**

Mass can neither be created nor destroyed.

## **Reaction Types**

**synthesis** – combination of two or more substances to create one more complex substance.

<u>decomposition</u> – the breaking down of a complex substance into two or more simple substances.

<u>single replacement</u> – uncombined element replaces an element that is part of a compound.

<u>double displacement</u> – different atoms in two different compounds replace each other

**combustion** – a substance reacts with oxygen to produce water, CO<sub>2</sub> and heat.

#### Mole

A mole is an Avogadro's number of anything.

## **Avogadro's Number**

Avogadro's number is the number of atoms in exactly 12.00 grams of carbon-12.

 $N = 6.022 \times 10^{23}$ 

## **Chemical Equation**

A chemical equation is a **symbolic description** of a chemical reaction.

$$NaOH + HCl \longrightarrow HOH + NaCl$$
 reactants products

It tells you 3 things:

- 1. The reactants
- 2. The products
- 3. The mole ratios (amounts)

#### Symbols

$$\begin{array}{ll} \text{(g) = gas} & \longrightarrow = \text{yeilds} \\ \text{(l) = liquid} & \Delta = \text{change} \\ \text{(s) = solid} & + = \text{combine} \\ \text{(aq) = aqueous} & \uparrow = \text{released} \\ \end{array}$$