

Chemistry Cycle Sheet

May 11, 2020 thru May 15, 2020



- Goals:** TLW work on balancing chemical equations and the final study guide.
- Monday:** Class @1:00 – 2:15 PM
Balancing Chemical Equations
- Homework:** Do worksheet
“Writing Chemical Equations”
- Tuesday:** No meeting. [Watch Videos](#)
- Homework:** Do worksheet
“Balancing Equations”
- Wednesday:** No Meeting. Watch Videos.
- Homework:** Study Guide
- Thursday:** Finals
- Homework:** Study Guide
- Friday:** Finals
- Homework:** Study Guide

Vocabulary

reactants	exothermic	chemical reaction
products	endothermic	chemical equation
catalyst	coefficients	stoichiometry
kinetics	mole	activation energy
oxidation	molar mass	limiting reactant

Know the following

the general rules for chemical bonds
ionic and covalent bonds
the properties of ionic, covalent and metal substances
nonpolar and polar covalent bonds
the driving force behind chemical bonding
Lewis structural formulas
determine the possible bonds
predict the bond type

Chemical Symbol

A symbolic representation of the elements.

Examples: gold Au
silver Ag
hydrogen H

Chemical Formula

A symbolic representation of a chemical substance. It tells you the elements involved, how many atoms of each element and number of units.

Examples: NaOH is sodium hydroxide

Keys to Chemical Formulas

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

Binary Compound

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

Polyatomic Ion

A covalently bonded group of atoms that act as a single ion.

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.

Reaction Types

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

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

single replacement – uncombined element replaces an element that is part of a compound.

double displacement – different atoms in two different compounds replace each other

combustion – a substance reacts with oxygen to produce water, CO₂ and heat.

Chemical Equation

A symbolic description of a chemical reaction.



Avogadro's Number

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

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

Mole

A mole is an Avogadro's number of anything.

Relative Atomic Mass Unit

A relative atomic mass unit is 1/12 the mass of a carbon-12 atom.

$$H = 1 \text{ amu} \quad C = 12 \text{ amu}$$

Mole Ratio

$$\frac{6.022 \times 10^{23} \text{ particles}}{1 \text{ mole of particles}}$$