Unit 6 NAME

Class Work 1/20/14

6.1 Grams Formula Mass

SPARK

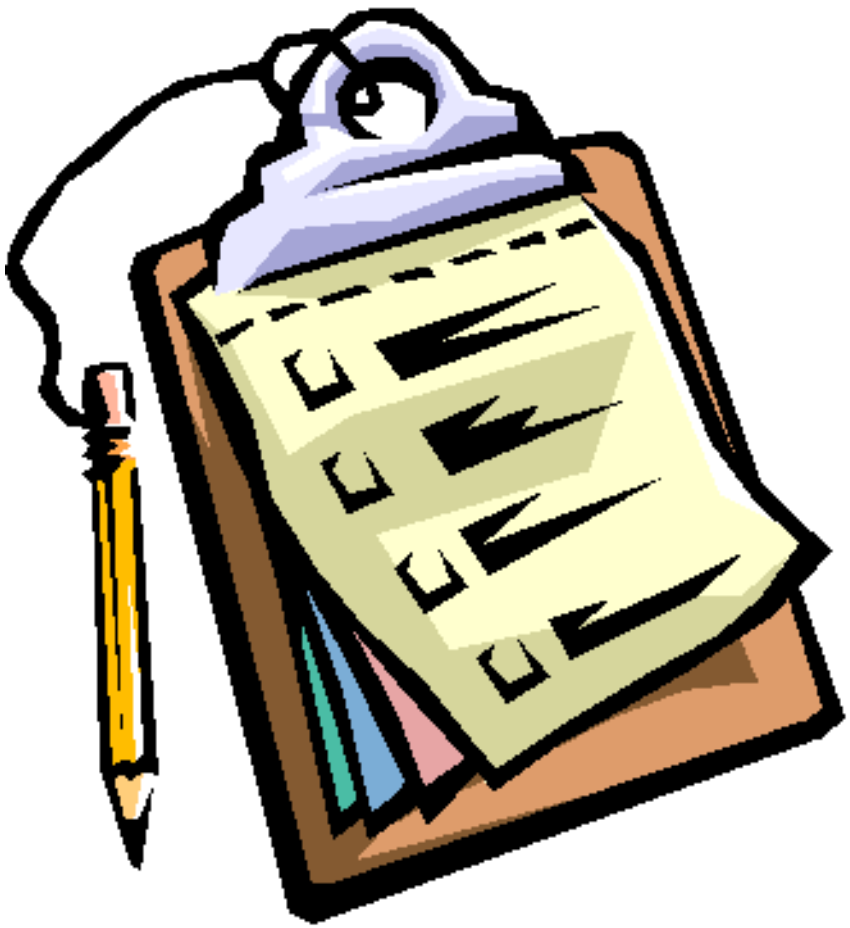
1. What is the mass of one atom of oxygen?
2. Which subatomic particles have mass?
3. Where are those subatomic particles located?

Objective

SWBAT calculate the grams formula mass of substances and identify an empirical and molecular formula of a compound.

Agenda:

- SPARK/Objective
- Notes
- Practice
- Exit Ticket
- Homework

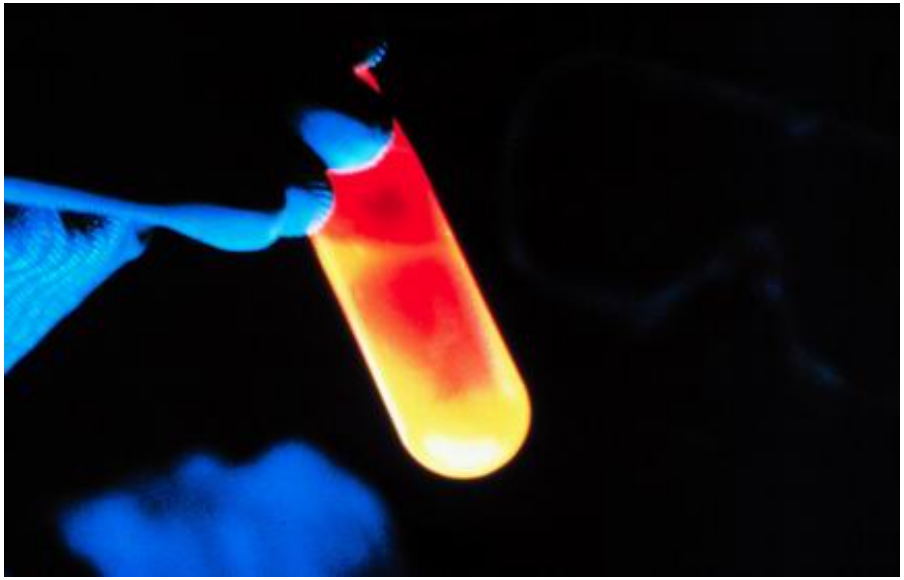


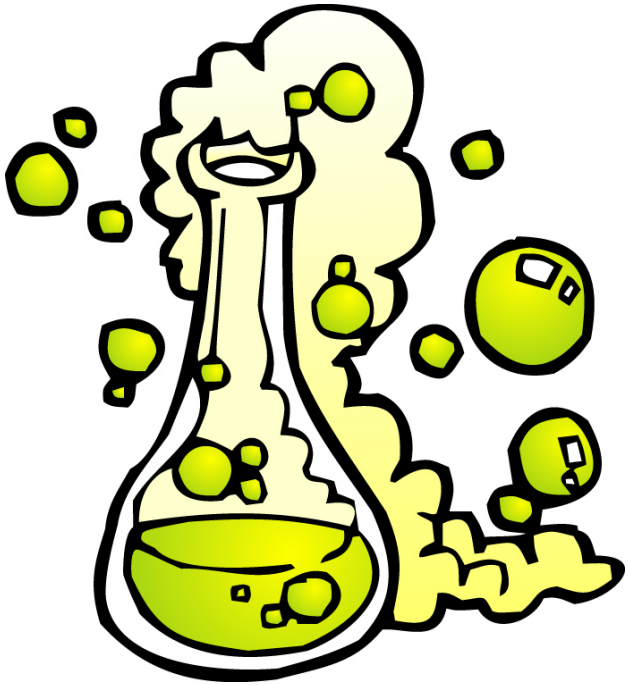
Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

Welcome to Unit 6!

STOICHIOMETRY!

Stoichiometry** describes chemical reactions!

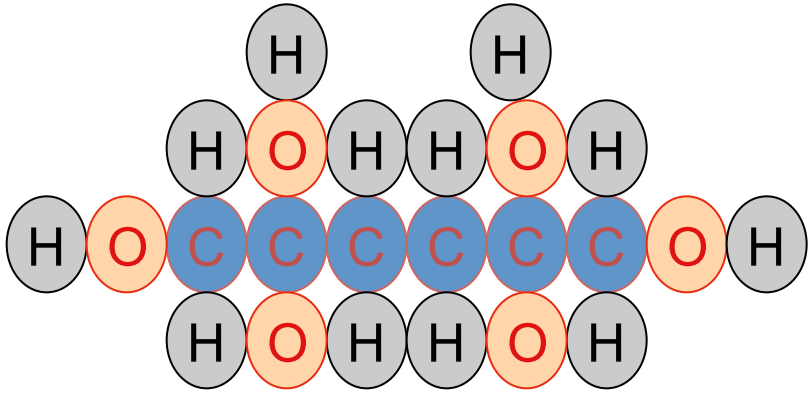




Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

Vocabulary

- Molecular Formula** - tells **exactly** how many of each atom are in the molecule

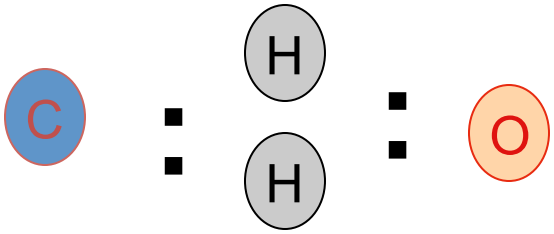


molecular formula of sugar = $C_6H_{12}O_6$

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

Vocabulary

- Empirical Formula** - tells the simplest **ratio** of atoms in a molecule



empirical formula of sugar = CH_2O

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

How do we find a substance's empirical formula??

- THINK-WRITE-PAIR-SHARE

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

PRACTICE – Empirical Formula

- *What is the empirical formula of* ***$H_4S_2O_8$?***

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

PRACTICE – Empirical Formula

molecular formula	**empirical formula**
C_2H_4	
$C_{11}H_{22}O_{11}$	
H_2O	
$C_{25}H_{50}$	

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

Vocabulary

- Grams formula mass** - total of all atomic masses in a compound (also known as molecular mass) – units are g!

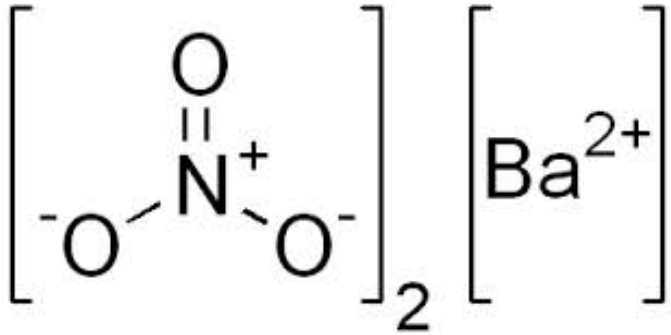
Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

Example #1

- Find the grams formula mass of potassium chlorate, $KClO_3$

FUN FACT: Used as a disinfectant!

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.



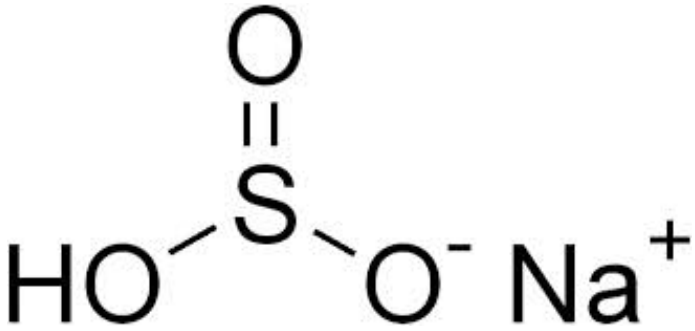
Example #2

- Find the grams formula mass of barium nitrate, $Ba(NO_3)_2$

FUN FACT: Used in paint, X-rays and glass!

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

Example #3



- Find the grams formula mass of sodium sulfite, Na_2SO_3

FUN FACT: Used as a preservative!

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

More Practice

- Find the grams formula mass of each of the following:

4) MnO_4^-

5) $HClO_3$

6) C_2H_6O

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

Your Turn!

- Work on your 6.1 worksheet!
- Raise your hand for help!

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

Exit Ticket

- Complete your 6.1 Exit Ticket!

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.

HOMEWORK

Finish the rest of your 6.1 WS

Objective: SWBAT calculate the gram formula mass of substances and identify an empirical and molecular formula of a compound.