Unit 6 NAME

Class Work 2/4/14

6.4 Conservation of Mass

SPARK place Regents break homework in bin!

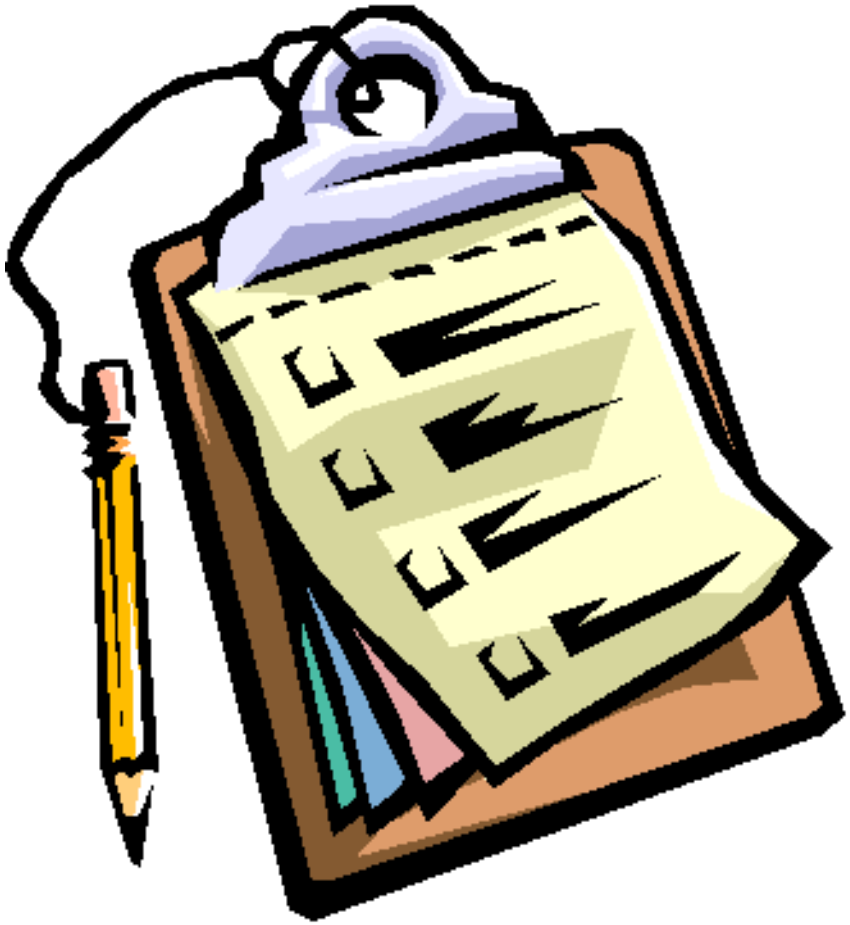
1. What is a physical change? Give an example.
2. What is an chemical change? Give an example.

Objective

SWBAT explain why mass is conserved in a chemical reaction.

Agenda:

- SPARK/Objective
- Announcements
- Practice
- Quiz
- Test Pass Back!
- Homework



Objective: SWBAT explain why mass is conserved in a chemical reaction.

Chemical Reactions – Chemical Changes

$$A + B \rightarrow AB$$

Reactants → Products

Mass of Reactants = Mass of Products

Objective: SWBAT explain why mass is conserved in a chemical reaction.

Review of Chemical Formulas

$2\ NaHCO_3$

The 2 is the COEFFICIENT – represents the number of molecules of the compound

The 3 is the SUBSCRIPT – represents the number of atoms of that element

Objective: SWBAT explain why mass is conserved in a chemical reaction.

Key Ideas

- The law of conservation of mass tells us that matter cannot be CREATED or DESTROYED
- In any kind of chemical reaction, there must be a conservation of MASS, CHARGE, and ENERGY.

Objective: SWBAT explain why mass is conserved in a chemical reaction.

After you finish Lab #15!

Citric acid+ sodium bicarbonate → carbon dioxide+ water+sodium citrate

$H_3C_6H_5O_7 + 3\ NaHCO_3 \rightarrow 3\ CO_2 + 3\ H_2O + Na_3C_6H_5O_7$

How many atoms of each element are on each side of the equation?

Reactants	Products
C =	C =
H=	H=
O=	O=
Na=	Na=

Objective: SWBAT explain why mass is conserved in a chemical reaction.

$H_2 + O_2 \rightarrow H_2O$

What are the reactants of the chemical reaction?

What are the products of the chemical reaction?

How do you represent the chemical equation verbally?

Element	# of atoms on reactant side	# of atoms on product side
H		
O		

Objective: SWBAT explain why mass is conserved in a chemical reaction.

Your Turn!

- Draw a **circle** the reactants
- Draw a **square** around the products
- Write the chemical equation in a sentence
- Determine whether or not the equation is balanced by using the table

$$C + S_8 \rightarrow CS_2$$

- Sentence: _____

Element	# of atoms on the reactants side	# of atoms on the products side

Objective: SWBAT explain why mass is conserved in a chemical reaction.

Exit Ticket

- *Your friend conducted an experiment. She massed a piece of paper; then she burned it and measured the mass of the leftover ash. The mass of the ash was much less than that of the paper, so she concluded that the chemical reaction of burning paper loses mass. Is she correct? Explain to her using evidence from your lesson why or why not.*
- *Challenge Question– How could she modify her experiment to get different results?*

HOMEWORK

Complete 6.4 HW

Complete midterm corrections in class tomorrow!

Objective: SWBAT explain why mass is conserved in a chemical reaction.