

Warm-up:

Consider the following chemical equation. Look at the chemical formulas and the state symbols (*l*, *g*, etc.):



1. Write an interpretation of the equation. (Look at the chemical formulas and state symbols):

2. What do you expect to observe (*see, hear, feel, or smell*) if you carry it out in the lab? Be specific.

Notes:

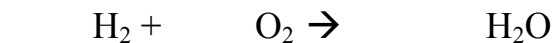
Purpose

To learn how to balance chemical equations according to the Law of Conservation of Mass.

Procedure and Questions

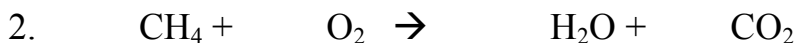
Open your zipper bag of gems and sort into like piles. You are responsible for returning all 42 gems at the end of the activity. Use the materials to model reactants and products. Take an inventory of the atoms. Is the same number on each side of the equation? When balanced, add mass of reactants & products.

EXAMPLE #1:



Mass

Reactant Side	Product Side
H	H
O	O



Mass

Reactant Side	Product Side
C	C
H	H
O	O



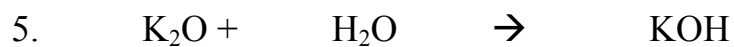
Mass

Reactant Side	Product Side
Fe	Fe
S	S
H	H
Cl	Cl



Mass

Reactant Side	Product Side
K	K
I	I
Cl	Cl



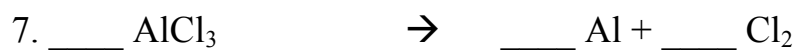
Mass

Reactant Side	Product Side
<u> </u> K	<u> </u> K
<u> </u> O	<u> </u> O
<u> </u> H	<u> </u> H



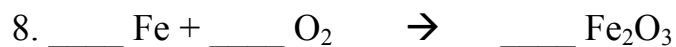
Mass

Reactant Side	Product Side
<u> </u> Zn	<u> </u> Zn
<u> </u> N	<u> </u> N



Mass

Reactant Side	Product Side
<u> </u> Al	<u> </u> Al
<u> </u> Cl	<u> </u> Cl



Mass

Reactant Side	Product Side
<u> </u> Fe	<u> </u> Fe
<u> </u> O	<u> </u> O



Mass

Reactant Side	Product Side
<u> </u> Zn	<u> </u> Zn
<u> </u> H	<u> </u> H
<u> </u> Cl	<u> </u> Cl



Mass

Reactant Side	Product Side
<u> </u> Al	<u> </u> Al
<u> </u> S	<u> </u> S
<u> </u> H	<u> </u> H
<u> </u> Cl	<u> </u> Cl

11. When is it okay to add individual atoms when balancing equations?

12. Choose ONE reaction. Draw your molecules below for the BALANCED reaction.

Reaction: _____ → _____

Reactants	Products

How do you know this is now balanced?

List: What did you learn from doing this activity?

When Finished:

Inventory the balancing gems, return to baggie with card, and put it back on the front lab bench. Turn in your paper to the Red Basket.

If there is more than 3 minutes of class remaining, get a textbook and begin the homework assignment written on the Front Board or found in your Unit 4 Calendar.