Balancing Equations Online

Name _____

Go to the *Matter & Atoms* page of the Kid Zone at http://sciencespot.net/ to find the links on this page.

SITE #1: Chemical Equations

1. What three things does a balanced equation show you?
    1. The _____ which enter into a reaction.
    2. The _____ which are formed by the reaction.
    3. The amounts of each substance _____ and each _____ produced.

2. What two things must we remember when balancing equations?
    1. Every chemical compound has a _____ which cannot be _____.
    2. A chemical _____ must account for every _____ that is used, which is an application of the Law of _____ of _____.

3. What does the → mean? _____

4. What does the ←→ mean? _____

5. Write a balanced chemical equation that illustrates each type of reaction.

    Synthesis - _____

    Decomposition - _____

    Single-Replacement - _____

    Double-Replacement (Ionic) - _____

SITE #2: Classic ChemBalancer - You will need to go back to the Matter & Atoms page of the Kid Zone!

(1) Click the button for "Directions" and **read carefully**. Click the "OK" button and return to the game screen.

(2) Click "Start Game" button to give it a try!

(3) Start by adding a "1" in each box and compare the number of atoms of each element you have on each side.

(4) Change coefficients to balance each equation and click the "Balanced" button to check it. Correct it if it's wrong.

(5) Use the information in the pop-up windows to answer each question and then write the balanced equation before clicking the OK button.

#1	#2
What does "ferrum" mean? _____ What color is sulfur? _____	What is HCl? _____ _____ Where is it found in your body? _____

More on back …

#3

What are pyrotechnics? _____

#4

What was the Hindenberg? _____
What gas was used in it? _____
What gas is used today? _____

#5

What does the symbol "Hg" represent? _____
Why should you never touch it? _____
_____

#6

What gas is produced when calcium metal is dropped in water? _____

#7

What is CH_4? _____ What gases is it related to? _____ & _____

#8

What is H_2O_2? _____ _____
What is it used for? _____
_____

#9

What is ammonia used for today?
_____ & _____

#10

How is the oxidation of aluminum different from that of iron? _____
_____

#11

What gas is released when potassium permanganate is decomposed? _____

Done? You may visit any of the sites listed on the Matter & Atoms page of the Kid Zone!