

# Balancing Equations

## Pre Lab Questions:

Answer the following before you begin the activity:

1. What number represents the **Coefficient**? \_\_\_\_\_
2. What number represents the **Subscript**? \_\_\_\_\_
3. What element is represented by the letter "**H**"? \_\_\_\_\_
4. How many "**H**'s" do you have? \_\_\_\_\_



## Procedure :

1. Using your set of cards, replicate the chemical equation onto your desk.
2. Label the reactant side and the product side.
3. Record all your information into the data table.
4. Identify the elements on the reactant side.
5. Count the number of atoms for each element.
6. Identify the elements on the product side.
7. Count the number of atoms on the product side.
8. Are the 2 sides equal? If not, the equation is not balanced.
9. The index cards numbered 2 - 7 are your **coefficients**. They can **ONLY** be placed in front of the elements. You can **not** change the subscripts.
10. Choose an element that is not balanced and begin to balance the equations.
11. Continue until you have worked through all the elements.
12. Once they are balanced, count the final number of Reactants and Products.
13. Write the balanced equation.
14. Can your equation be simplified?

Glue this side  
down into your  
science notebook.

“A dot is a lot!”

For more info about this lesson visit

<http://www.middleschoolscience.com/balance.html>

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Make the following equations on your desk	Reactants	Products	Reactants	Products	Balanced
	Start	Start	Final	Final	Equation
$H_2 + O_2 \rightarrow H_2O$					
$H_2O_2 \rightarrow H_2O + O_2$					
$Na + O_2 \rightarrow Na_2O$					
$N_2 + H_2 \rightarrow NH_3$					
$P_4 + O_2 \rightarrow P_4O_{10}$					
$Fe + H_2O \rightarrow Fe_3O_4 + H_2$					
$C + H_2 \rightarrow CH_4$					
$Na_2SO_4 + CaCl_2 \rightarrow$ $CaSO_4 + NaCl$					
$C_2H_6 + O_2 \rightarrow CO_2 + H_2O$					
$Al_2O_3 \rightarrow Al + O_2$					