

**Chemical Reactions**

Chemical reactions occur when substances change into something new, with new chemical and physical properties. Observing how a substance reacts with another substance can help you identify a compound another example of \_\_\_\_\_.

Clues that a chemical reaction has occurred:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

All reactions can be described by chemical equations

The **law of conservation of matter** states that atoms cannot be \_\_\_\_\_ or \_\_\_\_\_ in a chemical reaction. Because of this law, chemical equations must be balanced. The \_\_\_\_\_ in the \_\_\_\_\_ must be \_\_\_\_\_ to the \_\_\_\_\_ in the \_\_\_\_\_.

The symbols representing the state of each substance are added to the equation

solid \_\_\_\_\_ liquid \_\_\_\_\_ gas \_\_\_\_\_ aqueous \_\_\_\_\_

Example:

Word Equation:

Skeleton Equation: write formulas of compounds and atoms and add states.

Balance Equation:

Showing Experimental Conditions in Chemical Reactions

<b>Symbol</b>	<b>Meaning</b>
_____→	the reactants are heated
_____→	the reactants are heated to a particular temperature
_____→	the reaction is performed in the presence of a substance
_____→	light energy is necessary for the reaction

