Name Date

Writing Chemical Equations

A word **equation** is one way of representing a chemical reaction: it tells you what reacts and what is produced. Word equations are an efficient way to describe chemical changes, to help chemists recognize patterns, and to predict the products of a chemical reaction.

What are **products and reactants**?

* Reactants:
	+ Look for the substances that come before words like “combine”, “react together”, “react”
* Products:
	+ Look for the substances that come after words like “form”, “create”, or “make”
	+ Example: The reaction to the right can be written as

hydrogen + oxygen → water

 H2 + O2 → H2O

* The reactants are
* The products are

**Writing Word Equations**

Word equations are written in a particular format. The left side of a word equation lists the names of all the REACTANTS, and the right side lists the names of all the products. An arrow points from the reactants to the products: **all the reactants** → **all the products**

The reactants, as well as the products, are separated by a plus sign **(+):**

reactant 1+ reactant 2 → product 1 + product 2

Example:

Iron metal is placed in a flask containing oxygen gas (O2). Orange and yellow sparks are visible and there is smoke inside the flask. At the end of the reaction, iron (III) oxide has been created.

1. What is the evidence of a chemical reaction?
2. Reactant(s)
3. Product(s)
4. Word equation

You try:

Sodium bicarbonate, reacts with acetic acid. When they are mixed, there is vigorous fizzing and white bubbles are visible. The reaction creates sodium acetate, water and carbon dioxide.

1. What is the evidence of a chemical reaction?
2. Reactant(s)
3. Product(s)
4. Word equation