

Name: \_\_\_\_\_ Teacher: \_\_\_\_\_ Pd. \_\_\_\_ Date: \_\_\_\_\_

## **STAAR Science Tutorial 14** **TEK 8.5E: Chemical Reactions**

***TEK 8.5E: Investigate how evidence of chemical reactions indicates that new substances with different properties are formed.***

### **Evidence of Chemical Reactions**

- In a chemical reaction, the only absolute evidence of the chemical change is the creation of a new substance.
- There are a number of other possible signs of a chemical reaction, including:
  - change of temperature;
  - change in color;
  - release of a gas;
  - formation of a precipitate (insoluble powder) in a solution;
  - creation of light; or
  - change in taste or smell.
- In each of the following chemical reactions, the evidence of the reaction is listed:
  - Baking Soda / Vinegar: creation of gas, decrease in temperature.
  - Acid / Metal: creation of gas, increase in temperature.
  - Burning Wood: creation of light, increase in temperature, creation of gas.
  - Spoiling Food: change in taste and smell, creation of gas, change in color.
  - Cooking Food: change in taste and smell, change in color.
  - Firefly Light: creation of light, change in color.
  - Rusting Iron or Tarnishing Metal: change in color.

### **Practice Problems**

In each of the following examples, state whether the change is physical or chemical:

1. Chopping wood: \_\_\_\_\_
2. Burning paper: \_\_\_\_\_
3. Boiling water: \_\_\_\_\_
4. Tarnishing metal: \_\_\_\_\_
5. Spoiling milk: \_\_\_\_\_
6. Cooking food: \_\_\_\_\_
7. Tearing paper: \_\_\_\_\_
8. Digesting food: \_\_\_\_\_
9. Melting ice: \_\_\_\_\_