

## Multiple Choice: Core Concepts

1. What is the primary indicator that a chemical reaction has occurred?
  - A) The substance gets wet.
  - B) New products are formed from reactants.
  - C) The mass of the container changes.
2. In Reaction 1, what two substances are the reactants?



magnesium + hydrochloric acid  $\longrightarrow$  magnesium chloride + hydrogen

- A) Magnesium and Hydrogen
  - B) Magnesium and Hydrochloric acid
  - C) Magnesium chloride and Water
3. Which gas is responsible for turning limewater cloudy?
    - A) Hydrogen
    - B) Oxygen
    - C) Carbon dioxide
  4. What does a "precipitate" refer to in chemistry?
    - A) A gas given off during a reaction.
    - B) A solid that forms when two liquids are mixed.
    - C) The liquid left over after heating.
  5. When a glowing splint relights, which gas is present?
    - A) Carbon dioxide
    - B) Nitrogen
    - C) Oxygen

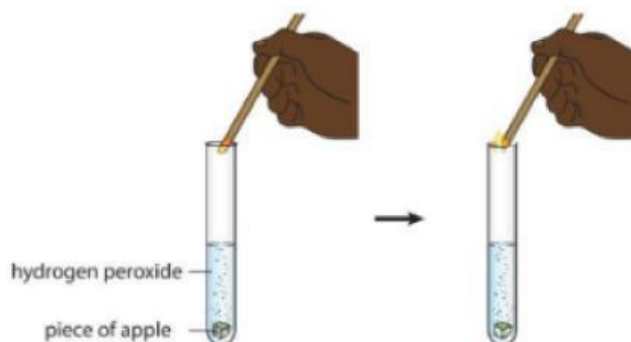
## Fill in the Blanks

disappears - reactants - heat - neutral - products - squeaky pop

- In a chemical reaction, the starting materials are called \_\_\_\_\_ and the new substances made are called \_\_\_\_\_.
  - When magnesium reacts with hydrochloric acid, the magnesium ribbon \_\_\_\_\_.
  - A reaction between an acid and an alkali is called a \_\_\_\_\_ reaction.
  - To test for hydrogen gas, you would expect to hear a "\_\_\_\_\_" sound when a lit splint is applied.
  - If a test tube feels hot during a reaction, it is evidence that \_\_\_\_\_ is being produced.
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## True or False

- Melting chocolate is a chemical reaction.
- A change in pH is a clue that a chemical reaction may have happened.
- In Reaction 3, the apple acts as a catalyst to release oxygen from hydrogen peroxide.



- When copper oxide reacts with sulfuric acid, the solution turns from blue to black.
  - A precipitate only forms when a gas is bubbled through a liquid.
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## Matching: Tests and Results

Match the gas/reaction to its specific test:

1. Precipitate	A. Limewater turns cloudy
2. Oxygen	B. "Squeaky pop" with a lit splint
3. Carbon Dioxide	C. Relights a glowing splint
4. Neutralization	D. Universal indicator changes color
5. Hydrogen	E. A clear liquid becomes cloudy/solid appears