🔬 Chemical Reactions: Reactants & Products Quiz

1. What is a chemical reaction?

A) A type of sandwich

B) When substances mix without changing

C) When one substance turns into another

D) When water evaporates

2. In a chemical reaction, the substances you start with are called:

A) Products

B) Molecules

C) Reactants

D) Atoms

3. The substances you end up with after a chemical reaction are called:

A) Reactants

B) Products

C) Ingredients

D) Elements

4. Which of these is an example of a chemical reaction?

A) Ice melting

B) Water boiling

C) Wood burning

D) Sugar dissolving in tea

5. If vinegar reacts with baking soda to make bubbles, what are vinegar and baking soda?

A) Products

B) Atoms

C) Reactants

D) Gases

6. What do bubbles in a chemical reaction often mean?

A) It's not working

B) Heat is leaving

C) A gas is being made

D) Water is boiling

7. In the reaction: hydrogen + oxygen → water, which is the product?

A) Hydrogen

B) Oxygen

C) Water

D) Air

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8. True or False: In every chemical reaction, the number of atoms stays the same—they're just rearranged.

A) True

B) False

9. Rust forming on iron is an example of:

A) Physical change

B) Chemical reaction

C) Freezing

D) Evaporation

10. Which of these signs shows that a chemical reaction has happened?

A) Change in color

B) Temperature change

C) Gas bubbles forming

D) All of the above

🧪 **Reactants and Products: What's What?**

1. In the reaction below, what are the *reactants*?

Magnesium + Oxygen → Magnesium Oxide

A) Magnesium Oxide

B) Magnesium and Oxygen

C) Oxygen only

D) Magnesium only

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2. In the reaction:

Hydrogen + Oxygen → Water

What is the *product*?

A) Hydrogen

B) Water

C) Oxygen

D) Hydrogen and Oxygen

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3. What are the *products* in this reaction?

Iron + Oxygen → Iron Oxide (rust)

A) Iron and Oxygen

B) Oxygen only

C) Iron Oxide

D) Just Iron

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4. In this reaction, what are the *reactants*?

Vinegar + Baking Soda → Carbon Dioxide + Water + Salt

A) Water and Salt

B) Vinegar and Baking Soda

C) Carbon Dioxide and Water

D) Just Baking Soda

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5. In this reaction, identify the *products*:

Carbon + Oxygen → Carbon Dioxide

A) Carbon and Oxygen

B) Oxygen only

C) Carbon only

D) Carbon Dioxide

🧪 Reactants and Products – Using Chemical Equations

1. In the reaction below, what are the *reactants*?

$Mg + O_2 \rightarrow MgO$

A) MgO

B) Mg and O_2

C) O_2 only

D) Mg only

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2. In the reaction:

$2H_2 + O_2 \rightarrow 2H_2O$

What is the *product*?

A) H_2

B) H_2O

C) O_2

D) H_2 and O_2

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3. What are the *products* in this reaction?

$4Fe + 3O_2 \rightarrow 2Fe_2O_3$

A) Fe and O_2

B) O_2 only

C) Fe_2O_3

D) Just Fe

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4. In this reaction, what are the *reactants*?

$CH_3COOH + NaHCO_3 \rightarrow CO_2 + H_2O + NaCH_3COO$

A) CO_2 and H_2O

B) CH_3COOH and $NaHCO_3$

C) $NaCH_3COO$ only

D) H_2O and CH_3COOH

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5. In this reaction, identify the *product*:

$C + O_2 \rightarrow CO_2$

A) C and O_2

B) O_2 only

C) C only

D) CO_2

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