

**Science Grade 5**  
**Chapter 6: Physical and Chemical Changes**  
**Lesson 2: compounds and chemical changes**

Please answer the following the following questions

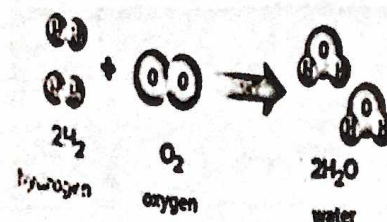
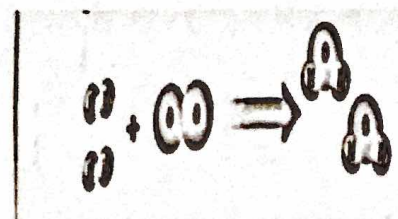
- Which process release carbon dioxide?
  - ☐ Ice melting
  - ☐ Salt being stirred in water
  - ☒ Wood burning
  - ☐ Rain falling
- \_\_\_\_\_ is formed by combination of two or more elements
  - ☐ Reactants
  - ☒ Compound
  - ☐ Metals
  - ☐ Atoms
- \_\_\_\_\_ is compound formed when iron combines with oxygen in the air
  - ☐ Carbon dioxide
  - ☐ Water
  - ☒ Rust
  - ☐ Table salt
- Which compound could be tarnish on a metal?
  - ☐  $\text{CO}_2$
  - ☐  $\text{C}_6\text{H}_{12}\text{O}_6$
  - ☐  $\text{HCO}_3$
  - ☒  $\text{AL}_2\text{O}_3$
- The chemicals on the left side of a chemical equation \_\_\_\_\_
  - ☐ Metals
  - ☒ Reactants
  - ☐ Products
  - ☐ Compounds
- The chemicals on the right side of the chemical equation \_\_\_\_\_
  - ☐ Metals
  - ☐ Reactants
  - ☒ Products
  - ☐ Compounds

What is the substance produced by a chemical reaction called?

- ☐ Metals
- ☐ Reactants
- ☒ Products
- ☐ Compounds

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- What is a substance that is used up during a chemical reaction called?
  - ☐ Metals
  - ☒ Reactants
  - ☐ Products
  - ☐ Compounds
  
- Vinegar is added to baking soda and bubbles of carbon dioxide rapidly form. A cloudy liquid is left behind. What are products in this chemical reaction
  - ☐ Vinegar and the cloudy liquid
  - ☐ Vinegar and baking soda
  - ☐ Carbon dioxide and baking soda
  - ☒ Carbon dioxide and the cloudy liquid
  
- Which are the reactants in this reaction?  $6\text{CO}_2 + 6\text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$ 
  - ☐  $\text{C}_6\text{H}_{12}\text{O}_6$
  - ☒  $\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$
  - ☐  $6\text{CO}_2$
  - ☐  $6\text{CO}_2 + 6\text{H}_2\text{O}$
  
- What happens to a matter during a chemical; change?
  - ☒ Atoms are rearranged to form new substances
  - ☐ Some atoms melt or evaporate
  - ☐ Some atoms disappear
  - ☐ New atoms are formed
  
- Study the diagram below. According to the law of conservation of mass, both sides of the arrow have:
  - ☐ The same arrangement of atoms
  - ☒ The same total number of each type of atom
  - ☐ Elements in the same state of matter
  - ☐ An equal number of reactants and products





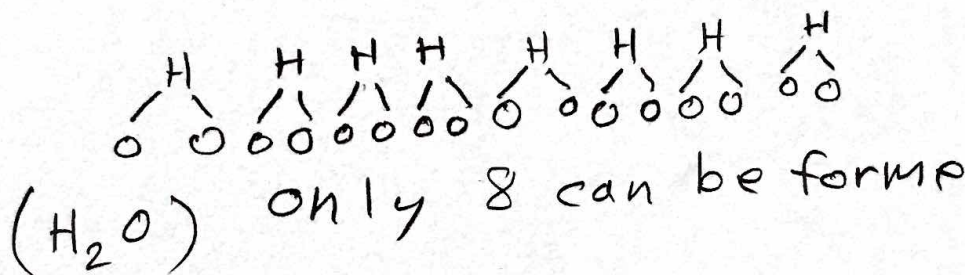
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• **What is the Law of Conservation of Mass?**

- ☒ The total mass of reactants equal the total mass of the products in chemical reaction
- ☐ The total mass of reactants greater than the total mass of the products in chemical reaction
- ☐ The total mass of reactants lower than the total mass of the products in chemical reaction
- ☐ The total mass of reactants different than the total mass of the products in chemical reaction

• **If 32 atoms of hydrogen react completely with 16 atoms of oxygen, how many molecules of water will be made?**

- ☐ 16 water molecules
- ☐ 32 water molecules
- ☒ 8 water molecules
- ☐ 2 water molecules



• **Name the product in the following chemical equation.:  $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$**

- ☐ magnesium
- ☐ oxygen
- ☐ reactant
- ☒ 2MgO

• **Name the product in the following chemical equation:  $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$**

- ☐ 2H<sub>2</sub>
- ☐ O<sub>2</sub>
- ☐ reactant
- ☒ 2H<sub>2</sub>O

• **Which are the reactants in this reaction?  $\text{NaHCO}_3 + \text{HC}_2\text{H}_3\text{O}_2 \rightarrow \text{H}_2\text{O} + \text{CO}_2 + \text{NaC}_2\text{H}_3\text{O}_2$**

- ☒ NaHCO<sub>3</sub> + HC<sub>2</sub>H<sub>3</sub>O<sub>2</sub>
- ☐ Water
- ☐ Carbon dioxide
- ☐ H<sub>2</sub>O + CO<sub>2</sub> + NaC<sub>2</sub>H<sub>3</sub>O<sub>2</sub>

• **How do atoms combine to form molecules and compounds?**

• By exchanging or sharing electrons. (Bonding)

• **How are compounds and chemical reactions related?**

• Compounds are formed the the chemical reactions of elements.