

Name

## Exploring Metals and Non-metals

Total questions: 15

Worksheet time: 8mins

Instructor name: Dr. Ramanathan Saitechinfo

Class

Date

- What are three common properties of metals?
  - Brittle and easily breakable
  - Non-malleable and non-ductile
  - Poor conductors of heat and electricity
  - Good conductors of heat and electricity, malleable, and ductile.
- How do non-metals generally differ from metals in terms of conductivity?
  - Non-metals conduct electricity better than metals.
  - Non-metals are generally poor conductors of electricity, while metals are good conductors.
  - Metals are generally poor conductors compared to non-metals.
  - Non-metals are excellent conductors of electricity.
- What is the reactivity series of metals?
  - Lithium, Barium, Strontium, Calcium, Magnesium
  - Bismuth, Mercury, Lead, Tin, Copper
  - Iron, Nickel, Cobalt, Silver, Gold
  - Potassium, Sodium, Calcium, Magnesium, Aluminum, Zinc, Iron, Tin, Lead, Copper, Silver, Gold
- Name a metal that is less reactive than hydrogen.
  - Copper
  - Sodium
  - Potassium
  - Calcium
- What is one common use of aluminum?
  - Building aircraft wings
  - Creating electrical wiring
  - Manufacturing car tires
  - Manufacturing beverage cans

6. How do non-metals typically exist at room temperature?
- a) Non-metals can only exist as liquids at room temperature.
  - b) Non-metals can exist as gases, liquids, or solids at room temperature.
  - c) Non-metals only exist as solids at room temperature.
  - d) All non-metals are gases at room temperature.
7. What is the primary characteristic of metallic bonding?
- a) The presence of ionic bonds.
  - b) The presence of fixed electrons in a lattice.
  - c) The presence of covalent bonds between atoms.
  - d) The presence of a sea of delocalized electrons.
8. Which non-metal is essential for respiration in humans?
- a) Nitrogen
  - b) Oxygen
  - c) Hydrogen
  - d) Carbon
9. What is a common use of copper in everyday life?
- a) Cooking utensils
  - b) Jewelry making
  - c) Electrical wiring
  - d) Plumbing pipes
10. How does the hardness of metals compare to that of non-metals?
- a) Non-metals are harder than metals.
  - b) Metals and non-metals have the same hardness.
  - c) Metals are generally harder than non-metals.
  - d) All metals are softer than non-metals.
11. What is the role of sulfur in industry?
- a) Sulfur is mainly utilized for creating renewable energy sources.
  - b) Sulfur is essential in the production of sulfuric acid, fertilizers, and various chemicals in industry.
  - c) Sulfur is primarily used in the production of steel.
  - d) Sulfur is a key ingredient in the manufacturing of plastics.

12. Which metal is known for its corrosion resistance?
- a) Stainless steel
  - b) Aluminum
  - c) Lead
  - d) Copper
13. What type of bond is formed between two non-metals?
- a) Hydrogen bond
  - b) Metallic bond
  - c) Covalent bond
  - d) Ionic bond
14. Name a property that makes metals suitable for electrical wiring.
- a) Low melting point
  - b) High thermal resistance
  - c) High electrical conductivity
  - d) Brittle structure
15. What is one use of chlorine in water treatment?
- a) Chlorine as a nutrient for aquatic plants
  - b) Using chlorine to increase water temperature
  - c) Disinfection of water to kill bacteria and pathogens.
  - d) Adding chlorine to enhance water color

## Answer Keys

1. d) Good conductors of heat and electricity, malleable, and ductile.
2. b) Non-metals are generally poor conductors of electricity, while metals are good conductors.
3. d) Potassium, Sodium, Calcium, Magnesium, Aluminum, Zinc, Iron, Tin, Lead, Copper, Silver, Gold
4. a) Copper
5. d) Manufacturing beverage cans
6. b) Non-metals can exist as gases, liquids, or solids at room temperature.
7. d) The presence of a sea of delocalized electrons.
8. b) Oxygen
9. c) Electrical wiring
10. c) Metals are generally harder than non-metals.
11. b) Sulfur is essential in the production of sulfuric acid, fertilizers, and various chemicals in industry.
12. a) Stainless steel
13. c) Covalent bond
14. c) High electrical conductivity
15. c) Disinfection of water to kill bacteria and pathogens.

