

Grade 8 Materials: Metals and Non-Metals Worksheets

A. Tick (✓) the correct option:

1. Which of the following can be beaten into thin sheets?

- (a) Zinc
- (b) Phosphorus
- (c) Sulphur
- (d) Oxygen

2. Which of the following statements is correct?

- (a) All metals are ductile.
- (b) All non-metals are ductile.
- (c) Generally, metals are ductile.
- (d) Some non-metals are ductile.

3. Metals can be drawn into thin wires because:

- (a) they are sonorous
- (b) they are malleable
- (c) they are ductile
- (d) they are dense

4. The best electrical conductor is:

- (a) gold
- (b) silver
- (c) copper
- (d) aluminium

5. The non-metal which has very high melting point is:

- (a) sulphur
- (b) graphite
- (c) phosphorus
- (d) iodine

B. Fill in the blanks:

1. Phosphorus is a very non-metal.
2. Metals are conductors of heat and
3. Iron is reactive than copper.
4. Metals react with acids to produce gas.

C. State True or False:

1. Generally, non-metals react with acids.
2. Sodium is a very reactive metal.
3. Copper displaces zinc from zinc sulphate solution.
4. Coal can be drawn into wires.
5. Copper foils are used to wrap food items.

D. Match the following:

'A'	'B'
1. Gold	a. Thermometers
2. Iron	b. Electric wire
3. Aluminium	c. Wrapping food
4. Carbon	d. Jewellery
5. Copper	e. Machinery
6. Mercury	f. Fuel

E. Answer the following questions in short:

1. Give reasons for the following:
 - (a) Aluminium foils are used to wrap food items.
 - (b) Immersion rods for heating liquids are made up of metallic substances.
 - (c) Copper cannot displace zinc from its salt solution.
 - (d) Sodium and potassium are stored in kerosene.
2. Can you store lemon pickle in an aluminium utensil? Explain.
3. What happens when:
 - (a) Dilute sulphuric acid is poured on a copper plate?
 - (b) Iron nails are placed in copper sulphate solution?
 Write word equations of the reactions involved.
4. Saloni took a piece of burning charcoal and collected the gas evolved in a test tube.
 - (a) How will she find the nature of the gas?
 - (b) Write down word equations of all the reactions taking place in this, process.
5. One day Reeta went to a jeweller's shop with her mother. Her mother gave an old gold jewellery to the goldsmith to polish. Next day when they brought the jewellery back, they found that there was a slight loss in its weight. Can you suggest a reason for the loss in weight?
6. Can a wire be drawn out of wood? Why not?
7. A doctor prescribed a tablet to a patient suffering from iron deficiency. The tablet does not look like iron. Explain.
8. Silver ornaments get blackened when exposed to air for a long time. Why?

F. Discuss with your parents/neighbours/goldsmiths why gold is preferred for making jewellery.

G. Some properties are listed in the following table. Distinguish between metals and non-metals on the basis of these properties:

S. No.	Properties	Metals	Non-metals
1.	Appearance		
2.	Hardness		
3.	Malleability		
4.	Ductility		
5.	Heat Conduction		
6.	Conduction of Electricity		

H. Some materials have been given in the table given below. Note down their lustre and hardness in the given space:

Object/Material	Appearance (Shiny/Dull)	Hardness (Very hard/ Not very hard)
Iron		
Coal		
Sulphur		
Aluminium		
Copper		

I. Recall the name of some of the laboratory acids and bases you have read in class VII. Note down their names in the table given below. Identify the metal or non-metal present in them which forms oxides with oxygen:

S.No.	Name of the Base	Metal	Name of the Acid	Non-metal
1.	Calcium hydroxide	Calcium	Sulphuric acid	Sulphur
2.				
3.				
4.				
5.				