

# VIDYA BHAWAN BALIKA VIDYAPEETH

## STUDY MATERIAL SCIENCE

### CLASS-VIII

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#### ▶ Metals & Non Metals

**Reaction with Bases:** Metals react with bases to produce hydrogen gas.

**Displacement Reaction:** More reactive metals displace less reactive metals from their metal compounds in aqueous solutions.

Uses of Metals and Non-metals

- Metals are used in making machinery automobiles, aeroplanes. trains, satellites, industrial gadgets, cooking utensils, water boilers etc.
- Non-metals are also used in day-to-day life. Some examples are:
  - ✓ oxygen is essential for life.
  - ✓ nitrogen, phosphorus and potassium are used as fertilizers.
  - ✓ chlorine is used as a water purifier.

**Ductility:** The property of metals by which they can be drawn into wires is called ductility

**Elements:** Substances whose molecules contain only one type of atoms are known as elements.

**Hardness:** Metals are hard, on the other hand, non-metals are generally brittle.

**Malleability:** The property of metals by which they can be beaten into thin sheets is called malleability.

**Metals:** The materials which are generally hard, lustrous, malleable, ductile, sonorous and good conductors of heat and electricity are called metals

**Metalloids:** Elements which possess characters of both metals and non-metals are called metalloids.

**Non-metals:** Materials which are soft, dull in appearance, brittle, not sonorous and poor conductors of heat and electricity are called non-metals.

**Sonorous:** Metals are called sonorous because they produce a specific ringing sound.

**Atom:** Atom is the smallest particle of matter which cannot be divided further by any physical means. Atoms are the basic units from which molecules and ions are formed.

**Conductor:** Substances which allow heat/electricity to pass through them are called conductors of heat/electricity

**Displacement reaction:** More reactive metals displace less reactive metals from their compounds in aqueous solutions.