

MAGNETISM

Magnets

Natural : found in nature (ex.Lodestone) – composed of oxides of iron (Fe_3O_4)-Attracts iron
 Magnetism – property of attracting iron
 Magnetic force- the force that a magnet exerts on iron
 Artificial : magnetized piece of iron or magnetic materials.

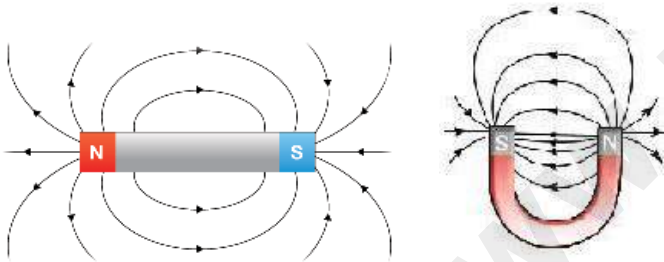
Magnetic Substance	Non-Magnetic Substance
are attracted by magnets	are not attracted by magnets
ex: iron, cobalt, nickel	ex: aluminium, copper, wood, plastic

Magnetic Field :

The space around the magnet where its influence can be experienced is known as magnetic field

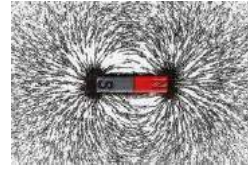
Magnetic Field Lines :

The space around the magnet in which the compass needle rests in a direction other than the geographic north-south direction.



Properties of Magnets

1. Attractive property

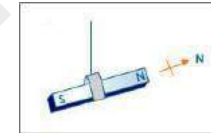


Poles of magnet – North and South – maximum attraction.
 Poles are located slightly inside from the edges.

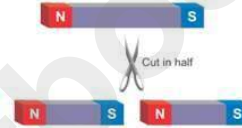


2. Directive property

Freely suspended magnet rests in north-south direction of earth.



3. Poles exist in pairs (No Monopoles exist)



North pole and south pole cannot exist separately.

4. Like poles repel and Unlike poles attract each other



Evidences of Earth's Magnetic field :

Earth also behaves like a magnet – its north pole is closer to geographic south pole and its south pole is closer to the geographic north pole.

- Freely suspended magnetic needle always points in geographic north-south direction
- Iron rod buried inside earth along N-S direction becomes a magnet

