Fun with Magnets

- **Magnetite** is a rock that has the property to attract objects made of iron.
- The substance that can attract iron, cobalt, or nickel is known as a **magnet**.
- Magnet was discovered by a shepherd named **Magnes** around 2000 B.C. who lived in **Magnesia**, Greece.
- With the passage of time, people learned to make magnets from iron pieces. These magnets are known as **artificial magnets**.

- Materials that get attracted towards the magnets are the magnetic materials.
- Materials that do not get attracted towards the magnets are the non-magnetic materials.
- Pin-holders, screwdrivers, refrigerator stickers, junkyard cranes, etc. consist of magnets.
- There are two poles of a magnet – North Pole (N) and South Pole (S).
- A large number of iron filings stick at the two poles of a magnet in comparison to the rest of the magnet body.

- There are two poles of a magnet – **North Pole** (N) and **South Pole** (S).
- A large number of iron filings stick at the two poles of a magnet in comparison to the rest of the magnet body.
- A freely suspended bar magnet always aligns along **North-South direction**.
- The direction at a place can be identified with the help of a bar magnet or a **magnetic compass**.
- A magnetic compass consists of a **magnetic needle** that always comes to rest in the North-South direction.
- In older days, sailors found direction by suspending bar magnets.

There are several methods of making magnets, the simplest one is **touch-stroke method**.

- An iron bar becomes a bar magnet when one of the poles of a bar magnet is rubbed on it several times. This is known as **touch-stroke method**.
- Remember that the pole of the magnet and the direction of its movement should not change.
- You can convert iron nail, a needle or a blade into magnet by this method.
- A freely suspended bar magnet **always aligns** along North-South direction.
- **Induced Magnetism:** The temporarily acquired magnetism by a magnetic material such as soft iron or steel when placed near or in contact with a permanent magnet is known as induced magnetism.

- The **direction at a place** can be identified with the help of a bar magnet or a magnetic compass.
- A magnetic compass consists of a **magnetic needle** that always comes to rest in the North-South direction.
- In older days, sailors found direction by suspending bar magnets.

- There are two poles of a magnet – **North Pole** (N) and **South Pole** (S).
- **Like poles** of two magnets always **repel** each other.
- **Unlike poles** of two magnets always **attract** each other.
- A magnetic compass works on this principle because the earth is considered as a huge bar magnet with its North and South poles aligned along the geographical South and North Poles respectively.
- **Repulsion** is considered the sure way for testing magnets.

- A magnet loses its magnetic property when **dropped from a height** and **hammered.**
- Magnets lost there magnetic property on **heating**.
- Magnets can be stored safely as follows

Two bar magnets

Horse-shoe magnet

- Magnets should be kept away from cassettes, CDs, mobile, TVs, plastic cards, etc.
- Metal detectors are used for security purposes at various places. They work on the principal of electromagnetism.