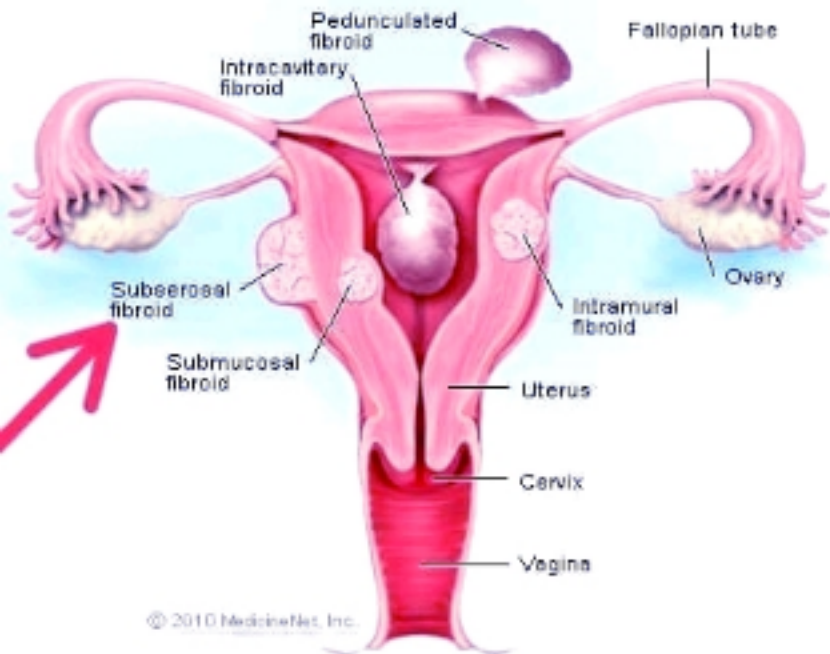


Uterine Fibroids

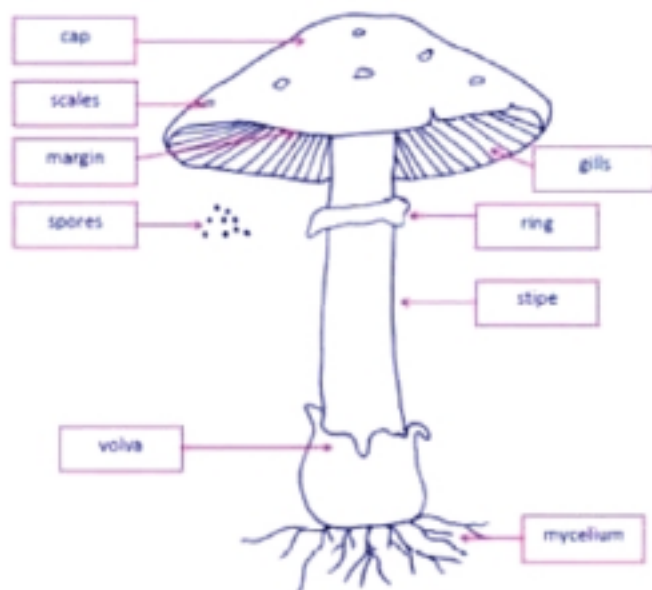


Parts of Fire Extinguisher Diagram



- Yeast
- Moulds
- Bracket fungus

The structure of a mushroom



Functions of each part of a mushroom

Cap. Holds the gills.

Gills. Produces and stores spores.

Stalk/stipe. Holds the cap in position.

Hyphae. Helps in absorbing food from decaying

Yeast.

This is a group of fungi that exist as single cells

Yeast is found on the surface of ripe fruits mainly

Yeast reproduces by budding

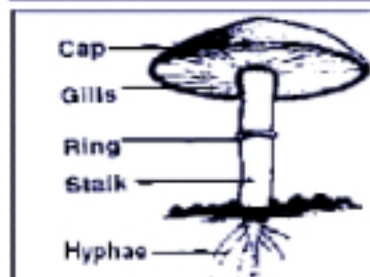
They feed saprophytically

Moulds

- Moulds are thread like fungi that grow

MUSHROOM

The structure of a mushroom



Functions of some parts of a mushroom

Cap

The cap protects the gills

The gills

They produce and store the spores.

The Hyphae

The hyphae absorb nutrients from decaying matter.

How a mushroom reproduce

A mushroom reproduces by means of spores.

Mode of feeding in a mushroom

A mushroom feeds by absorbing nutrients from decay

MOULDS

Devices that use magnets

- Microphones
- Electric bells
- Loud speakers
- Refrigerators
- Generators
- Electric motors
- Debit and credit cards
- Dynamos

Electric bell

An electric bell is used for communication at school. It uses electromagnetism to work.

Structure of an electric bell

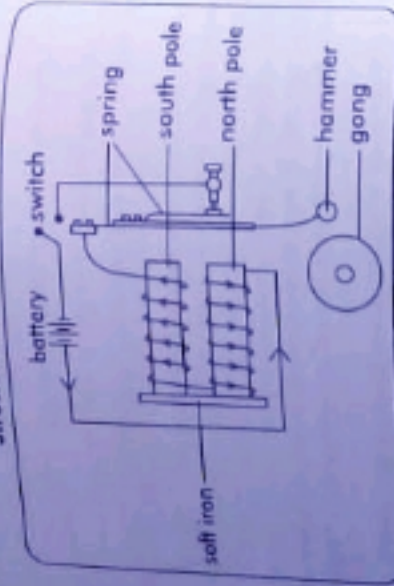


Figure 2.42: Structure of an electric bell.

Parts of electric bell

- **Battery:** The battery produces electricity.
- **Soft iron:** It becomes an electromagnet when the circuit is complete.
- **Switch:** The switch breaks or completes the circuit at one's will.
- **Hammer:** It hits the gong to produce sound.
- **Gong:** It vibrates to produce sound.

How an electric bell functions

When current flows through the soft iron, it becomes an electromagnet. The electromagnet pulls the strip that has a hammer towards the gong. It hits the gong to produce sound. But as the strip moves towards the hammer, a space is created between the strip and the spring. As a result, current flow is cut off and the strip moves back to its position. This occurs continuously thus enabling the electric bell to work.

Electricity and magnetism in the modern world of work

- Electric bells use electricity and magnetism to work.
- Escalators and lifts are used in tall buildings for movement.
- Magnetic compasses are used to show direction.
- Some underground railway lines use electricity to operate.
- Some vehicles like tram cars use electricity to work.
- Refrigerators use electricity and magnetism to work.

Generating electricity using a dynamo

A dynamo is a simple generator which produces electricity by converting mechanical energy in form of kinetic energy into electrical energy. It has a coil of wire which rotates between poles of a permanent magnet.

Diagram showing a dynamo

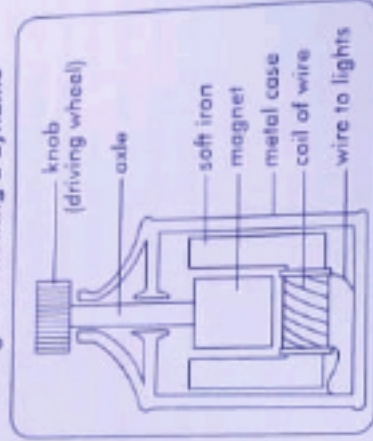


Figure 2.43: A dynamo

Parts of a dynamo

- Knob:** Rotates to turn the coils of wire.
- Magnet:** Produces the magnetic field.
- Coils of wires:** They turn to produce electricity.

Testing exercise 2.5

1. State the meaning of magnetic fields.
2. Write down the communication gadgets that use a magnet.
3. What is magnetization?

4. Name two kinds of magnets made through magnetization.
5. Write down the methods of making magnets.
6. Below is a method of making a magnet. Study it and answer questions that follow.



Figure 2.44

- (a) Name the method of making magnets shown above.
- (b) Identify the poles of the magnet marked X and Y.
- (c) Apart from the method above, mention other methods of magnetization.
7. The iron pins were attracted to the magnet as shown below

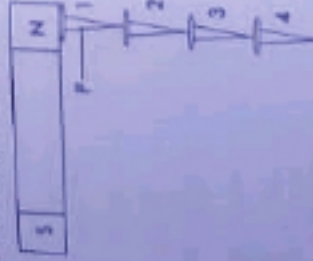
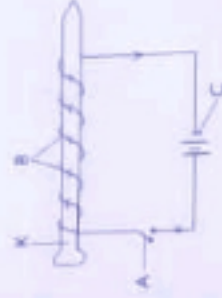


Figure 2.45

- (a) Name the magnet marked P.
- (b) What method of making magnets is shown?
- (c) Which of the pins will fall off, (i) first? (ii) last?
- (d) Give a reason to support your answer in (c) above.
- 8(a) Name the method of making magnets using electricity.
- (b) What name is given to the magnet made by the method above?
- (c) State two ways of increasing the strength of an electromagnet.
9. Study the diagram below and use it to answer the questions that follow.



- (a) Name the parts marked A and B.
- (b) Identify the pole of a magnet marked K.
- (c) What happens to the iron nail when part A is closed?
10. What is demagnetization?
11. Write down the appliances that use magnetism.
12. Name two appliances that use both electricity and magnetism.
13. How are electromagnets useful at school?
14. Name the magnet formed using electricity.
15. State any two ways of making magnets lose magnetism.
16. The diagram below shows an electric bell. Use it to answer questions that follow.

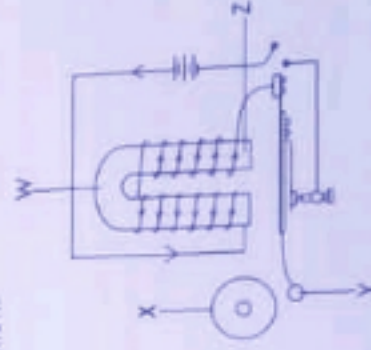


Figure 2.47

- (a) Name part Y.
- (b) State the function of part X.
- (c) What happens to W when the switch is closed?
- (d) Name the pole at Z.
17. State the use of a bell at school.

solenoid and direct current is passed through it to form a magnet. Magnet loses magnetism immediately the current is switched off.

Strength of an electromagnet can be increased by the following.

- Increasing the voltage used.
- Increasing the number of turns in coils of wire.

Uses of electromagnets

- Used by doctors to remove iron materials from patients' bodies.
- Used in generators and dynamos to produce electricity.
- Used to load and offload iron materials on buildings and lorries.
- Used in electric bells.

Stroking method

Stroking method is a method in which a magnet is stroked over magnetic material to make it become a magnet. Stroking method forms permanent magnets. There are two methods of stroking.

- Single touch stroking:** In this method, one magnet is used to stroke a magnetic material. Here, a magnet is passed over magnetic material to make it a magnet. During stroking, the pole of the magnetic material first stroked is the same as the pole of the magnet used. R becomes the North pole and K becomes the South pole. The arrows show the movement of the magnets.

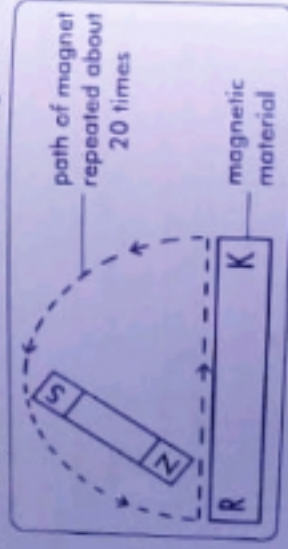


Figure 2.39: Single touch stroking method.

- Double touch stroking:** In this method, two magnets moving in opposite directions are used. Each magnet magnetises half of the magnetic material. L becomes the North pole and M becomes the South pole.

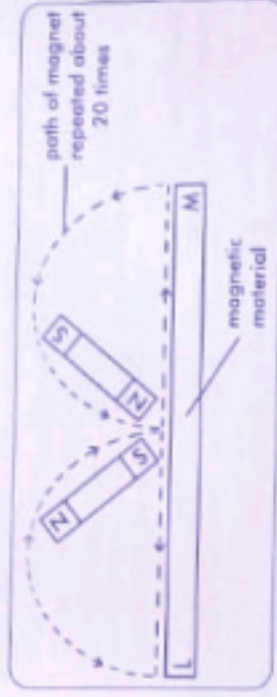


Figure 2.40: Double touch stroking method.

Demagnetisation

Demagnetisation is the way of making magnets lose magnetism.

Ways of making magnets lose magnetism

- Hammering the magnet.
- Heating the magnet.
- Leaving magnets to rust.
- Storing magnets in East to West direction for a long time.
- Keeping two magnets with like poles together for a long time.

Ways of preventing magnets from losing magnetism

- Handle magnets well to prevent dropping on the ground.
- Keeping magnets in the North-South directions.
- Keeping two magnets with opposite poles together.
- Avoid heating/boiling magnets.
- Keeping magnets in iron keepers.

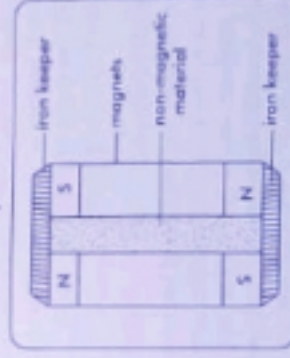


Figure 2.41: Iron keeper.