

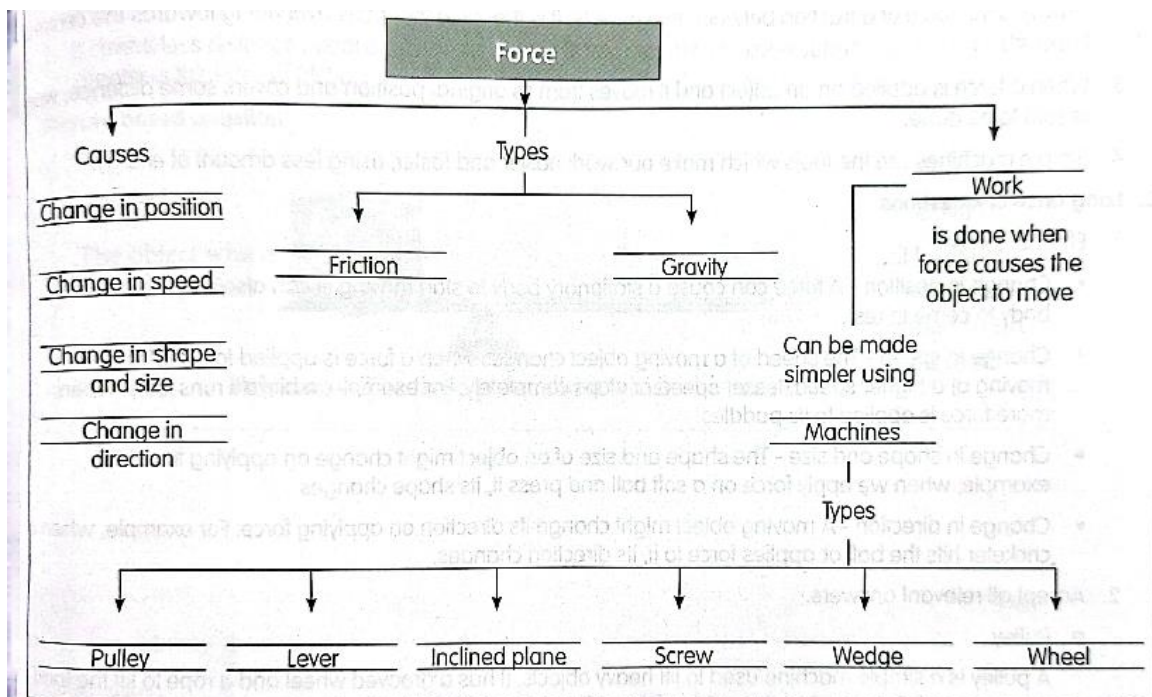
Ch-9

Force and Work

Science Words:

1. Force
2. Load
3. Friction
4. Fulcrum
5. Gravity
6. Effort
7. Pulley
8. Simple Machines
9. Wedge
10. Lever
11. Axle
12. Work

Mind Map:



Short Answer Questions

Q1.What is frictional force?

Ans. Frictional force or friction is the force which opposes motion when two surfaces are in contact.

Q2.What is gravitational force?

Ans. It is the force of attraction between two objects. It is the force that pulls everything towards the centre of Earth.

Q3.What is work?

Ans. When a force is applied on an object and it moves from its original position and covers some distance, work is said to be done.

Q4.What are simple machines?

Ans. Simple machines are the tools which make our work easier and faster using less amount of energy.

Long Answer Question

Q1.Write any four effects of force, giving one example each.

Ans. Effects of force:

Change in position:- A force can cause a stationary body to start moving. It can also cause a moving body to come to rest. E.g.:- kicking a ball at rest

Change in speed :- Force can change the speed of moving object. E.g. :- A bicycle runs faster ,when more force is applied to its paddles.

Change in shape and size:- Force also change the shape of and size of an object. E.g.:- When we apply force on soft ball and press it , its shape changes.

Change in direction:- Force can change the direction of a moving object. E.g.- When a cricketer hits the ball, its direction changes.

Q2.Explain any two simple machines with the help of examples.

Ans.a.Pulley:- A pulley is a simple machines used to lift heavy objects. It has a grooved wheel and a rope from one side of the pulley, the wheel moves and loads lifts up.

b.Lever:- A lever is a basic simple machine which we use in our daily life. Ex:- Scissors, fork, spoon etc. It has a rod resting at a point around which it moves.

Q3.Explain the advantages and disadvantages of friction.

Ans.Advantages:

- a.It help us to walk on a surface without slipping.
- b.It help us to hold any object.
- c.It help us to write.

Disadvantages:

- a.It causes wear and tear of moving objects, like shoes or tyres of vehicles.
- b.It causes objects to slow down.