

St. Andrews Scots Sr. Sec. School

9th Avenue, I.P. Extension, Patparganj, Delhi-110092

Session: 2022-2023

Class: V Subject: Science Topic: Force, Work and Energy Lesson No: 9

- Reading of the chapter
- Explanation (will be done in class)

(Textbook exercise)

Section- A

Class Response

- A. Oral Questions.
 1. Force is needed in our daily life to move any object, to stop any moving object and to change the direction or shape of any object.
 2. Ripe fruits fall on the earth due to gravitational force.
 3. We need energy to do work.
- B. Science Quiz.
 1. Screw and Lever.
 2. Nutcracker and bottle opener.
 3. Clock and Sewing machine.

Worksheet

- A. Multiple Choice Questions.
 1. (a) load
 2. (a) wedge
 3. (a) lever

• **B. Fill in the blanks .**

1. gravity
2. hard
3. first
4. Wedge
5. potential

• **C. Match the following:**

1. (c)
2. (d)
3. (a)
4. (b)

Section- B

• **A.(MCQs) Scientific/ Practical skills.**

1. (c) screw
2. (b) wedge

• **B. Very Short Answer Questions.**

1. Name the force that helps us to walk.

Ans. Frictional force.

2. Name a device that uses solar energy.

Ans Solar cooker.

3. Name two third class- levers.

Ans. Ice tongs and staple machine.

4. Name a machine which works on electrical energy.

Ans. Television and washing machine.

(Notebook Work)

- **New Words**

Any 10 words

- **Defines**

1. **Force** - A push or a pull.

2. **Work** - When applied force changes the position of an object.

3. **Energy**- Ability to do work.

4. **Simple machine** - the device which makes our work easier.

- **Short Answer Questions.**

1. What is magnetism?

Ans. The force applied by a magnet on an object is called magnetic force or magnetism.

2. What is meant by buoyant force ?

Ans. The upward force acting on an object in water is called buoyant force.

3. What is a compound machine?

Ans. The machine that consists of several simple machines for their working is called a complex machine or a compound machine.

4. What is the difference between single fixed pulley and single movable pulley?

Ans.

Single fixed pulley	Single movable pulley
Single fixed pulley has a fixed axle. It is used to change the direction of the load. Eg. A pulley is used to draw water from well.	A single movable pulley has a free axle, i.e. the axle is free to move. It is generally used in combination with a fixed pulley.

- **Long Answer Questions.**

1. When is work said to be done?

Ans. Work is said to be done only when the applied force causes a change in the position of the object in the direction of the applied force.

Example :- pushing of a table, pulling of a toy car

2. Define load, effort and fulcrum and mention their positions in first, second and third- class levers.

Ans. Load-The object on which work is said to be performed is called load.

Effort - The force applied on a lever to lift (or move) the load is called effort.

Fulcrum - The fixed point on which a lever turns is called fulcrum.

In first class lever, fulcrum is in between the load and effort.

In second class lever, load is in between the fulcrum and effort.

In third class lever, the effort is in between fulcrum and load.

- **Give Reason.**

1. Ramesh throws a ball from the roof of his house. What kind of energy does the ball possess? Give the name of force acting on the ball.

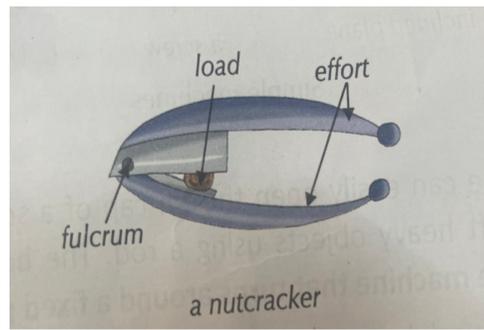
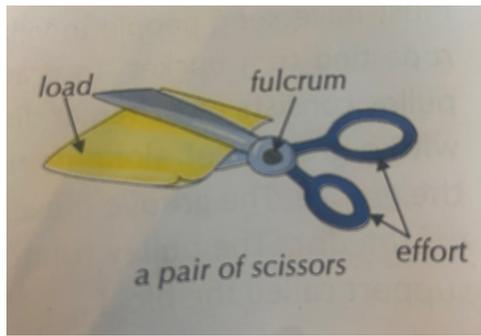
Ans. The ball possesses kinetic energy and potential energy. Gravitational force acts on the ball.

- **Diagrams.**

Draw neat and labelled diagram of :

1. Simple machines

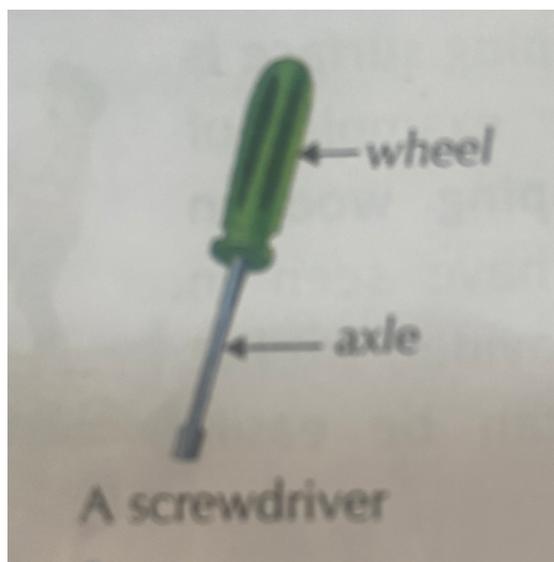
* **Lever**



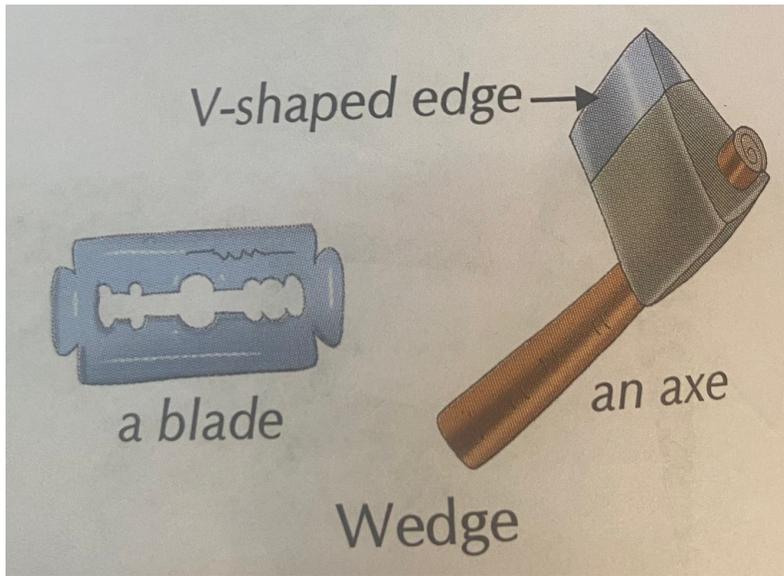
*** Screw**



*** Wheel and Axle**



*** Wedge**



Activity

Make a list of simple and complex machines that you see at home and in school.

Dictation

Any 10 words

