

St. Andrews Scots Senior Secondary School

9th , Avenue, I.P Extension, Patparganj

Class-V

Sub-Science

Session- 2025- 2026

Lesson -7 Force, Energy and Machine

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

(Textbook exercise)

- **A. Tick the correct answer.**

- 1. frictional**
- 2. magnetic**
- 3. sun**
- 4. potential**
- 5. Tweezers**

- **B.Fill in the blanks.**

- 1. gravitational**
- 2. sound**
- 3. heat**
- 4. water**
- 5. solar**

- **C. Name the type of energy present in the following .**

- 1. HEAT**
- 2. KINETIC**
- 3. POTENTIAL ENERGY**

- 4. LIGHT
- 5. SOLAR

- **D Identify the type of lever in the following .**
 - 1 Third class lever
 - 2 First class lever
 - 3 First class lever
 - 4 Second class lever
- Define- Pg no- 81 (Learn from the book)

(Notebook Work

New Words

Any 10 words

Short Question/Answer

1 What is energy?

Ans. Energy is the ability to do work.

2. Define buoyant force.

Ans. The upward push of water on an object is called buoyant force.

3. Name the two non – polluting sources of energy.

Ans. Solar energy and wind energy.

4. What is the law of conservation of energy?

Ans. The law of conservation of energy states that energy can neither be created nor be destroyed. It can only be transformed from one form to another.

5. Why do sportspersons have spikes in their shoes?

Ans. To increase the friction and to reduce the risk of falling.

6. Why are ramps constructed at the entrance of hospitals?

Ans. Ramps are constructed at the entrance of hospitals because rolling friction is less than static friction.

Long Question/Answer

1. What is force? What are its effects

Ans. A push or pull acting on a body is called force.

Force can change:

- the state of an object
- speed of an object
- direction of an object
- shape of object

2. Write two advantages and two disadvantages of friction .

Ans. Two advantages of friction are-

- We are able to walk.
- We can write.

Two disadvantages of friction are-

- Wear and tear of objects.
- Loss of energy in the form of heat.

3. What is simple machine? Name the types of simple machine.

Ans. Machines that have a few parts are called simple machines. Different types of simple machines are:-

- Lever
- Inclined plane
- Screw
- Pulley
- Wheel and axle
- Wedge

4. Write a short note on:

Ans. (a) Water energy – The energy that we get from water is called hydroenergy. It is mainly used to generate electricity in hydroelectric power stations.

(b) Wind energy – Moving air is called wind. It has kinetic energy. It is used to generate electricity.

(c) Solar energy - The energy that we get from the sun is called the solar energy. It is the ultimate source of energy on earth.

5. Differentiate between the following:

(a) Magnetic force and electrostatic force

(b) Gravitational force and mechanical force

Ans.

Page : Date : / /	
a) <u>Magnetic force</u> It is the force of attraction by which it can move certain objects towards themselves.	<u>Electrostatic force</u> It is the force of attraction exerted by one charged body on another charged body or uncharged body.
b) <u>Gravitational force</u> It is the force of attraction applied by the earth on all objects.	<u>Mechanical force</u> It is the force generated by machines to do something.

Give Reasons

1. Why do we slip if our foot falls on banana peel?

Ans. It is slippery so friction is very less .

2. When you iron your clothes which energy is being converted from one form to another?

Ans. Electric energy to heat energy.

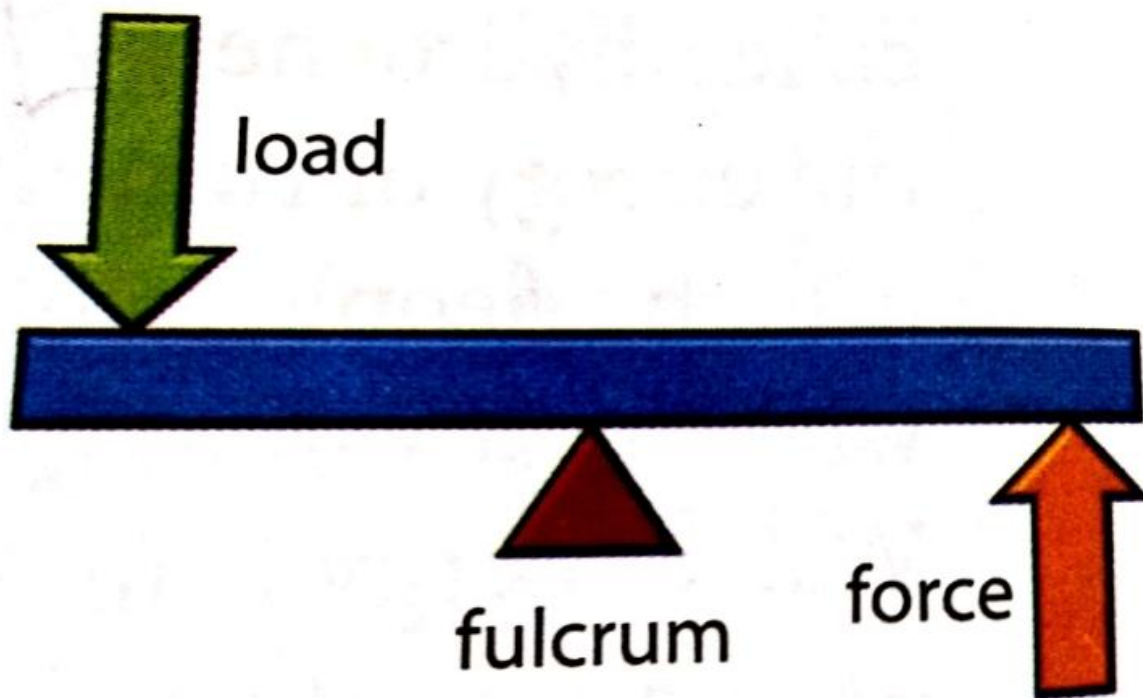
Activity

Collect pictures of different simple machines that we use in our daily life and paste them in your notebook.

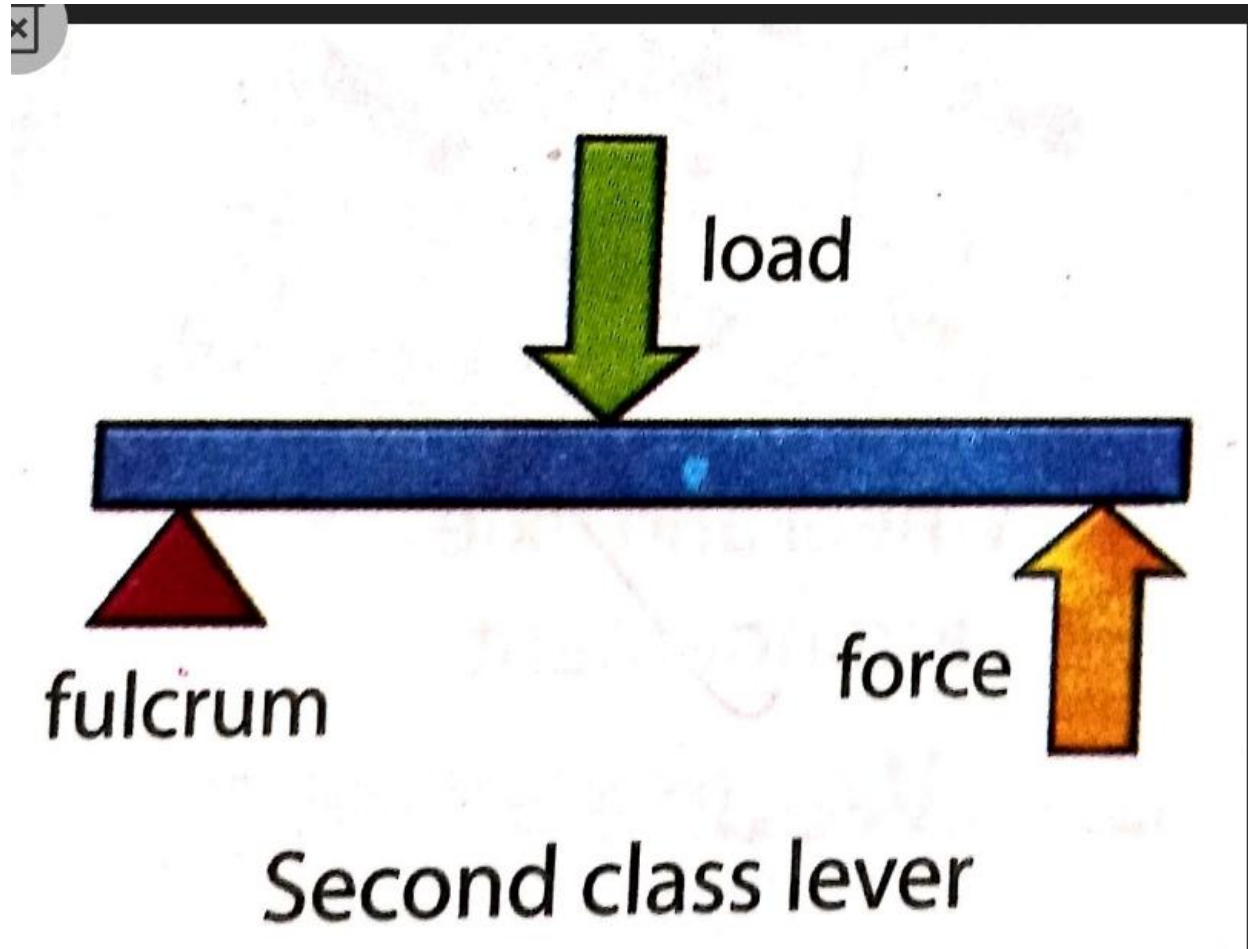
Dictation

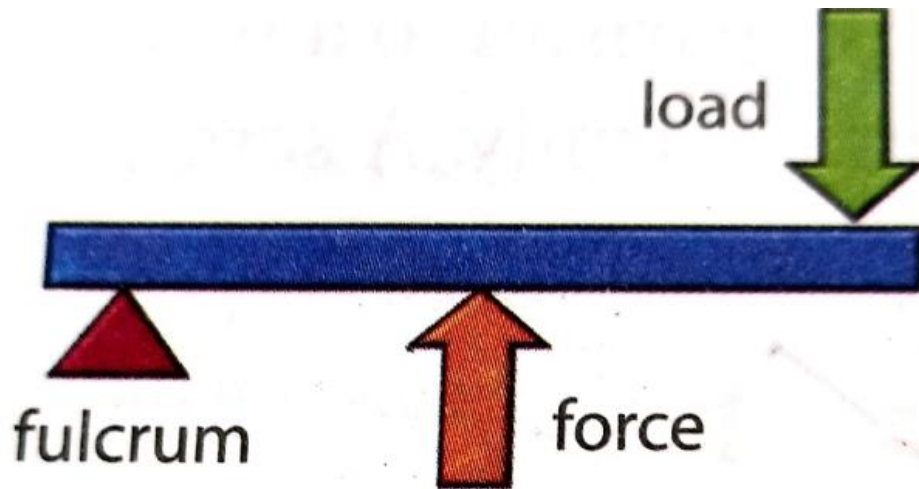
Any 10 words

Diagrams



First class lever





Third class lever



scissors



seesaw

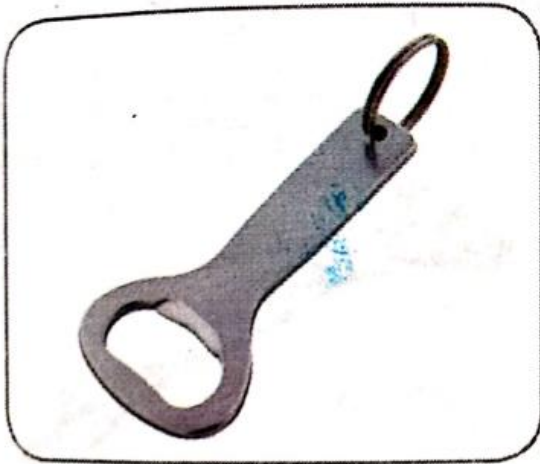


pliers

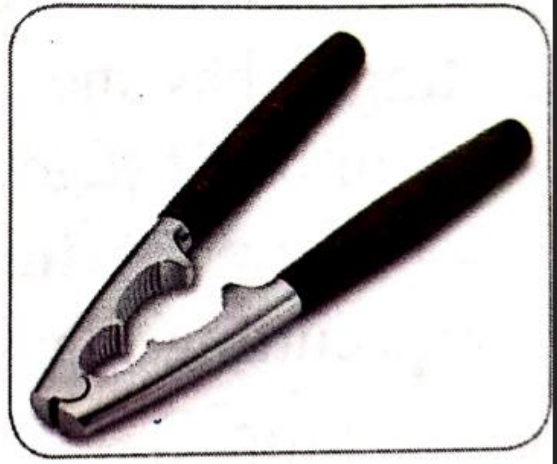


claw hammer

Some examples of first class levers

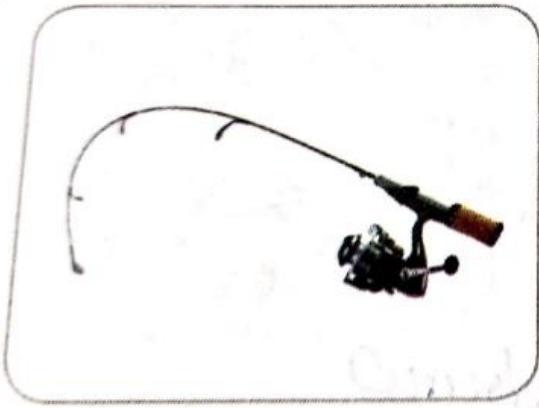


bottle opener

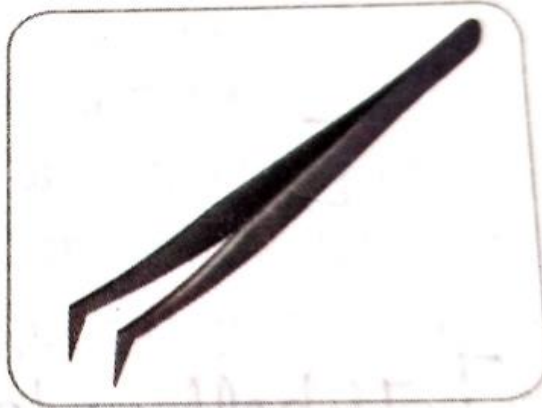


nutcracker

Some examples of second class levers



fishing rod



tweezers

Some examples of third class levers