



LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ▶ concept of force and the changes a force can bring in an object
- ▶ types of force
- ▶ machines and their types
- ▶ lever and its types
- ▶ pulley, inclined plane, wheel and axle, wedge and screw

TEACHING AIDS

A chart showing simple machines, blackboard, chalk, duster and digital content.

TEACHING STRATEGY

- ▶ Start the chapter with Warm Up section by asking some simple questions on force and machines based on previous knowledge of students.
- ▶ Explain the concept of force that it is a pull or push that brings a change in an object, and also discuss the effects of force on an object.
- ▶ Explain different types of forces and their effects (as given in chapter).
- ▶ Discuss how machines make our work easier and explain the two types of machines by showing their pictures (as given in chapter).
- ▶ Explain types of simple machines (as given in chapter).
- ▶ Describe pulley, its types and uses.
- ▶ With suitable examples, explain an inclined plane and its uses.
- ▶ Explain how wheel and axle reduce the workload.
- ▶ Define a wedge, its features and uses.
- ▶ Explain the formation of screw that it is like wrapping of an inclined plane around a rod.
- ▶ Sum up the chapter by going through the points given under the head 'Remember'.
- ▶ Finally, the teacher will help the students do all the exercises.

BOOST UP

- ▶ Explain the type of forces by demonstrating some acts given in the chapter such as stretching of rubber band, rolling of ball, floating of ball in water.

- ▶ Demonstrate Activity 1 given under the head 'lever'.
- ▶ Perform Activity 2 given under the head 'inclined plane'.

EXPECTED LEARNING OUTCOMES

The students are able to learn about

- ▶ the concept of force and its possible effects.
- ▶ types of forces.
- ▶ simple machines and their application in various fields.

EVALUATIVE QUESTIONS

The teachers may ask the following questions to evaluate their students.

1. What possible changes can a force bring in an object?
2. Which force is applied with the help of muscles?
3. Name the force applied by a machine.
4. Which force makes things float in water?
5. How do machines make the work easier?
6. What is a complex machine?
7. What is a lever?
8. What are fulcrum, load and effort of a lever?
9. In which class of lever is load between fulcrum and effort?
10. What is a pulley?
11. What is a wedge?
12. What is a screw?