

LESSON PLAN**SPECIFIC OBJECTIVES**

The students will learn about

- ✧ friction and its causes
- ✧ types of friction; measuring friction; factors affecting friction
- ✧ advantages and disadvantages of friction
- ✧ methods to reduce and increase friction

TEACHING AIDS

Pictures/charts/models/animations on spring balance; ball bearing, roller bearing, worn out tyres, etc.

LESSON PLAN

- ✧ The teacher will start the lesson with ‘Science Vocabulary’ section by telling the meaning/definition of new terms which are used in the chapter.
- ✧ Now, the teacher should define friction and discuss its causes and types.
- ✧ The teacher should explain how to measure friction by demonstrating Activity 1.
- ✧ The teacher should discuss the factors affecting friction by demonstrating the Activities 2 and 3.
- ✧ Now, the teacher should discuss the significance of friction.
- ✧ The teacher should discuss the ways for reducing and increasing friction.
- ✧ Now, students should be asked to solve Check Points 1 and 2.
- ✧ The teacher will help the students to solve the questions given in exercises under the head ‘Let’s Drill Our Skills’ and to complete the flowchart given under the head ‘Let’s Memorise’.

BOOST UP

- ✧ The teacher should encourage students to find out some examples of different kinds of friction.
- ✧ Students should be asked to tell some events when increasing friction become a necessity.

EXPECTED LEARNING OUTCOMES

The students know about

- ✧ friction and its causes.
- ✧ different types of friction and their applications.
- ✧ factors which affect the friction.
- ✧ importance of friction as a necessary evil.
- ✧ ways for increasing and decreasing friction.

EVALUATIVE QUESTIONS

The teacher may ask the following questions for evaluating the understanding of students:

1. Define friction.
2. How can we measure the friction?
3. What is meant by static friction? Write its one example.
4. Mention the factors which affect the friction.
5. How can we increase the friction?
6. What is meant by lubrication?
7. Why do we use ball-bearing in wheels and talcum powder on a carom board?