



6

Light, Sound and Force

LESSON PLAN

SPECIFIC OBJECTIVES

The students learn about

- ✧ light, sources of light, luminous and nonluminous objects
- ✧ shadows, features of shadow
- ✧ sound, sound production in humans, music and noise
- ✧ force and effects of force on an object

TEACHING AIDS

Any light source such as torch/bulb/tube/candle; globe or ball; Pictures/animation of sunrise, sunset and noon (showing shadow of an object); Picture/chart of sound box of man; Animation on sound production in man; Clay, rubber band/string

LESSON PLAN

- ✧ Teacher will start the chapter with 'Warm Up' section by asking simple questions on pushing and pulling.
- ✧ Teacher will explain the need of light and tell that the sun is the only source of energy on the earth.
- ✧ Teacher will explain difference between natural and artificial sources of energy.
- ✧ With the help of teaching aids, teacher will explain difference between luminous and nonluminous objects.
- ✧ To demonstrate the need of light for looking objects around us, teacher can help students to perform Activity 1 given in the chapter.
- ✧ Now, teacher will explain the process of shadow formation by Activity 2, given in chapter under the head 'Shadows'.
For performing Activity, teacher can use torch/candle or any light source and globe/ball or any other object.
- ✧ With the help of teaching aids, teacher will show the shadow formation on sunrise, at noon and on sunset emphasising the difference between their sizes.
- ✧ To evaluate the understanding of chapter taught so far, teacher will ask students to solve 'Checkpoint 1'.
- ✧ Now, before starting on sound, teacher will ask some sound-related simple questions based on previous knowledge of students.
- ✧ Teacher can demonstrate the sound production by vibrating a string or a stretched rubber band.
- ✧ Now, teacher will explain what vibration is and explain when an object vibrates, it produces sound.
- ✧ Now using teaching aids, teacher will show the sound producing organ of man and explain that sound is produced by the vibration in vocal cords.

- ✧ Now, teacher will explain the difference between music and noise and give the brief idea of noise pollution and its harms.
- ✧ Teacher will emphasise on to minimise noise pollution.
- ✧ Now, teacher will discuss on force and explain the changes that a force can bring in an object as described in the chapter.
- ✧ Using clay, teacher will demonstrate how force can change the shape of an object.
- ✧ Now, teacher will ask students to solve 'Checkpoint 2'.
- ✧ The teacher will sum up the chapter by going through the points given under the head 'At One Go'.
- ✧ Finally, the teacher will help students to solve all the exercises given under the head 'Check Your Study'.

BOOST UP

- ✧ Teacher can encourage the students to experiment themselves with different objects for shadow formation.
- ✧ Teacher can ask students to collect pictures of noisy areas and write 5 lines on the harms of noise.
- ✧ Students can check the effects of force themselves by experimenting with other objects.

EXPECTED LEARNING OUTCOMES

The students understand

- ✧ about light, its sources and luminous and nonluminous objects.
- ✧ what a shadow is, its features and how it forms.
- ✧ about sound, how it produces, can differentiate between music and noise
- ✧ what the force is and how it brings different changes in an object.

EVALUATIVE QUESTIONS

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

1. Name a natural and ultimate source of light on the earth.
2. What are man-made sources of light?
3. Name some natural luminous objects.
4. What is a shadow and how does it form?
5. How is sound produced?
6. What is a force?

