

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ✧ light
- ✧ rectilinear propagation of light
- ✧ reflection of light—changing the path of light
- ✧ images formed by plane mirrors and uses of plane mirrors
- ✧ curved or spherical mirrors, i.e., concave and convex mirrors and their uses
- ✧ lenses and images, and uses of lenses
- ✧ colours of light

TEACHING AIDS

Pictures/charts/models/animations on plane mirror, curved mirrors, rear-view mirror, a kaleidoscope, periscope; dispersion of light through prism, rainbow.

LESSON PLAN

- ✧ The teacher should start the chapter with ‘Gear Up’ and questions given in this section.
- ✧ Now, the teacher should define light and rectilinear propagation of light by describing parallel, convergent and divergent beams of light.
- ✧ The teacher should explain that light travels in a straight line by demonstrating Activities 1 and 2.
- ✧ Now, the teacher should discuss the reflection of light.
- ✧ The teacher should describe image formation by plane mirrors by performing Activity 3 and 4.
- ✧ Now, teacher should discuss spherical mirrors, i.e., concave and convex mirrors, image formation by them and their uses.
- ✧ Teacher should explain image formed by spherical mirrors using Activity 5.
- ✧ Now, the teacher should define lenses, i.e., concave and convex lenses, image formed by lenses by Activities 6, 7 and 8 and uses of lenses.
- ✧ Now, the teacher should define colours of light by demonstrating Activities 9 and 10.

- ✧ The teacher should demonstrate students Activity 10 in which seven colours of white light are shown. Teacher should also ask students to study knowledge desk given at page 232.
- ✧ Students should be asked to answer 'Check Points' 1, 2 and 3.
- ✧ At last, the teacher will sum up the lesson by going through the points given under the head 'Wrap Up Now'.
- ✧ The teacher will help the students to solve all the questions given in exercises under the head 'Practice Time' and will also discuss the topics given under the head 'Formative Tasks'.

BOOST UP

- ✧ The students should be encouraged to explore more uses of plane and spherical mirrors and lenses in everyday life and scientific studies.
- ✧ Students should also be asked to draw incident ray, reflected ray, normal, angle of reflection and angle of incidence on the board.

EXPECTED LEARNING OUTCOMES

The students know about

- ✧ concept of light and rectilinear propagation of light.
- ✧ reflection of light
- ✧ plane and spherical mirrors, nature of their images and uses.
- ✧ lenses, the nature of images formed by them and their uses.
- ✧ different colours of light.

EVALUATIVE QUESTIONS

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

1. How are we able to see the objects?
2. Mention the laws of reflection of light.
3. Write the nature of image formed by a plane mirror.
4. Write two uses of plane mirrors.
5. Define radius of curvature.
6. Establish the relation between f and R .
7. What is the difference between dispersion and spectrum?