

LESSON PLAN

SPECIFIC OBJECTIVES

- The students will learn about
- ✧ celestial objects
 - ✧ the moon, its surface and phases
 - ✧ stars
 - ✧ constellations
 - ✧ the solar system
 - ✧ artificial satellites

TEACHING AIDS

Pictures/charts/models/animations on phases and surface of the moon; polestar; Ursa Major, different position of Ursa Major around pole star, Ursa Minor, Orion, Cassiopea; solar system and its planets; asteroid belt; meteors; comets, different positions of comet around the sun, some artificial satellites.

LESSON PLAN

- ✧ Teacher will start the chapter by going through the points given in 'Know these points before you start' section.
- ✧ Teacher will discuss the features of celestial objects.
- ✧ Teacher will discuss the features of surface of moon and explain phases of the moon.
- ✧ Now, teacher will ask students to solve Check Point 1.
- ✧ Teacher will define a star and explain features of the sun.
- ✧ Teacher will define a constellation and discuss some constellations and pole star.
- ✧ Now, teacher will ask students to solve Check Point 2.
- ✧ Teacher will discuss solar system and explain the features of its planets, asteroids, meteors, meteorites and comets.
- ✧ Teacher will discuss artificial satellites and their applications.
- ✧ Now, teacher will ask students to solve Check Point 3.

- ✧ Teacher will make students revise the new terms given under the head 'Know These Terms'.
- ✧ Finally, teacher will help students to solve the questions given in exercises under the head 'Practice Time' and 'Think Zone'.

BOOST UP

- ✧ Teacher should demonstrate and explain activities given in the chapter.
- ✧ Teacher should discuss the information given under the head 'Something More'.
- ✧ Teacher should discuss the conversation of Annu and Mannu given in between the topics.
- ✧ Teacher should ask students to explore differences between natural and artificial satellites.
- ✧ Teacher should ask students to explore some more names of constellations, other than those given in the book.

EXPECTED LEARNING OUTCOMES

The students know about

- ✧ celestial or heavenly bodies.
- ✧ features of the moon—its surface and different phases.
- ✧ stars and the sun.
- ✧ constellations and pole star.
- ✧ solar system and its planets.
- ✧ dwarf planets, asteroids, meteors, meteorites and comets.
- ✧ ozone layer and its importance.
- ✧ artificial satellites and their applications, India's first artificial satellite.

EVALUATIVE QUESTIONS

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

1. Define heavenly objects.
2. What is the difference between waxing and waning moon?
3. What is meant by lunar month?
4. How many planets does the solar system have?
5. Which planet is also called evening star?
6. Write the differences between meteors and meteorites.
7. Explain artificial satellites.
8. What are shooting stars?