

## LESSON PLAN

### SPECIFIC OBJECTIVES

- The students will learn about
- ✧ natural resources—exhaustible and inexhaustible natural resources
  - ✧ fossil fuels—coal, natural gas and petroleum, their formation and uses
  - ✧ limitations of fossil fuels
  - ✧ ways to save fossil fuels
  - ✧ impacts of fossil fuels on the environment

### TEACHING AIDS

Pictures/charts/models/animations on exhaustible and inexhaustible natural resources, coal and its uses, coke, coal tar, coal mines in India, petroleum and natural gas deposits under the earth, a petroleum refinery, a CNG bus.

### LESSON PLAN

- ✧ Teacher will start the chapter by going through the points given in 'Know these points before you start' section.
- ✧ Now, teacher will define natural resources and explain exhaustible and inexhaustible natural resources.
- ✧ Teacher will discuss fossil fuels.
- ✧ Teacher will discuss the properties, uses, formation and types of coal, impacts of its mining and uses on the environment.
- ✧ Now, teacher will ask students to solve Check Point 1.
- ✧ Teacher will discuss about petroleum, its formation, refining, petroleum products and their uses and impacts on the environment.
- ✧ Teacher will discuss the uses and advantages of natural gas.
- ✧ Teacher will explain the need of conserving fossil fuels and will name some alternative sources of energy.

- ✧ Teacher will also discuss the ways to conserve fossil fuels.
- ✧ Now, teacher will ask students to solve Check Point 2.
- ✧ 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 discuss the facts given in the table.
- ✧ Students should be encouraged to explore more information related to coal, coke, coal gas, coal tar, their uses and formation.
- ✧ Teacher should encourage students to collect information on extraction of petroleum and natural gas.

### EXPECTED LEARNING OUTCOMES

The students know about

- ✧ natural resources.
- ✧ exhaustible and inexhaustible natural resources.
- ✧ fossil fuels, their formation and their kinds.
- ✧ environmental impacts of using fossil fuels.
- ✧ need of conserving fossil fuels.
- ✧ alternative sources of energy and their significance.

### EVALUATIVE QUESTIONS

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

1. Define natural resources and write their two kinds.
2. Mention two uses of coal.
3. Which pollutants are released in air when coal is burned?
4. How was petroleum formed?
5. Write two uses of petrol.
6. What does natural gas consist of?
7. Write few ways used to save fossil fuels.