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Coal and Petroleum

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ✧ natural resources, i.e., exhaustible and inexhaustible
- ✧ fuels
- ✧ fossil fuels and their forms, i.e., coal, natural gas and petroleum and their details
- ✧ limitations of fossil fuels
- ✧ ways to save fossil fuels

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; alternative sources of energy.

LESSON PLAN

- ✧ The teacher should start the chapter with Gear Up and ask students the questions given in this section.
- ✧ Now, the teacher should define natural resources and explain exhaustible and inexhaustible natural resources.
- ✧ The teacher should define fuels and discuss about fossil fuels.
- ✧ The teacher should discuss the properties, uses, formation and types of coal, its mining and impacts of its uses on environment.
- ✧ The teacher should also demonstrate Activity 1.
- ✧ The teacher should discuss about petroleum, its formation and impacts of its uses on environment.
- ✧ The teacher should discuss the uses and advantages of natural gas.
- ✧ The teacher should explain the need of conserving fossil fuels and alternative sources of energy.
- ✧ Now, the teacher should ask students to solve Check Points 1 and 2.

- ✧ 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 teacher should assign Activity 2 as part of projects and discuss the results in the class.
- ✧ Students should be encouraged to explore more information related to coal, coke, coal gas, coal tar, their uses and formation.
- ✧ The 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. What is meant by greenhouse gases?
4. How is petroleum formed?
5. Write two uses of petrol.
6. What does natural gas consist of?
7. Write few ways used to save fossil fuels.