

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ✧ waste water
- ✧ sewage and harmful effects of untreated sewage
- ✧ waste water treatment
- ✧ water pollution

TEACHING AIDS

Pictures/charts/models/animations on a drought-affected area, a waterbody polluted by detergent discharge; sources of sewage; waste water treatment plant, screening of waste water, grit and sand removal tank, sedimentation tank, aeration tank, etc.

LESSON PLAN

- ✧ Teacher will start the chapter by going through the points given in 'Know these points before you start' section.
- ✧ Teacher will explain potable water and its importance.
- ✧ Teacher will define waste water and its sources.
- ✧ Now, teacher will define sewage, its sources and the contaminants found in it.
- ✧ Teacher will discuss the harmful effects of untreated sewage.
- ✧ Now, teacher will describe waste water treatment and elaborate the processes involved in it. Teacher will also discuss the need of waste water treatment.
- ✧ Teacher will ask students to solve Check Point 1.
- ✧ Teacher will define water pollution and ways to control it.
- ✧ 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 discuss the conversation of Annu and Mannu given in between the topics.
- ✧ Students should be encouraged to make an Environment Club at their school for creating awareness to reduce water contamination.

EXPECTED LEARNING OUTCOMES

The students know about

- ✧ potable water and waste water.
- ✧ sewage and its sources.
- ✧ impurities in water.
- ✧ harmful effects of untreated sewage.
- ✧ waste water treatment, processes involved and its need.
- ✧ water pollution.
- ✧ various ways to reduce water pollution.

EVALUATIVE QUESTIONS

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

1. Define waste water.
2. Mention organic and inorganic impurities present in sewage.
3. Explain the harmful effects of untreated sewage.
4. What is meant by waste water treatment?
5. Why do we need to treat waste water?
6. Write the constituents of biogas.
7. Mention few ways that should be adopted to reduce water contaminants.