

Lesson at a Glance

- **Man-made disasters** are those which are caused by major accidents or inadvertent or deliberate actions of individuals, groups or governments.
- **Weapons of mass destruction (WMDs)** can be broadly classified into three categories – as those that are used in nuclear, biological and chemical warfare.
- Scientific research and development has enabled nations to produce nuclear arms instead of atomic bomb. **Nuclear arms** are more destructive. Theft of nuclear weapons enables terrorists to misuse them.
- Nausea, dizziness, vomiting and disorientation are symptoms in case of nuclear attacks. An **explosion** is followed by a blast. Doors and windows should be closed. Radioactive rays do not penetrate solid structures, although buildings may be damaged by fires.
- **Chemical disasters** are caused by industrial accidents, irresponsible handling of chemical substances. They may occur by deliberate action also, meant to cause destruction.
- **Biological weapons** are easy to manufacture and they also target a large number of people. Effects of such weapons usually take time to show up. They are called a “poor man’s nuclear bomb”. They deliberately infect people with harmful biological species.
- **Accidental disasters** like train accidents, road accidents also kill a number of people every year. They also come under the category of man-made disasters.
- Man-made disasters are generally more hazardous than natural hazards.

■ TEXTBOOK QUESTIONS SOLVED ■

Q. 1. Find out how potassium iodate tablets can be used to counter exposure to radioactivity.

Ans. Potassium iodate can be used to protect the thyroid against accumulation of radioactive iodine. It does

this by saturating the body with a stable source of iodine prior to this exposure.

Q. 2. How can we prevent and prepare for chemical disasters?

1. Find out what industries exist close to your city or village, and whether any of the chemicals they use are hazardous.
2. Find out whether an emergency plan is in place to deal with industrial accidents, and what antidotes can be used in case of poisoning of people, animals, water sources, etc.
3. Find out whether your local medical association is aware of how to treat patients suffering from exposure to these chemicals.
4. Make a report of your findings and take the help of your teacher to inform suitable authorities such as the District Magistrate, Block or Taluka Development Officer, or Municipal Corporation as well as the closest PHC.
5. Make a chart of simple Do-s and Don't-s in the event of a chemical disaster based upon information gathered from the industry.

Ans. 1. Find out with the help of your teacher.

2. Attempt this yourself.

3. Attempt this yourself.

4. Attempt this yourself.

5. **Do's during a chemical disaster:**

- Keep calm and do not panic.
- Stay inside if at home. Close all doors and windows.
- Protect your mouth and nose with wet cloth or a protective mask.
- Remain inside a building until you get instructions from the authorities.
- Eat only the food stored inside a building such as tinned and preserved food.

Don'ts during a chemical disaster:

- Do not consume open food.
- Do not smoke, eat or drink in areas exposed to the disasters.
- Do not kneel, lie or sit on the ground.
- Do not walk barefooted or in open footwear.

Q. 3. Can you organize a mock drill in your class for the various manmade disasters, to see how you will prepare and respond to them?

Ans. Take help of your subject teacher and find out how to conduct a mock drill.

Q. 4. Organise a Traffic Safety Week in your school with the help of your teachers. Ask your local authorities how you can create awareness among commuters.

Ans. To be done as a group activity.

Exercises

Q. 1. What causes manmade disasters?

Ans. Man-made disasters are caused by major accidents or inadvertent or deliberate actions of individuals, groups or governments.

Q. 2. How do manmade disasters affect us?

Ans. In comparison to natural disasters, man-made disasters cost more in terms of human suffering, loss of life and they long-term damage to a country's economy and productive capacity. Not only the survivors of tragedies like the Bhopal Gas Tragedy and the Hiroshima and Nagasaki atomic bomb explosions, even newborns in these places still bear the brunt in the form of disabilities.

Q. 3. How would you protect yourself and your family in the case of a nuclear disaster?

Ans. Nausea, dizziness, vomiting and disorientation are symptoms in case of nuclear attacks. An explosion is followed by a blast. Doors and windows should be closed. Radioactive rays do not penetrate solid structures, although buildings may be damaged by fires.

Q. 4. What simple do's and don'ts can you list in case of a biological disaster?

Ans. Do's in the event of biological disasters:

- Implement hygienic methods of living. Wash hands with soap properly before consuming food.
- Follow active immunization.
- Wash all vegetables properly before cooking.

- Report any case of sickness to health authorities without delay.
- Use mosquito nets or repellents at night.

Don'ts in the event of biological disasters:

- Do not allow waste food material to accumulate in or around your premises.
- Do not allow collection of stagnant water in surrounding area.
- Do not panic and stay calm.
- Do not consume stale food material.

Q. 5. *How would you recognize the presence of a poisonous gas in the air? What precautions would you take to protect yourself and your family against its harmful effects?*

Ans. Attempt this yourself.

Q. 6. *Describe how you would help people involved in a road accident in your neighbourhood.*

Ans. Attempt this yourself.

