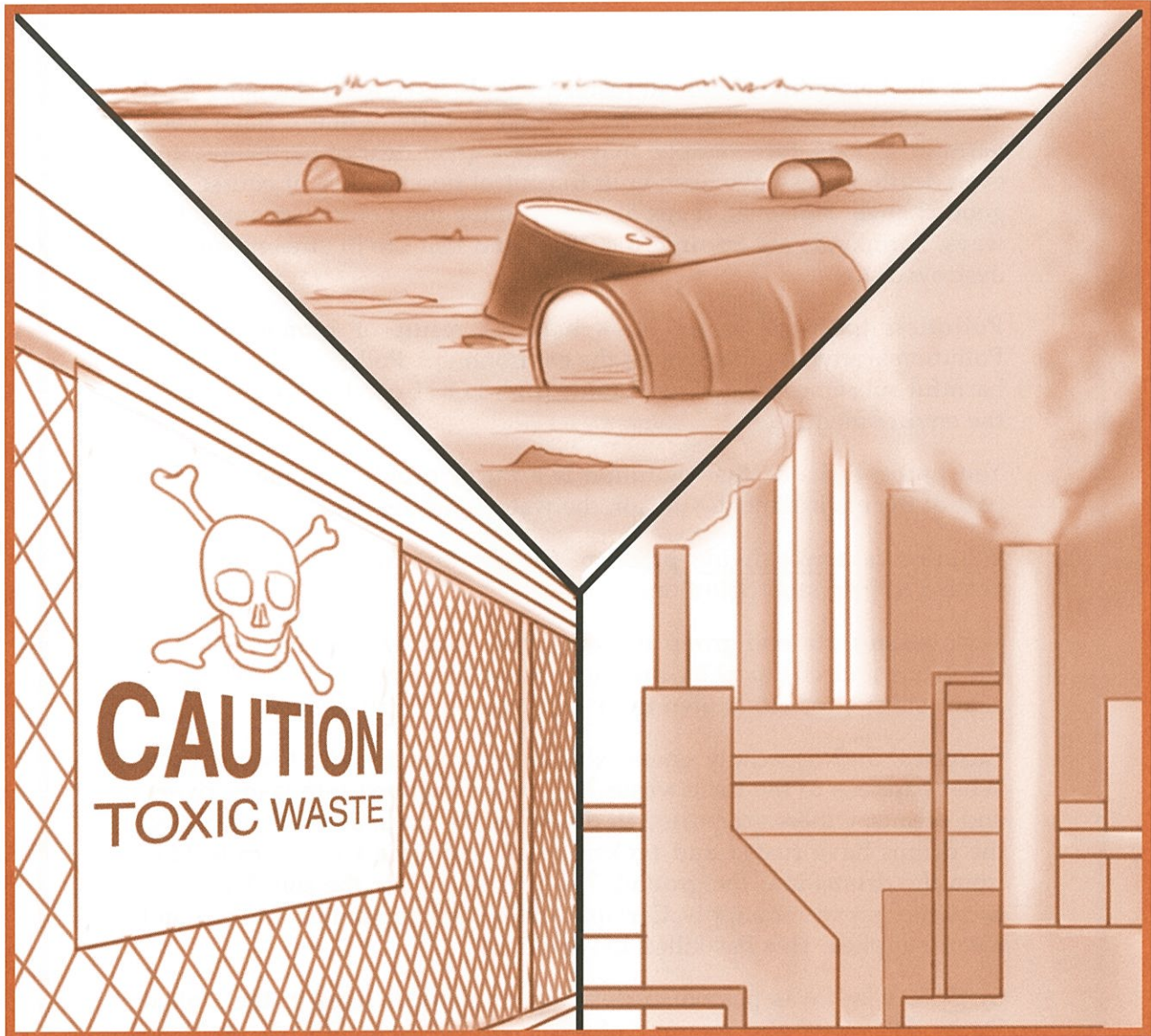


How do toxic wastes affect the environment?



KEY TERMS

pollution: anything that harms the environment

pollutants: harmful substances

LESSON

29

How do toxic wastes affect the environment?

Since the beginning of human history, people have been changing their environment. Some changes have been helpful. Others have been harmful. Floods, for example, may cause a great deal of hardships, and even death. Dams have been built to control floods. This, of course, is a good change. However, dams also change the local environment in bad ways. Farmlands are left infertile. Plant and fish life in streams may be destroyed.

Pollution [puh-LOO-shun] is a harmful result of human activity. Pollution is anything that harms the environment. Pollution occurs when harmful substances called **pollutants** [puh-LOOT-ents] are released into the environment.

You probably know that pollution is a major problem. It harms every part of the environment—the air, the water, and the land.

Pollution is a worldwide problem. Cooperation among all nations is needed to help stop pollution.

Toxic wastes are one group of pollutants. Toxic wastes are poisonous chemicals and chemical by-products. Some are radioactive too. Radioactive substances are known to cause cancer and birth defects.

Factories, and especially chemical plants, produce most toxic wastes. What happens to the toxic wastes? Some are dumped into lakes, rivers, and oceans. Others are buried in drums in the ground. In many places, the drums have rusted and broken apart. The toxic wastes are leaking from the drums into the ground. The wastes pollute the soil. They also seep into our water supply. Certain wastes have contaminated food and water supplies. This has killed living things.

In 1980, a law was passed to clean up toxic waste sites in the United States. However, the cleanup of toxic wastes is a difficult problem. Cleaning up toxic wastes is expensive and takes a lot of time.

WHAT DO THE PICTURES SHOW?

Study Figures A, B, and C. Then answer the questions on the lines provided.



Figure A



Figure B

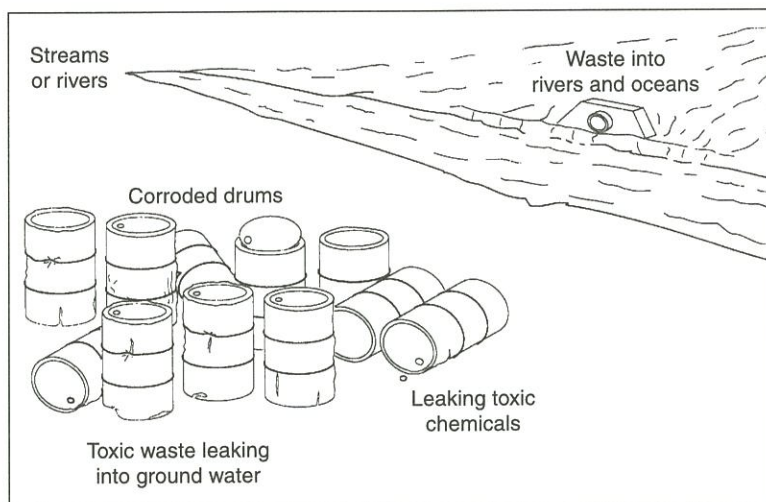


Figure C

1. Which figure shows toxic wastes being dumped directly into a lake? _____
2. a) What has happened to the drums in Figure C? _____

- b) What is happening to the toxic wastes in the drums? _____

3. Why is the person in Figure B wearing a protective suit? _____

TOXIC WASTES

Trace the path toxic wastes may take in Figure D. Notice how they spread out in a web of damage and destruction. There are many possibilities.

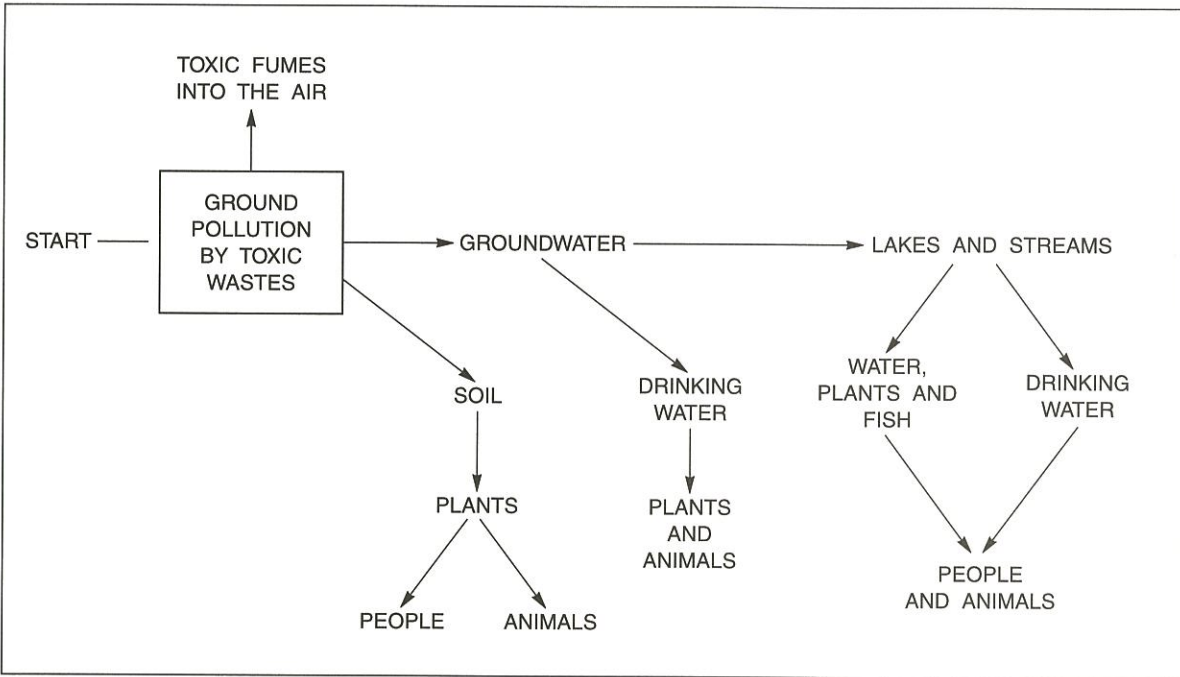


Figure D

Answer the questions about Figure D on the lines provided.

1. Toxic wastes can produce toxic _____ that escape into the air.
fumes, water
2. Into what two things can toxic wastes leak? _____ and _____
3. Polluted ground water may be carried to _____ and _____.
4. What living things are directly affected by the pollution of lakes and streams?

5. What living things are directly affected by soil pollution? _____
6. Where does our drinking water come from? _____
7. What living things eat plants and fish that are affected by toxic chemicals?

8. How do toxic wastes spread throughout the environment? _____

TRUE OR FALSE

In the space provided, write "true" if the sentence is true. Write "false" if the sentence is false.

- _____ 1. Pollution is a worldwide problem.
- _____ 2. The cleanup of toxic wastes is easy.
- _____ 3. All toxic wastes are buried in the ground.
- _____ 4. Toxic wastes harm only fish and water plants.
- _____ 5. Pollution is anything that harms the environment.
- _____ 6. Radioactive substances can cause cancer and birth defects.
- _____ 7. Toxic wastes do not produce fumes.
- _____ 8. Toxic wastes pollute water and food supplies.
- _____ 9. All human changes are bad.
- _____ 10. Chemical factories produce most toxic wastes.

NUCLEAR ENERGY



Figure E

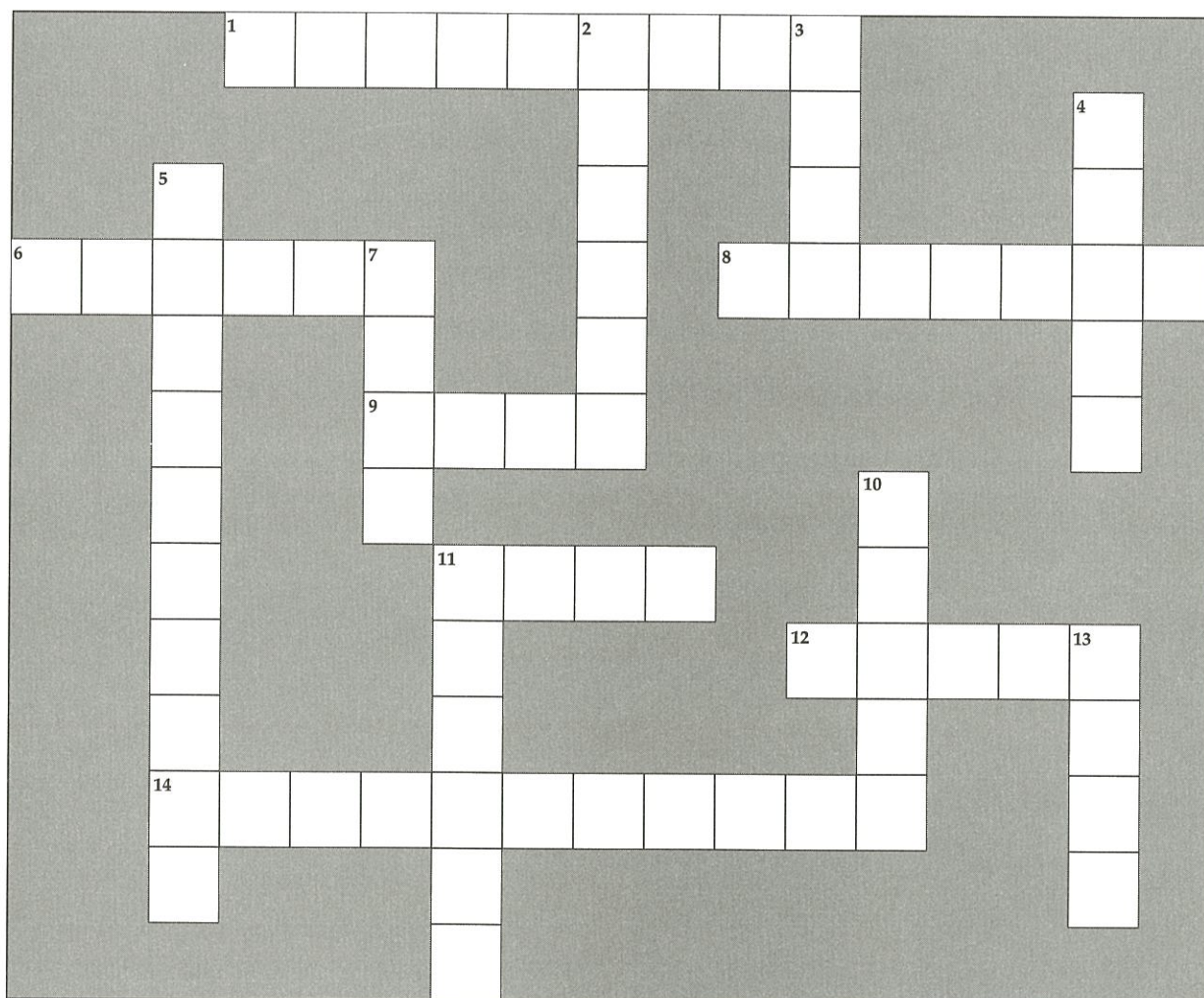
Today people are using up oil, coal, and natural gas at a very rapid rate. These are our main energy resources. Therefore, people are looking for other energy sources.

Nuclear energy is another source of energy. Today, nuclear power plants have been built in many places. However, there are drawbacks to using nuclear energy. Dangerous radioactive wastes are produced. Storing and getting rid of these wastes is a major problem.

How can radioactive wastes harm people? _____

CROSSWORD PUZZLE

Use the clues to complete the crossword puzzle.



Clues

Across

1. produce toxic chemicals
6. where toxic chemicals are buried
8. birth _____
9. to fix
11. a fossil fuel
12. gases
14. poisonous chemicals (two words)

Down

2. chemically weathered
3. place
4. change
5. harmful substances
7. control floods
10. store toxic wastes
11. can be caused by radioactive substances
13. to leak