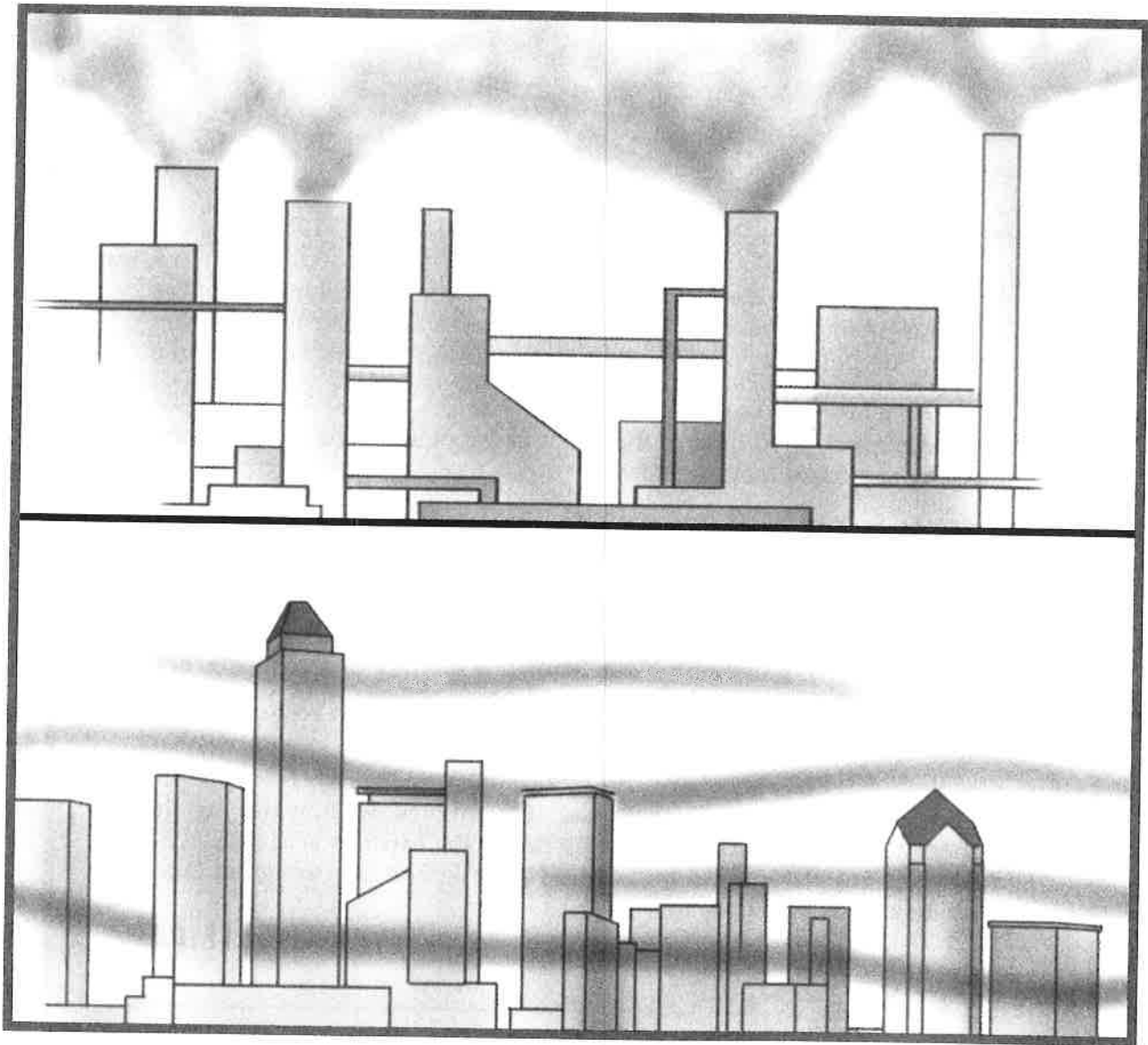


What is air made of?



KEY TERMS

atmosphere: envelope of gases that surrounds the earth

respiration: process by which living things combine food and oxygen to get energy

LESSON | What is air pollution?

10

Look at Figure A on the facing page. What do you see coming out of the cars, buses, and chimneys? Many air pollutants are being released into the air. Air pollution occurs when these harmful substances enter the atmosphere.

The burning of fossil fuels is the major cause of air pollution. Cars and factories use fossil fuels to run.

There are two kinds of air pollutants — solid particles and gases. Dust and soot are tiny particles. They are air pollutants. Dust and soot are given off in smoke. They can remain in the air for a long time. Dust and soot can irritate your eyes, and your lungs.

Many cities have a smog problem. Smog is a mixture of smoke, fog, and gas pollutants, such as carbon monoxide. Smog is harmful to people who have breathing problems.

Gas pollutants can also harm the environment indirectly. For example, sulfur dioxide is a pollutant gas. It combines with water in the atmosphere to form acids. The acids fall to the earth as acid rain. Acid rain damages statues and buildings. It also kills living things in lakes and streams. It kills trees too.

AIR POLLUTION

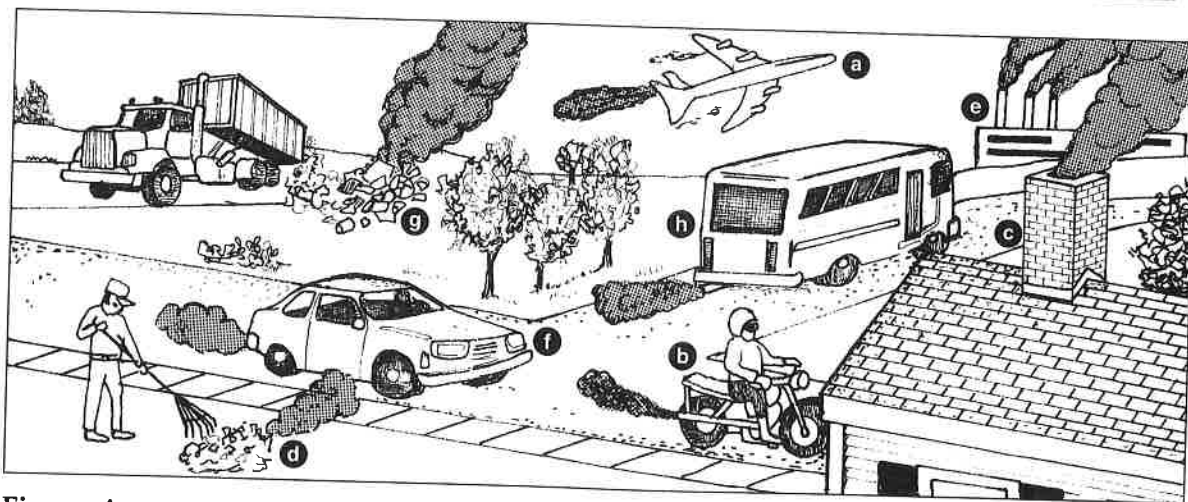


Figure A

Look at Figure A. It shows some of the ways air becomes polluted. Identify each source by writing its name next to the correct letter on the spaces provided.

a) _____

e) _____

b) _____

f) _____

c) _____

g) _____

d) _____

h) _____

Answer the following.

1. What is the major cause of air pollution? _____

2. What are the three fossil fuels? _____

3. What are fossil fuels used for? _____

OBSERVING AIR POLLUTANTS

What You Need (Materials)



hand lens
microscope slide

toothpick
petroleum jelly

How to Do the Experiment (Procedure)

1. Use the toothpick to coat one side of a glass slide with a thin layer of petroleum jelly.
2. Place the slide on a window ledge overnight.
3. Examine the slide with a hand lens the next day.

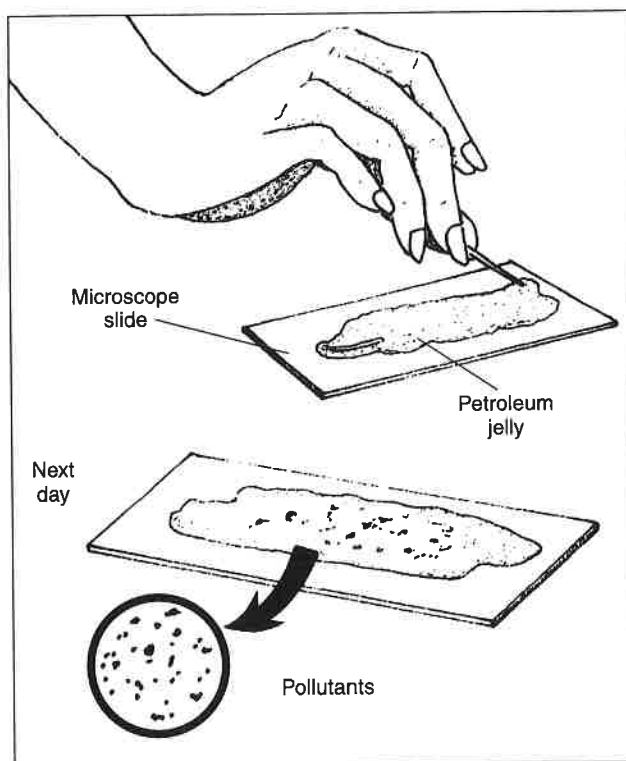


Figure B

What You Learned (Observations)

1. Describe some of the things you saw on your slide. _____

Something to Think About (Conclusions)

1. What do you think these particles are? _____
2. Where do you think they come from? _____

FILL IN THE BLANK

Complete each statement using a term or terms from the list below. Write your answers in the spaces provided. Some words may be used more than once.

soot
fossil fuels
cities
lungs

acid rain
atmosphere
gas pollutants

break
gas
eyes

1. The major cause of air pollution is the burning of _____.
2. Air pollution occurs when harmful substances are released into the _____.
3. Two kinds of pollutants in smoke are dust and _____.
4. Smog is a mixture of smoke, fog, and _____.
5. Some gases that are released into the atmosphere combine with water in the air to form _____.
6. Dust and soot can irritate your _____ and _____.
7. Many _____ have a smog problem.
8. Acid rain can cause brick, stone, and metal structures to _____ apart.
9. Sulfur dioxide is a pollutant _____.
10. Cars use _____ to run.

COMPLETE THE CHART

Complete the chart by identifying the pollutant or pollutants that are contained in each item described in the first column. Place a check mark in the correct column or columns.

	Source	Smoke	Dust	Soot	Chemicals
1.	Burning fossil fuels				
2.	Smog				
3.	Factory smokestacks				
4.	Automobile exhaust				
5.	Burning wood in a fireplace				

TRUE OR FALSE

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

- _____ 1. Dust and soot are gas pollutants.
- _____ 2. Smog is harmless.
- _____ 3. Acid rain kills forests and fish.
- _____ 4. Smog is made up of smoke, fog, and gas pollutants.
- _____ 5. Smog is a major problem in small towns.
- _____ 6. The burning of fossil fuels is the major cause of air pollution.
- _____ 7. Carbon monoxide is a pollutant gas.
- _____ 8. Carpooling does not reduce air pollution.
- _____ 9. Dust and soot may remain in the air for a long time.
- _____ 10. Gas pollutants can harm the environment indirectly.

WORD SCRAMBLE

Below are several scrambled words you have used in this Lesson. Unscramble the words and write your answers in the spaces provided.

1. SGOM

2. TNPOULLTSA

3. IRA

4. BNGNRUI

5. OTOS
