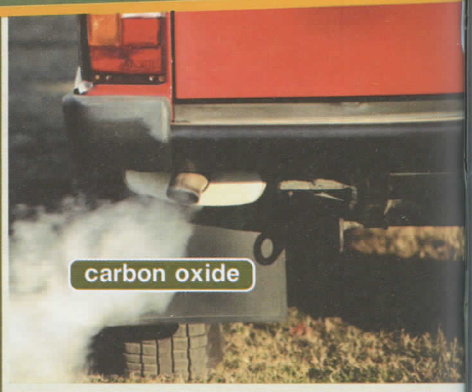
6 Air pollution 1

Rupert County Environmental Commission (RCEC)

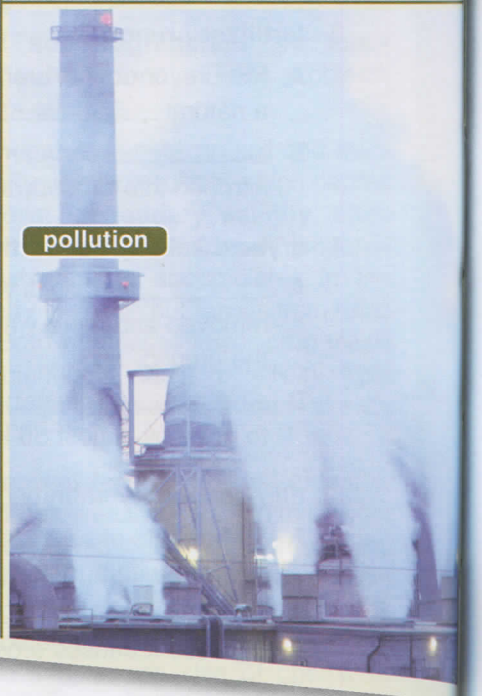
AIR QUALITY REPORT

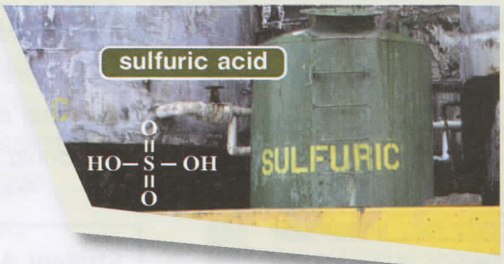
The RCEC conducted its annual air quality tests between May 27 and June 2. We concluded that **air pollution** has increased significantly in the last year. Rising populations and industrial activity most likely caused the higher levels of **primary pollutants**. This led to an increase in **volatile organic compounds** and other **secondary pollutants**. Residents may notice increased lung and throat irritation from **particulates** in the air. The following chart shows changes in pollutant levels:

Carbon Oxides		
Carbon Monoxide (CO)	+ 0.5%	The small elevation is not likely to cause significant increases in lung disease.
Carbon Dioxide (CO_2)	+ 5.6%	Emissions are rising quickly. This rise is in line with worldwide increases.
Nitrogen Oxides		
Nitrogen Dioxide (NO_2)	+ 3.2%	Residents may notice irritation from increases.
Nitrous Oxide (N_2O)	+ 3.9%	These gases are likely to contribute to climate change.
Nitric Acid	+ 5.0%	Increases may damage crops from acid deposition.
Sulfur Dioxide	- 6.2%	Levels are lower since the oil refinery closed this year.
Sulfuric Acid	- 4.3%	Lower levels may reduce the risk of acid deposition.
Radioactive Radon	+ 0.01%	Presence in homes was not significant.


carbon oxide

volatile organic compound


pollution



sulfuric acid

Get ready!

1 Before you read the passage, talk about these questions.

1 What type of gas is emitted from motor vehicles?

2 What is one type of corrosive acid?

Reading

2 Read the report. Then, mark the following statements as true (T) or false (F).

1 __ The report shows that this year's air quality is worse than the previous year's air quality.

2 __ Levels of some compounds decreased since the previous year.

3 __ According to the report, radioactive radon is likely to cause serious health problems in the area.

Vocabulary

3 Match the words (1-7) with the definitions (A-G).

1 __ particulate
2 __ air pollution
3 __ sulfur dioxide
4 __ volatile organic compound
5 __ radioactive radon
6 __ primary pollutant
7 __ secondary pollutant

A a harmful chemical that is formed by the reaction of other chemicals

B a small solid or liquid substance in the air

C materials in the air that are harmful to organisms

D a gas that leaks into buildings from rocks or soil

E a harmful chemical that is produced directly by human activities or natural forces

F a compound that contains sulfur and oxygen

G a harmful gas in the air that causes irritation when inhaled

4 **Read the sentence pairs. Choose where the words best fit the blanks.**

1 **carbon oxide / sulfuric acid**

A A type of _____ is largely responsible for global temperature increases.

B _____ contributes to acid deposition.

2 **nitric acid / nitrogen oxide**

A _____ contains nitrogen, oxygen, and hydrogen.

B _____ contains only nitrogen and oxygen.

5 **Listen and read the report again. What effect might particulates in the air have on people?**

Listening

6 **Listen to a conversation between two scientists. Choose the correct answers.**

1 What is the main idea of the conversation?

A how to test air pollution in a particular region

B the results of a new air quality report

C which cities have the lowest levels of harmful compounds

D the consequences of opening a new oil refinery

2 According to the man, what caused an increase in air pollution?

A an oil refinery

B driving habits

C acid deposition

D radioactive radon

7 **Listen again and complete the conversation.**

Scientist 1: What about carbon oxides and **1** _____ _____?

Scientist 2: They all went up. **2** _____ _____ was especially high.

Scientist 1: Wow. It must just be the **3** _____ _____. But I'm still surprised.

Scientist 2: Well, I think it makes sense. A lot of people live outside of town now. **4** _____ _____ _____, and they're spending more time in traffic.

Scientist 1: I guess you're right. What did the report say about **5** _____ _____?

Scientist 2: Fortunately, **6** _____ _____ _____ leaks were reported. Overall occurrences barely went up at all.

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

The results are ...

I figured that ...

What made you think ...?

Student A: You are a scientist. Talk to Student B about:

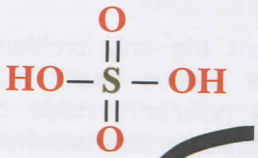
- an air quality report
- good news about air pollution levels
- bad news about air pollution levels

Student B: You are a scientist. Talk to Student A about an air quality report.

Writing

9 **Use the report and the conversation from Task 8 to write a summary of an air quality report. Include: the changes in levels of two substances, the causes of the changes, and the likely effects of the changes.**

Sulfuric acid



Carbon Dioxide CO_2