

# Environmental Issues of Canada

Acid Rain and Pollution of the Great Lakes, the Extraction and Use of Natural Resources  
on the Canadian Shield, and Timber Resources

# Georgia Standards of Excellence

## **SS6G6 Explain the impact of environmental issues in Canada.**

- a. Explain the causes and effects of pollution and acid rain in Canada to include the Great Lakes.
- b. Explain the causes and effects of the extraction of natural resources on the Canadian Shield (e.g., mining and logging).



Name: \_\_\_\_\_

# CANADA'S ENVIRONMENTAL ISSUES

<b>Environmental Issue</b>	<b>Description of Problem</b>	<b>Illustration of Problem</b>	<b>Solution</b>
<b>Acid Rain &amp; Pollution of the Great Lakes</b>			
<b>Extraction of Natural Resources on the Canadian Shield</b>			
<b>Deforestation of Timber Resources</b>			

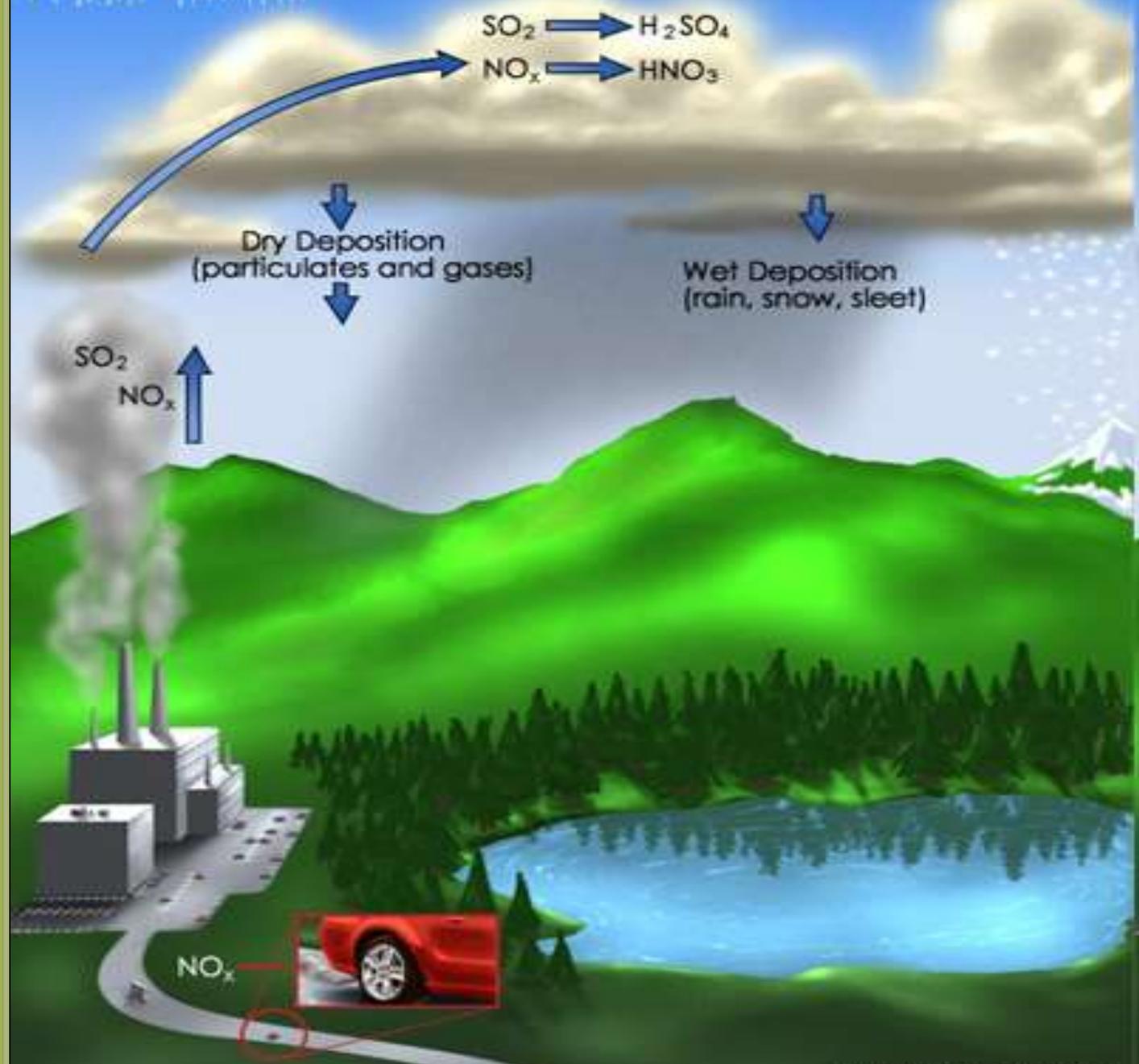
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# Acid Rain

- Coal-burning factories, cars, & trucks release chemicals that pollute the air.
  - The pollutants mix with water molecules in clouds and turn the water acidic.
- High levels of acid in rain can damage or kill trees and pollute lakes enough to kill fish.
- Houses, buildings, and statues can also be damaged.

# ACID RAIN



# Acid Rain

- Southern Canada (near the Great Lakes region) experiences the highest levels of acid rain.
- 50-75% of the pollution that causes acid rain actually comes from the US.
  - Wind patterns tend to move the pollution from the US north into Canada.



# Acid Rain - Solution

- Canada's government has done several things to reduce pollution:
  - They are building factories that don't pollute the air.
  - Laws have been passed that require cars to produce less pollution.
  - They are encouraging people to walk or ride bikes/buses, rather than driving.



# Pollution – Great Lakes

- In the 1970s, the Great Lakes had high levels of water pollution.
  - Fishing was unsafe; tons of animals and plants were harmed or killed.
- Factories around the region used the lakes as a place to dump wastes.
- Factories also used the chemical *phosphorus* when producing things like toothpaste, fertilizer, pesticides, detergents, etc.
  - This was really bad for lakes because it caused a rapid increase in algae.



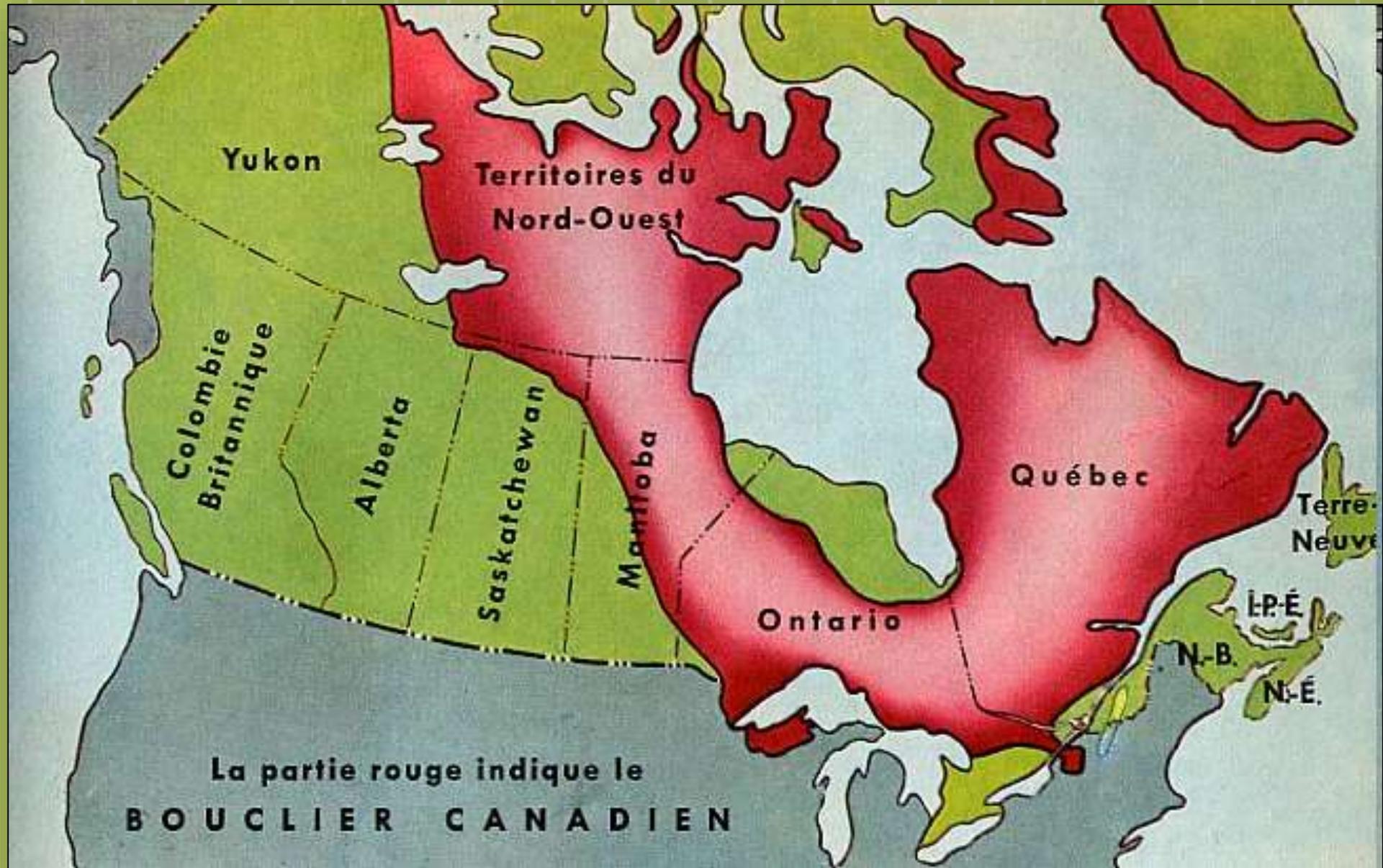


# Pollution – Solution

- In 1971, the Great Lakes Water Quality Agreement was signed by US and Canada (renewed in 2002).
- The goal was to restore the lakes' environment and to prevent further damage.
  - The countries are working together to reduce the amount of human wastes dumped in lakes.
  - They're working to make sure that chemicals (like phosphorus) are not put into lakes.

# Extraction of Resources

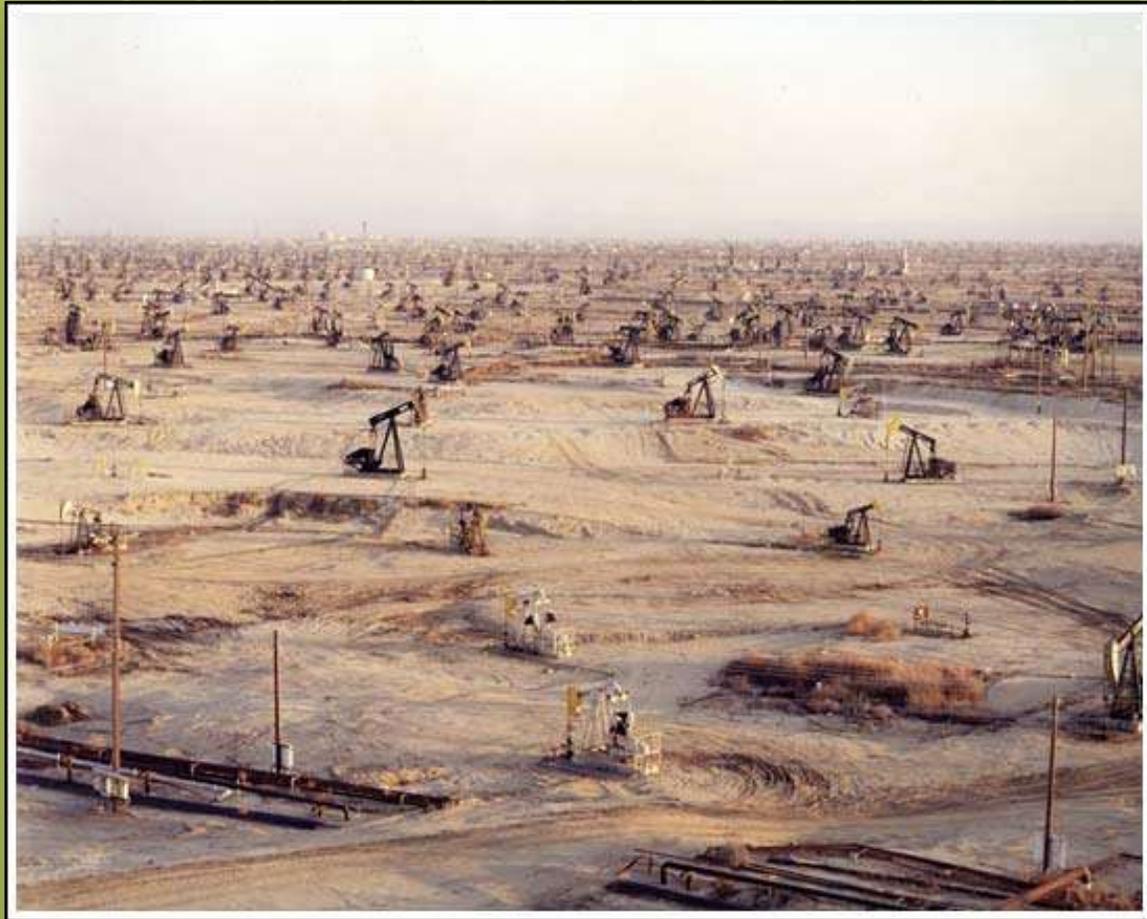
- The Canadian Shield is a large area of thin, rocky soil that surrounds the Hudson Bay.
  - Beneath the soil is one of Canada's most valuable resources: minerals (gold, silver, copper, zinc, lead, iron ore, uranium, & nickel).
- Mineral deposits are very important to Canada's economy because they provide jobs.
  - 1.5 million people make their living in the mining industry in this area.



# Extraction of Resources

- Blasting & digging with heavy machinery causes the land around mines to be damaged and the environment is often ruined.
- *Slag*, or leftover rock from the smelting process, is often dumped in any convenient place.
- Mining processes release harmful chemicals into the air, which causes acid rain.





# Extraction - Solution

- Canada's government has made new rules about mining.
- Some rules reduce the amount of pollution allowed in waterways.
  - The government hopes to keep its fish alive and safe to eat.

# Timber Industry

- With almost half its land covered in forests, Canada is a leading producer of timber products.
  - These products include lumber, paper, plywood, and wood pulp.
- The major timber-producing provinces include British Columbia, Quebec, and Ontario.



# Timber Industry

- Citizens are concerned that logging is destroying the forests.
- Most timber companies cut all the trees in a given area, leaving large treeless gaps in the forest (called “clear-cutting”).
  - This reduces water quality, causes erosion, & kills animals’ habitats.
  - Heavy machinery leaves the forest floor compacted and makes it hard for new growth to start.
- Cutting trees down quicker than they can be re-grown is called “deforestation”.
- Trees are a limited resource.
  - If they continue to be overused, they will not be renewed.



# Timber - Solution

- Government and industries are working together to manage use of the forests.
- Hundreds of millions of seedlings are planted each year.
- Billions of dollars are spent on managing and protecting the forests.
  - Over \$100 million is spent each year by the logging industry to protect wildlife & their habitats.