What effects do people have on the natural environment?

The natural environment and the availability of resources influence where people live. In turn, people affect the natural environment as they use resources in different ways to meet their needs.

Extracting Resources

Every day, we use products created from natural resources. For example, skateboards, bikes, and electronic devices all contain metals that have been extracted, or removed, from the environment. As demand for natural resources increases, advances in technology allow people to extract some resources more easily. People can now drill deep wells, sometimes deep into the ocean floor, to extract oil for fuel. They also have the technology to efficiently cut down trees to obtain wood for building houses, or to clear land for farming or raising cattle.

The Effects of Extracting Resources

Extracting resources can harm the natural environment and ecosystems. Cutting down too many trees can cause deforestation, which is the destruction of a forest. Deforestation can lead to soil erosion and flooding because there are no tree roots to absorb the rain. Drilling wells and transporting oil can lead to oil spills, which harm land and water resources. Deforestation and producing oil can also reduce biodiversity. Biodiversity is the variety of living things in a region or ecosystem.

More About

Protecting the Environment

Resource developers are required to follow strict safety and environmental standards set by the federal and provincial governments. These industries are also required to perform environmental monitoring to ensure that water, air, plants, animals, and fish in the surrounding areas are not negatively affected by their operations.

In April 2010, an explosion on an oil well platform in the Gulf of Mexico released about 780 million litres of crude oil, which affected hundreds of kilometres of coastal wetlands.
Both Russia and Canada have many natural resources, including agricultural land, lakes and rivers, forests, and energy resources. Throughout the histories of both countries, people have settled in different areas to take advantage of these resources. People’s impact on the natural environment is evident in both Russia and Canada.

**Taking What They Need** People have cleared land to grow crops, built dams for hydroelectric power, cut down trees for timber and paper, and dug mines to extract coal and minerals. They have also blasted through mountains to build roads, railways, and pipelines to transport goods and resources. Mines and oil wells dot the landscape, and new settlements have sprung up in isolated places where energy resources are found.

**Ocean Resources** The overfishing of cod and haddock in the Barents Sea in northern Russia has seriously reduced the number of fish. In Canada, overfishing affected cod stocks so severely that the federal government stopped cod fishing in 1992 to try to help increase the number of fish. When this did not work, the Canadian government banned cod fishing in 2003. This ended an industry that thousands of people in Atlantic Canada depended on for their livelihood and forced some to move to other areas.

Extracting natural resources can cause land, water, and air pollution, as well as deforestation and soil erosion in both countries. Human activity has damaged natural habitats for plants, birds, and other animals. Most people agree that human activity also contributes to climate change.
Cleaner Power?
The Effects of Technology on Humans and the Environment

In the search for cleaner sources of power, some nations have turned to nuclear energy. Nuclear energy accounts for about 15 percent of electricity generation worldwide. Under normal conditions, nuclear energy produces little air pollution and the used nuclear fuel, also called radioactive waste, is safely stored. But a serious accident near or at a nuclear power plant can damage the plant and result in radioactive pollution spreading over a large area, damaging the environment and forcing people to move.

On April 26, 1986, an explosion at the Chernobyl nuclear power plant in Ukraine (then part of the Soviet Union) spewed large amounts of radioactive dust from the site. Radiation levels around the plant were so high that over 300,000 people had to relocate after the accident. More than 25 years later, high levels of radiation remain in areas around Chernobyl and people will be unable to live in these areas for many more years.

THINKING CRITICALLY Do you think the benefits of using nuclear power are worth the potential environmental and human impacts? Explain your reasoning.

Benefits
- Nuclear plants need to be refuelled once a year, while coal plants need very large quantities of coal every day.
- Nuclear plants transform energy into electricity more efficiently than coal plants.
- Nuclear plants give off fewer greenhouse gases than electricity generated from fossil fuels.

Risks
- High-level radioactive waste needs to be carefully stored for thousands of years.
- Mechanical and operator failure could cause a meltdown, which may release radioactive waste into the air and water.
- Uranium, the energy source for nuclear power, is a non-renewable resource.
The Impact on Indigenous and Aboriginal Peoples

Clearing land and building roads affect the migration patterns of animals such as caribou and reindeer, which the Inuit and Nenets rely on for their livelihood. Despite government regulations designed to protect the environment, chemical pollutants from pulp and paper mills can sometimes make their way into waterways, which may affect the health of people who live near and rely on these resources.

Hydroelectric power is a renewable energy source, and developing this resource can provide jobs and lower electricity costs. Building dams for hydroelectric power can create lakes and change the direction of rivers. In northern Manitoba, the Chemawawin First Nation near Easterville and the Nisichawayasihk Cree First Nation near South Indian Lake were relocated to higher ground in the 1960s and 1970s when hydroelectric dams caused flooding to their lands.

Seeking Sustainable Solutions To help address these challenges in Canada, many Aboriginal communities work with developers to ensure that natural resources are extracted and used in a sustainable way. For example, the White Bear First Nation in southern Saskatchewan formed a company to take full control over management of oil and natural gas resources on reserve land. In northern Saskatchewan, the Black Lake First Nation are working with a leading producer and developer of renewable energy. Together, they are working to develop a run-of-river hydroelectric project at Elizabeth Falls, near Fond du Lac, at the east end of Lake Athabasca.

Thinking It Through

**Key Ideas**
1. What are some of the impacts of human activities on the natural environment?
2. How has extracting resources affected the natural environment and Indigenous peoples in Russia and Aboriginal peoples in Canada?

**Thinking Critically**
3. What laws or policies do you think should be in place to balance people’s use of natural resources with impacts on the environment?

**Chapter Focus Question**

How do people’s interactions with natural and political environments affect their lives?

4. Why do people have a responsibility to make consumer choices that respect the environment? Explain.
How have land and resources been shared in Canada?

Aboriginal Peoples and the Land

First Nations peoples and Inuit lived in what is now Canada for thousands of years before Europeans arrived. First Nations peoples and Inuit are closely connected to the natural environment and consider it part of the spiritual world. They try to live in harmony with nature because it provides them with the necessities of life—water, air, food, and shelter. First Nations peoples and Inuit try to treat the natural environment with great respect and limit their impact on it so that nature will continue to provide for them generation after generation.

Before the arrival of Europeans, many First Nations peoples and Inuit lived in large family and community groups. They believed that the land and resources belonged to the community for the benefit of everyone. Their societies included means of governance, law, education, use of resources, and relationships with neighbouring groups. Their social interactions emphasized living in harmony with each other within their community, although there were sometimes conflicts with other groups over territory.

The Arrival of Europeans

People who came from Europe in the late 1400s had very different views on land ownership and how land and resources should be used. Many of them believed in competition, profit, and economic growth. They believed that natural resources should be extracted and used for profit, and were not very concerned or knowledgeable about how this might affect the environment. They also believed that the land in Canada did not really belong to anyone, so they could claim it for themselves.

Treaties

The different beliefs and values of First Nations peoples and Europeans caused conflicts between them. As Europeans claimed more land and resources across Canada, First Nations peoples gradually lost their land, traditional sources of food, and means of survival. Both groups realized that they would have to find ways to deal with these challenges.
The Canadian government and First Nations peoples signed treaties in an attempt to address these challenges. In Canada, a treaty is a negotiated agreement that defines the rights and responsibilities of all Canadians, including First Nations peoples and the federal and provincial governments. A treaty also provides a way to resolve long-standing disputes and improve cooperation between First Nations peoples and the governments and people of Canada. Many treaties were signed at various times throughout Canada's history. The treaties in western Canada, including Saskatchewan, were signed between 1871 and 1921 and are known as the Numbered Treaties. In some parts of Canada, treaties were never signed. Treaty negotiations continue to the present time.

**WHAT DO YOU THINK?**

"We are all treaty people." What does this phrase mean to you? What are your rights and responsibilities under the treaties?
The Lasting Effects of Treaties

The Canadian government wanted to sign treaties so it could colonize the land, build a railway across Canada, and claim natural resources. First Nations peoples saw treaties as a way to establish a relationship with the federal government. They believed that treaties would help them preserve their languages, cultures, and traditions. The treaties promised First Nations peoples reserve lands, hunting and fishing rights, annual payments, education, and health care. The Canadian government did not keep all of its promises. First Nations peoples are still struggling to reclaim what is rightfully theirs under the treaties.

Moving Forward

In recent years, questions about climate change, land and resource use, and sustainable development have become important issues in Canada and around the world. The search for resources is expanding farther north, and governments, development companies, and Aboriginal peoples are working together to help protect the natural environment and the people who live in the region. Governments and scientists are paying more attention to the concerns of First Nations peoples and Inuit about climate change and how changes in the natural environment will affect them. Canadians are working together to meet the challenges caused by their impact on the natural environment, and its effects on their lives.

Voices of Saskatchewan

Treaties Are Important to All Canadians

We do, as Aboriginal First Nations, have a special relationship with the Crown, we do indeed have treaty rights and they are here as long as the sun shines, the rivers flow, and the grass grows. They will not be terminated, there is no end to that, they are here forever. And people have to realize and understand that, what those rights are and the more awareness, the more education about them that can be taught, it’s more beneficial for both Indian and non-Indian people. So that we can peacefully coexist in this country; that we can share the resources together.

Former Grand Chief Perry Bellegarde

Thinking It Through

Key Ideas
1. What are some of the long-term effects that treaties have had on First Nations people in Canada?

Thinking Critically
2. Why is it important for all Canadians to understand their rights and responsibilities under treaties?

Chapter Focus Question

How do people’s interactions with natural and political environments affect their lives?

3. How can we use what we have learned in the past to shape our interactions with the natural environment in the future?
Chapter Focus Question

How do people's interactions with natural and political environments affect their lives?

You have explored how people's interactions with natural and political environments in Russia and Canada affect their lives. Use an organizer and the five section heading questions to answer the Chapter Focus Question. Your organizer might look like this:

<table>
<thead>
<tr>
<th>Section Heading Questions</th>
<th>Important Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do models of Earth help us understand different environments?</td>
<td>Political maps give us information about a country's borders and capitals.</td>
</tr>
</tbody>
</table>

Communicate Your Understanding

Use visual art, music, dance, writing, or some other creative response to communicate what you have learned about interactions with environments and your answer to the Chapter Focus Question with others.

Think About Your Learning

1. How does learning about the ways in which environments affect the lives of people in Russia and Canada help you to better understand how you interact with environments in your own life?

2. What questions do you still have about the kinds of interactions that First Nations and other Indigenous peoples have with their environments?

Online Country Community Activity

E-mail

Do some research online about one of the questions from the beginning of this unit. Write your e-mail friend to tell them what you have learned. Ask them to e-mail back their answer to the