

NATURAL RESOURCES IN ALBERTA

LEARNING INTENTIONS:

Values, Attitudes, Knowledge and Understanding

- Students will value Alberta's physical geography and natural environment by appreciating the variety and abundance of natural resources in Alberta.
- Students will appreciate how land sustains communities and quality of life.

Skills and Processes

- Students will develop skills of critical and creative thinking.
- Students will develop skills of geographic thinking.
- Students will apply the research process.

SUCCESS CRITERIA:

- Compare and contrast information from different sources.
- Use a simple map to locate areas of natural resources in Alberta.
- Demonstrate an understanding of how people use natural resources.
- Draw a simple chart of ideas expressing the cycle of a natural resource from source to economic development to consumption to waste and consequences.
- Evaluate whether information supports an issue or a research question.
- Apply information learned to compare quality of life before use of a natural resource and after.

QUESTIONS FOR INQUIRY:

- Do you think people in Alberta have a high level of quality of life? Or a low level of quality of life?
- How can you measure quality of life?
- What are the significant natural resources in Alberta and where are they located?

- How are natural resources used by Albertans?
- How do Albertans deal with competing demands on land use?

MATERIALS NEEDED:

- a copy of **Natural Resources in Alberta** Worksheets 1 and 2 for each student
- a copy of **Natural Resources in Alberta** Worksheets 3 and 4 for each student
- map of Canada or Alberta
- video or visual display equipment, internet access
- examples and non-examples of natural resources – such as coal, rock, plant, and water compared to steel, electronic device, bag of potato chips, milled wood, bottled drink
- photos of examples of natural resources, such as coal, oil, trees, water, and more
- pencils, crayons, paper

PROCEDURE

NOTE – This lesson and following lessons can be delivered as teacher-directed inquiries with the entire class. But as an option, the lessons or worksheets can be given to student pairs. Each pair would be responsible for completing the lesson worksheets and extra activities as assigned by the teacher.

1. Assess student knowledge and familiarity with the concept of “quality of life” - *What are some things that might show you have a high quality of life?* (Accept reasonable answers - shelter, food, comfort, safety, access to information.) *What would happen to your quality of life if your electricity went off? Or if you no longer had running water in your house?*
2. Introduce the concept of **natural resources**. Natural resources are the raw materials occurring in nature. Create a word web with students – coal, rocks trees, oil, water, wildlife, vegetation, etc. Use examples, and non-

examples – Is this a natural resource? How about this? Why? Why not?

3. Ask students to think about Alberta's natural resources. Example:

*What is something Alberta is known for?
Ranching and Cattle Farms!*

Now let's take that example, and think about the natural resources that are needed – water, land, grass, etc.

4. Tell students that each geographic region in Alberta is rich in different kinds of resources. They will be learning about the natural resources that can be found in each region. Distribute Worksheets 1 and 2. Read through the instructions with the class and check for understanding. Assign work and monitor student progress.
5. Lead a discussion with students on how natural resources and land sustains communities. Review the terms extracting, transporting, processing, consuming and waste managing. What kinds of jobs are involved in extracting and transporting wood? Do you know someone who helps with waste management?

6. Distribute Worksheets 3 and 4. Read through the instructions with the class and check for understanding. Assign work and monitor student progress.

EXTENSIONS AND ACCOMMODATIONS

After completing the worksheets, students could write a story that traces the journey a natural resource takes from nature to processing to helping a community and its return to nature. Or a career-profile of someone (fictional or not) who works in natural resources.

Students struggling with the concepts in the worksheets can use Worksheet 1 and 2 as examples and copy materials over to Worksheet 3 and 4. Alternatively, a student could explain orally each activity and answer instead of using writing to complete the worksheets.

For more detailed locations or information on natural resources and energy products, Alberta's website provides resource maps – <https://www.alberta.ca/interactive-energy-maps.aspx#toc-1>.

Natural Resources in Alberta

Alberta is a land rich in natural resources! Each geographic region has resources that people have used to improve their quality of life.

Many jobs are created in the extracting, transporting, processing, consuming and waste-managing of our resources. Did you know that in Alberta about 50% of our electricity comes from burning coal?



Parklands

Oil
Coal
Rock and Gravel
Soil
Water

Foothills

Coal
Oil
Natural Gas
Fish, Birds, Animals
Metals, Rock, Sand

Rocky Mountains

Coal
Oil
Natural Gas

Canadian Shield

Minerals
Rock

Boreal Forest

Oil
Natural Gas
Wood
Coal
Fish, Animals
Soil

Grasslands

Oil
Natural Gas
Soil
Wind

Journal Time

- Make a list of all the electronic devices you use in a day. What would you do if you could only use 50% of them each day for the next week?

Or

- Research how coal is used to make electricity. Draw a diagram of the process used and explain the steps in four or five sentences.

Natural Resources in Alberta

The land sustains our communities and our ways of life. Did you know Alberta harvests almost 31 million cubic metres of wood in a year? Imagine that much lumber! About 18,000 Albertans are employed in the work of forest management. Let's look at the work that goes into wood.



Extracting

Loggers use machines to cut and harvest trees.

Transporting

Truck drivers haul the raw logs from the forest to mills or factories.

Processing

Millworkers move logs through milling machines to make boards and planks. The wood fibre is also used in paper mills to produce paper.

Consuming

Wood products are delivered to warehouses or stores so that contractors and consumers can buy and use them in daily life.

Waste Managing

Bark and wood chips can be used as landscaping products or heating products. Re-planting is important in managing the forest. The wood industry creates waste that needs cleaning up too, like machine oil or fertilizer and pesticide containers.

Journal Time

- Choose one of the jobs above. Imagine what would a day of work be like. Describe your morning, afternoon, and night on the job in a journal entry.

Or

- Search the classroom or your home and make a list of as many things as you can find that come from wood. Research how one of the items was made. Explain how it is made in 3 or 4 steps.

Natural Resources in Alberta

For each geographic region, write down a natural resources found there.

In one sentence, explain one use we have found for the natural resource and how it improves people's quality of life.

Draw a picture of the natural resource.



Parklands

Resource: _____

Use: _____

Canadian Shield

Resource: _____

Use: _____

Foothills

Resource: _____

Use: _____

Boreal Forest

Resource: _____

Use: _____

Rocky Mountains

Resource: _____

Use: _____

Grasslands

Resource: _____

Use: _____

Natural Resources in Alberta

It's your turn! Choose a natural resource. Research the industry that comes from it. For each box below, explain the work done in that stage of the industry using one or two sentences. What jobs are involved in each stage? Then draw a picture of the work being done or the people who do the work.



The natural resource I have chosen is _____.

Extracting

Transporting

Processing

Consuming

Waste Managing
