

### Grade 4 - Regions of Alberta



#### 4.1 Alberta: A Sense of the Land

General Outcome

Students will demonstrate an understanding and appreciation of how elements of physical geography, climate, geology and paleontology are integral to the landscapes and environment of Alberta.
<u>Specific Outcomes</u>
Values and Attitudes

Students will:

4.1.1 Value Alberta's physical geography and natural environment:

• appreciate the diversity of elements pertaining to geography, climate, geology and paleontology in Alberta (LPP)

- appreciate how Alberta's fossil heritage contributes to the province's unique character (LPP)
- appreciate the variety and abundance of natural resources in Alberta (ER, LPP)

• appreciate the environmental significance of national and provincial parks and protected areas in Alberta (ER, LPP)

• appreciate how land sustains communities and quality of life (ER, LPP)

• demonstrate care and concern for the environment through their choices and actions (LPP)

Knowledge and Understanding

Students will:

**4.1.2** Examine, critically, the physical geography of Alberta by exploring and reflecting upon the following questions and issues:

• Where is Alberta located in relation to the other provinces and territories of Canada? (LPP)

• What are the major geographical and natural vegetation regions, landforms and bodies of water in Alberta (e.g., prairie region, forests, rivers, hoodoos, Rocky Mountains, oil sands)? (LPP)

What are the factors that determine climate in the diverse regions of Alberta (e.g., latitude, mountains)? (LPP)
What are the significant natural resources in Alberta, and where are they located (e.g., mineral deposits, coal, natural gas and oil, forests)? (ER, LPP)

• How are Alberta's provincial parks and protected areas and the national parks in Alberta important to the sustainability of Alberta's natural environment? (ER, LPP)

**4.1.3** Examine, critically, how geology and paleontology contribute to knowledge of Alberta's physical geography by exploring and reflecting upon the following questions and issues:

• What geological features make Alberta unique (e.g., hoodoos, Rocky Mountains, foothills, oil sands)? (LPP, ER) 4.1.4 Analyze how Albertans interact with their environment by exploring and reflecting upon the following auestions and issues:

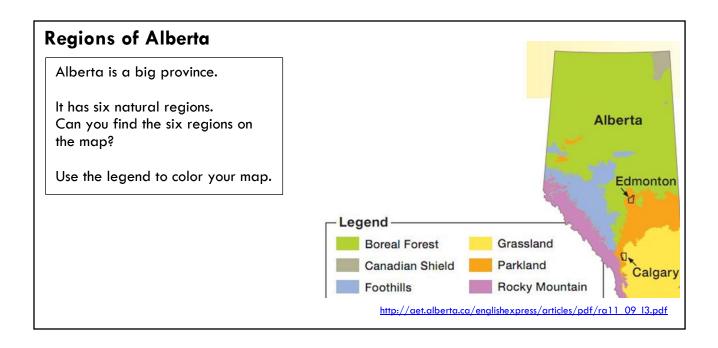
• In what ways do the physical geography and natural resources of a region determine the establishment of communities? (LPP)

• How are natural resources used by Albertans (i.e., agriculture, oil and natural gas, forests, coal)? (ER, LPP)

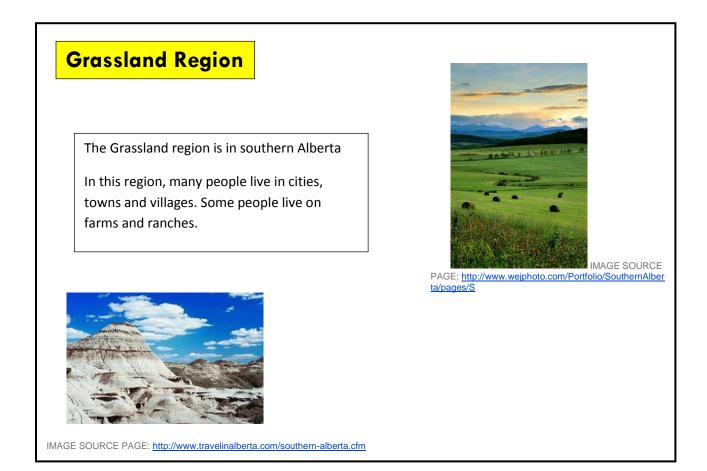
• How do Albertans deal with competing demands on land use (e.g., conservation, solar and wind power, recreation, agriculture, oil exploration, forestry)? (ER, LPP)

• Whose responsibility should it be to ensure the preservation of national parks, provincial parks and protected areas in Alberta? (C, LPP, PADM)





Zooming In...Alberta's Regions – (Learn Alberta) http://www.learnalberta.ca/content/sszi/en/index.html



#### Land

- Hoodoos
- Barley crops
- Bodies of water Red Deer River, Milk River, Old Man River, Bow River, Elbow River



IMAGE SOURCE PAGE: http://www.albertabarley.com/policy/updates/upd ates.html



IMAGE SOURCE PAGE: http://www.panoramio.com/photo /4607700

IMAGE SOURCE



PAGE: <u>http://allglobalphotos.com/search/meandering.html</u>

# **Grassland Region**

### **Plants**

• Before settlers, there were tall grasses and few trees, but most of the area is now farm and ranch lands.

#### Why would this happen?



PAGE: http://albertawilderness.ca/issues/wildlands/milk \_river-ridge



IMAGE SOURCE PAGE: http://www.ualberta.ca/~anaeth/research team.html

### Animals

 Before settlers, there were huge herds of buffalo. When the buffalos moved as a herd, they sounded like thunder. There were also large herds of antelope and deer. Grizzly bears and cougars also roamed the grasslands.

#### All of these animals are not living in the grasslands in such large numbers today, why is that?

 Today, a few small herds of pronghorn antelope, deer, rattlesnakes, swift fox and burrowing owls.



IMAGE SOURCE PAGE: http://theintelhub.com/2010/09/16/deer-with-chronic-wasting-d IMAGE SOURCE PAGE: http://www.huntingtripsrus.com/pronghorn-antelope-hunting IMAGE SOURCE PAGE: http://www.srd.alberta.ca/FishWildlife/WildSpecies/Reptiles IMAGE SOURCE PAGE: http://www.cpaws-southernalberta.org/events/capture\_wild IMAGE SOURCE PAGE: http://westcountry.wolfcreek.ab.ca/Wildlife%20Resources

## **Grassland Region**

### Land Use (Natural Resources)

- The Oldman River Dam near Pincher Creek helps store water for dry periods and is also used to create hydroelectric power.
- Crops canola, wheat, barley, sugar beets, alfalfa, hay – What are these crops used for?
- Irrigation Why is this necessary?
- Oil and Gas
- Wind plant/farms Pincher Creek



IMAGE SOURCE PAGE: http://www.uleth.ca/vft/Oldman\_River /OldmanDam.html



IMAGE SOURCE PAGE: http://www.worldofstock.com/closeups/BEN1186.php

#### Climate

- very low rainfall 30-40 cm per year
- less snow than other regions
- arid/very dry
- The Badlands have desert like conditions

It is important that Alberta's water resources are used carefully. Why?



IMAGE SOURCE PAGE: http://www.uleth.ca/vft/Old man\_River/Irrigation.html



**Drought** – What is drought? Not enough precipitation to meet the needs of people or crops. What are the effects of drought? Why does this happen in this region? Warm

temperatures evaporate water from the

land, not allowing crops to grow. People

need to irrigate in order for crops to grow.

IMAGE SOURCE PAGE: http://www.irrigationsaskat chewan.com/ICDC/forage.h tm



IMAGE SOURCE PAGE: http://www.wingrider.net/Canada/Pagep54.htm IMAGE SOURCE PAGE: http://www.tripadvisor.ca/Attraction\_Review-g815290-d536 IMAGE SOURCE PAGE: http://www.absoluteastronomy.com/topics/Writing-on-Stone IMAGE SOURCE PAGE: http://canadabadlands.com/2010/02/highlights-of-our-can IMAGE SOURCE PAGE: http://www.visualphotos.com/image/1x5601435/waterton\_ IMAGE SOURCE PAGE: http://photobucket.com/images/Smashed+head/

Jobs –

What types of jobs do you think are available in this region?

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