

CGC1P Unit 1: The Diversity of Canada's Natural Landscapes

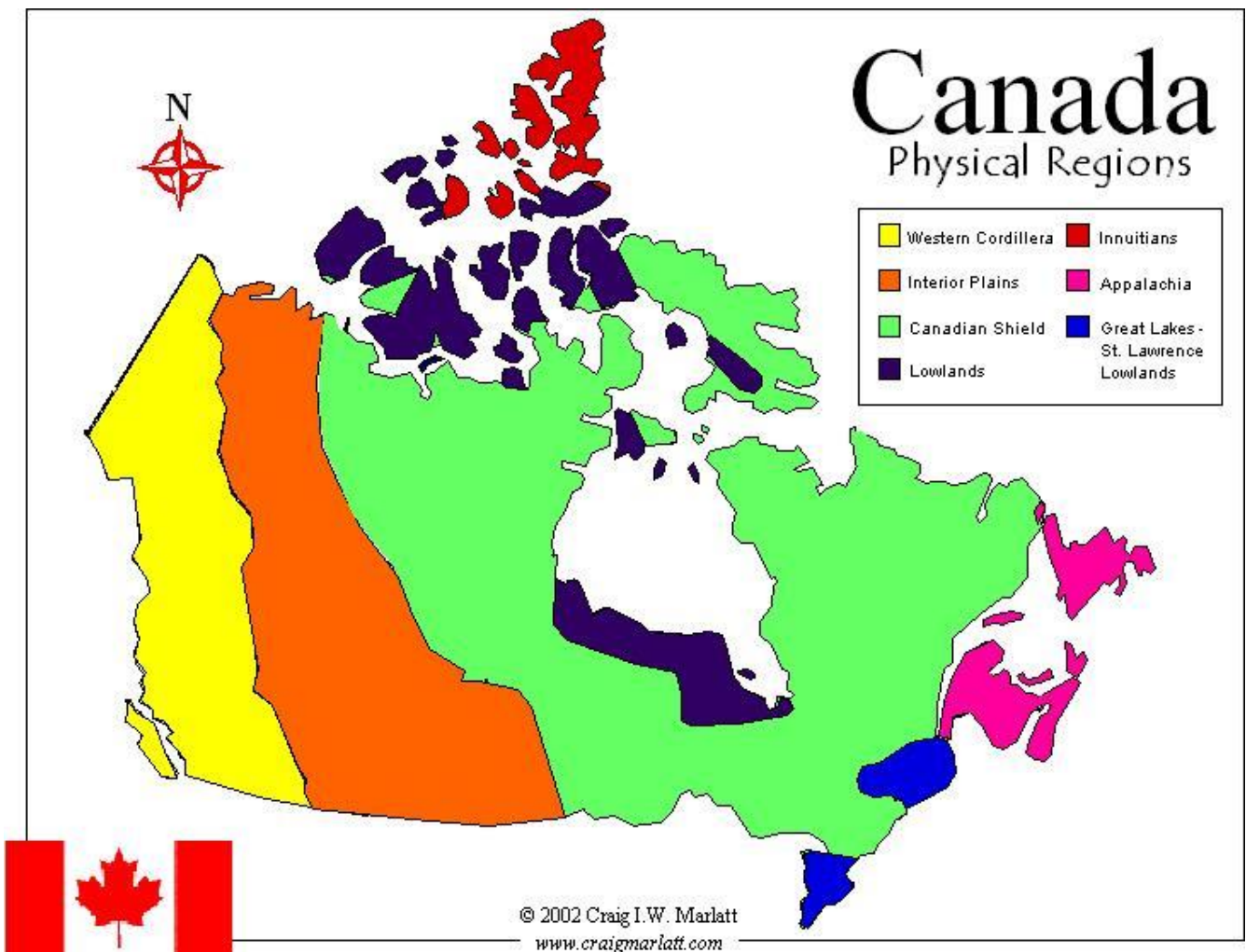
Activity 4: Landforms

Overview

Hundreds of millions of years ago tectonic forces created spectacular land features in Canada. At the same time erosional forces have worked to wear down those land features. Even today those opposing forces are still sculpting Canada's landforms. In this activity you will research investigate Canada's landforms.

Lesson

Canada's Landform Regions



Landform Formation in Canada

Millions of years ago the **Canadian Shield** was a mountainous area. This mountainous area was formed from volcanic action. The volcanoes are long gone. Ever since, the area has had erosion which has leveled the mountains so that they no longer exist. Some of these erosion forces include ice ages, when huge glaciers covered what later became Canada.

Today the Canadian Shield is relatively flat. The ground is bedrock, old igneous rock. This landform is called a shield because water cannot go through the rock (it is impervious), so it is like a shield. The water sits on the rock, making thousands of lakes. The Canadian Shield covers almost 50% of Canada.

Where did the top parts of those old mountains go? *They became sediments. These areas surrounding the shield are where these sediments have become layers of rocks.*

Lowland Areas in Canada

The Interior Plains

The Interior Plains have been formed by the sediments from the shield, and by the shallow seas which once covered the area. Over millions of years the plains were built up in layers. Where there were seas with coral reefs, there are now oil and gas in that layer. Where there were swamps, there are now coal deposits. The minerals washed into the seas are now mined, like the potash which is used for fertilizer.

The Interior Plain has not only been built up, it is also constantly eroding. The layers are getting worn away. Layers of soft materials wear away faster than areas of hard materials. This has led to three levels of elevation on the Interior Plain, divided by escarpments. It's like three giant steps as wide as provinces which go down from Alberta to Manitoba. Today the Interior Plain is a dry area. The former lake bottoms are flat lands. There are great dinosaur skeleton discoveries in southern Alberta and Saskatchewan.

Great Lakes - St. Lawrence Lowlands

The Great Lakes - St. Lawrence Lowlands is two areas joined into one region. The Great Lakes are in Ontario. The shores of the St. Lawrence are in Ontario and Quebec. This area is south of the Canadian Shield. These two areas are separated by a thin part of the Canadian Shield near Kingston, Ontario.

In the Great Lakes area, the land was formed by the action of glaciers. These glaciers moved large amounts of sediments from the shield and dumped them across the Great Lakes area. The glaciers gouged out basins, like rough-shaped bowls, which are the lakes. The Great Lakes are huge basins.

Today the Great Lakes - St. Lawrence Lowlands is the most populated area of Canada. About 50% of Canada's population lives there, although it covers only about 14% of Canada's total land area.

Arctic and Hudson Bay Lowlands

The Hudson Bay - Arctic Lowlands are two areas joined into one region.

The Hudson Bay Lowlands is the area south of Hudson Bay and James Bay. It seems to sit in the middle of the Canadian Shield. After the last ice age, this area was covered by water. The water along the

borders of the Hudson and James Bays is mostly gone now (evaporated); these are the Hudson Bay Lowlands.

The Arctic Lowlands are in northern Canada. There are islands in Nunavut and the Northwest Territories which are part of this landform region, just north of the Canadian Shield. There are not many people living here, because there are few resources for human activity.

Mountain Areas in Canada

The Appalachians

The Appalachians mountains are on the east coast. These are the oldest mountains in Canada. The forces of erosion have slowly shaved off layer after layer of the mountains over millions of years so that they are now more like rolling mountains and hills. The layers have minerals which are found in sedimentary rocks.

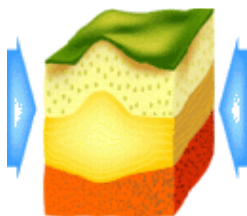
The Innuitian Mountains

The Innuitian mountains are in Northern Canada. They are younger than the Appalachians. Though there are minerals in them, they are not mined because of the climate, which causes permanently frozen ground.

The Western Cordillera

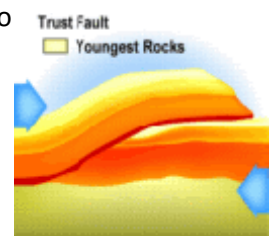
The Western Cordillera is a really interesting part of Canada. There are several mountain ranges here, including the Rocky Mountains, the Columbia Mountains, and the Coast Range. The mountain ranges in this area were formed in two different ways.

The Rocky mountains are the youngest mountains in Canada. Since they have not had much time to erode, they also have some of the tallest mountains in Canada.



The Rocky and Columbia mountains are fold mountains. They were formed as two tectonic plates moved against each other, pushing up the land in between.

The Coast Mountains were formed by the movement of two plates. The heavier Pacific Plate is sinking below the North American Plate. Along this area, there are fault lines, making this the most active earthquake region in Canada.



Volcanic activity also contributed to building the mountains along the coast. There are still volcanoes considered active in this region, though none have erupted in Canada in over a hundred years.

Assignment

Complete the following organizer.

LandForm	Description	Development of (how it was formed)
Innuitian Mountains		
Western Cordillera		
Appalachians		
Arctic-Hudson Bay Lowlands		
Interior Plains		
Great Lakes-St. Lawrence Lowlands		
Canadian Shield		