Social Studies 9

UNIT 2 – GEOGRAPHIC INFLUENCES ON IDENTITY: PLACE AND PEOPLE

Inquiry Questions

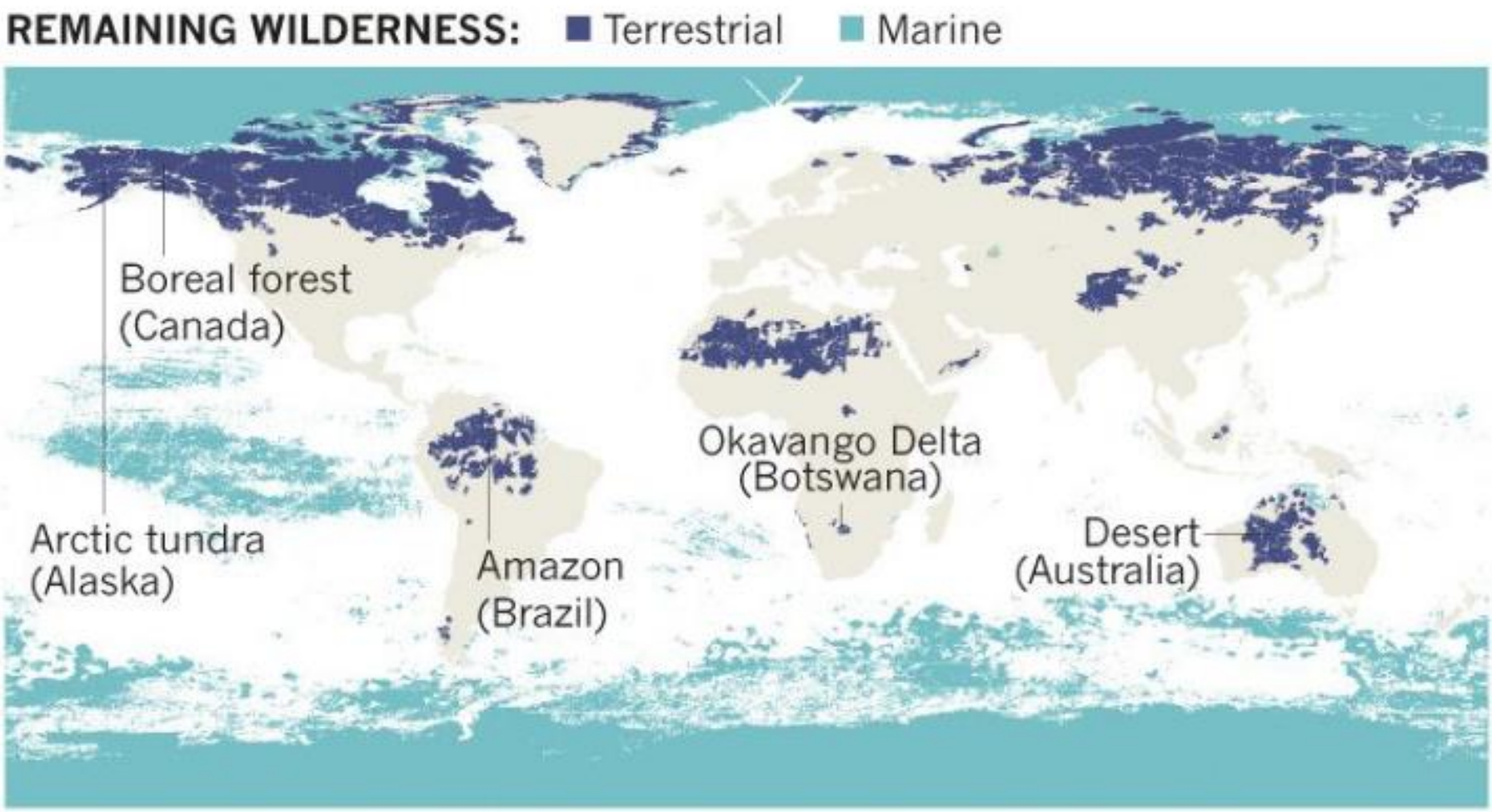
- **Does where we live influence our Canadian identity?**
- **What significance does our geography/location have on who you are?**
- **How have we altered Canada's landscape?**

Canada

- Canada is the world's second largest country in area.
- It borders three oceans and extends across six time zones. Canada is not only geographically large –- it is also incredibly diverse.
- The size and variety of Canada's geographic landscape, and the response of the diverse peoples who have inhabited it, have played a significant role in shaping Canadian identity(ies).

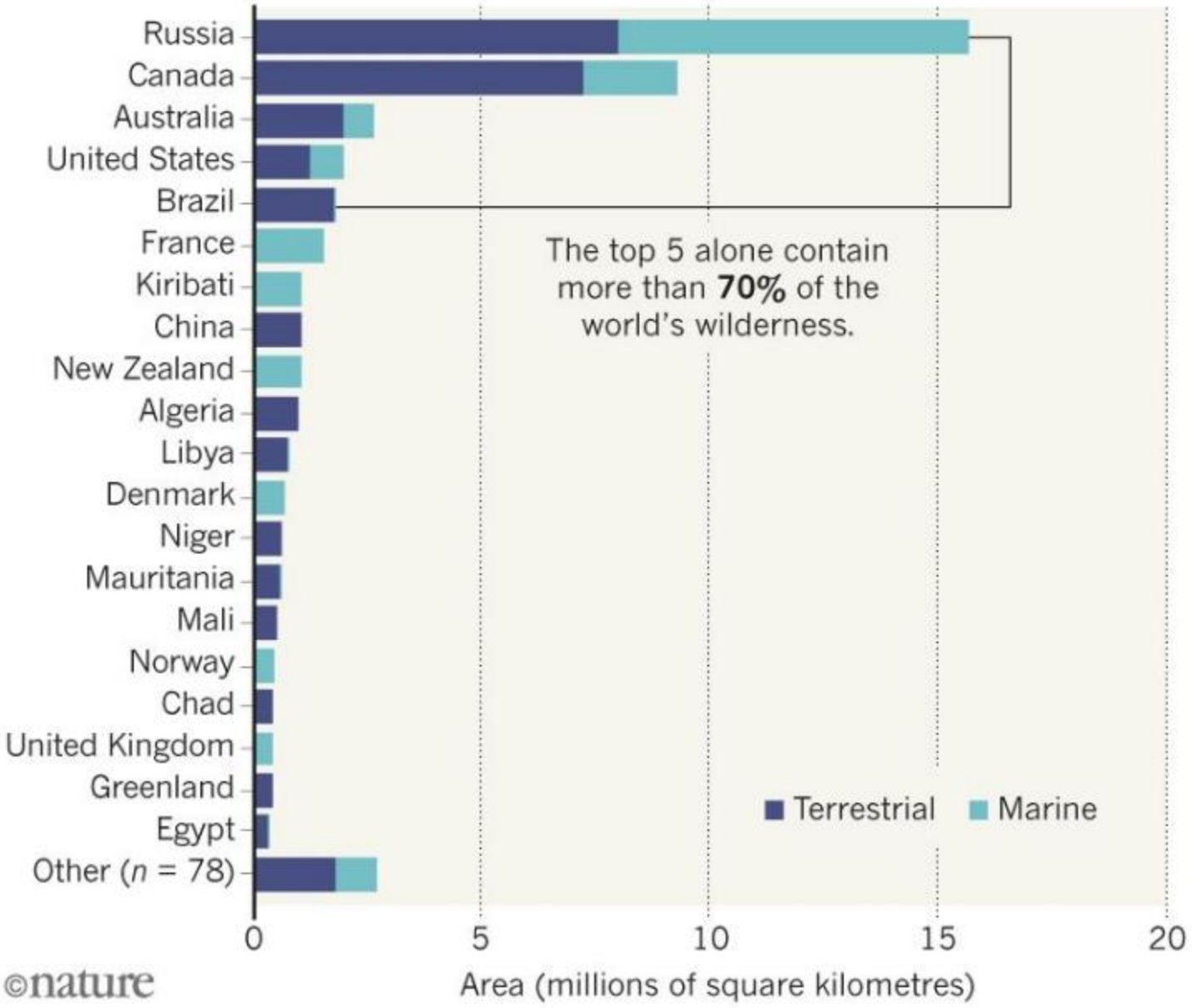
THE HUMAN FOOTPRINT

77% of land (excluding Antarctica) and 87% of the ocean has been modified by the direct effects of human activities.



THE WILDEST COUNTRIES

Twenty countries contain 94% of the world's wilderness, excluding Antarctica and the high seas.

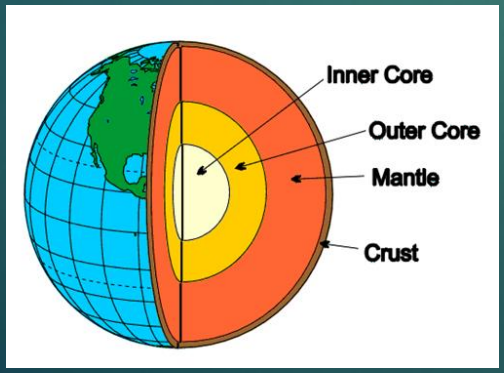


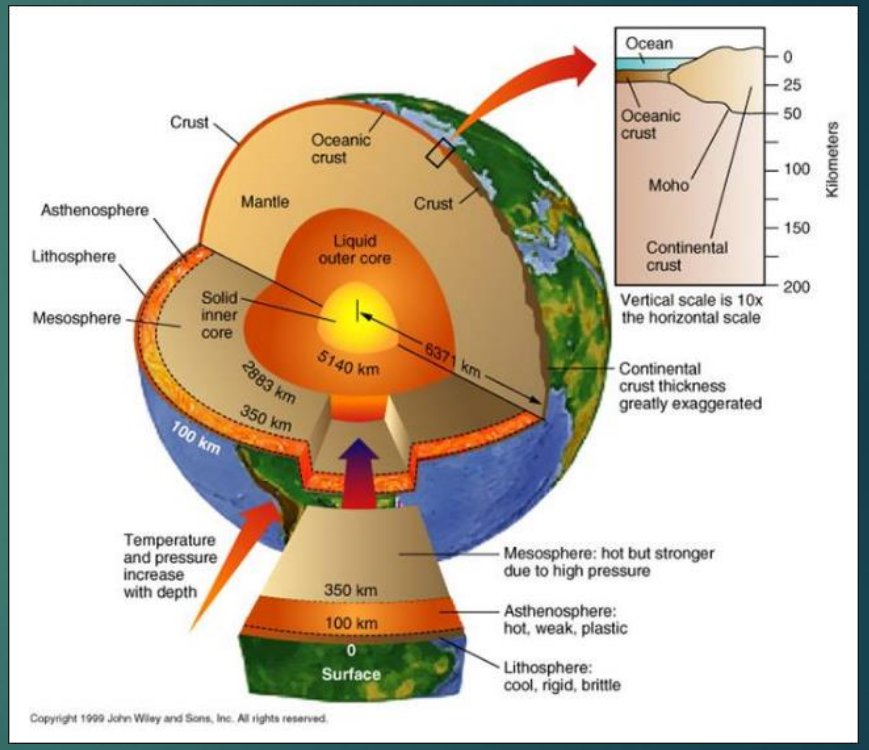

If some countries have too much history, we have too much geography.
(Mackenzie King)

The Structure of the Earth

- To understand the forces that create Canada's physical landscape we must understand the structure of the earth.

- The earth is made up of four layers





The Four Layers of the Earth

- **Inner Core:** Solid and hot because it is under a lot of pressure.
- **Outer Core:** Liquid material that surrounds the inner core.
- **Mantle:** A liquid and semi liquid layer that exists between the outer core and crust the upper part is known as the asthenosphere, this section is involved in plate tectonics.
- **Crust (Lithosphere):** A solid but brittle outer layer of the planet
- Video: Structure of Earth

The Theory of Continental Drift

- A theory suggested by German geologist ***Alfred Wagner*** in 1915
- He examined the shape of the continents, rock structures, and recovered fossils to come up with his theory.
- He proposed that the Earth's crust is not solid but made up of plates moving upon the mantle.
- He believed there was once a super continent called Pangea and one sea called Panthalassa

- Video: Continental Drift

Plate Tectonics

- **Plate Tectonics:** The theory that the earth's plates interact to produce mountains, trenches, earthquakes, and volcanoes.

- The moving of the earths plates causes the following:
  - Earthquakes
  - Volcanos
  - Mountains
  - Tsunamis

- Video: Plate Tectonics

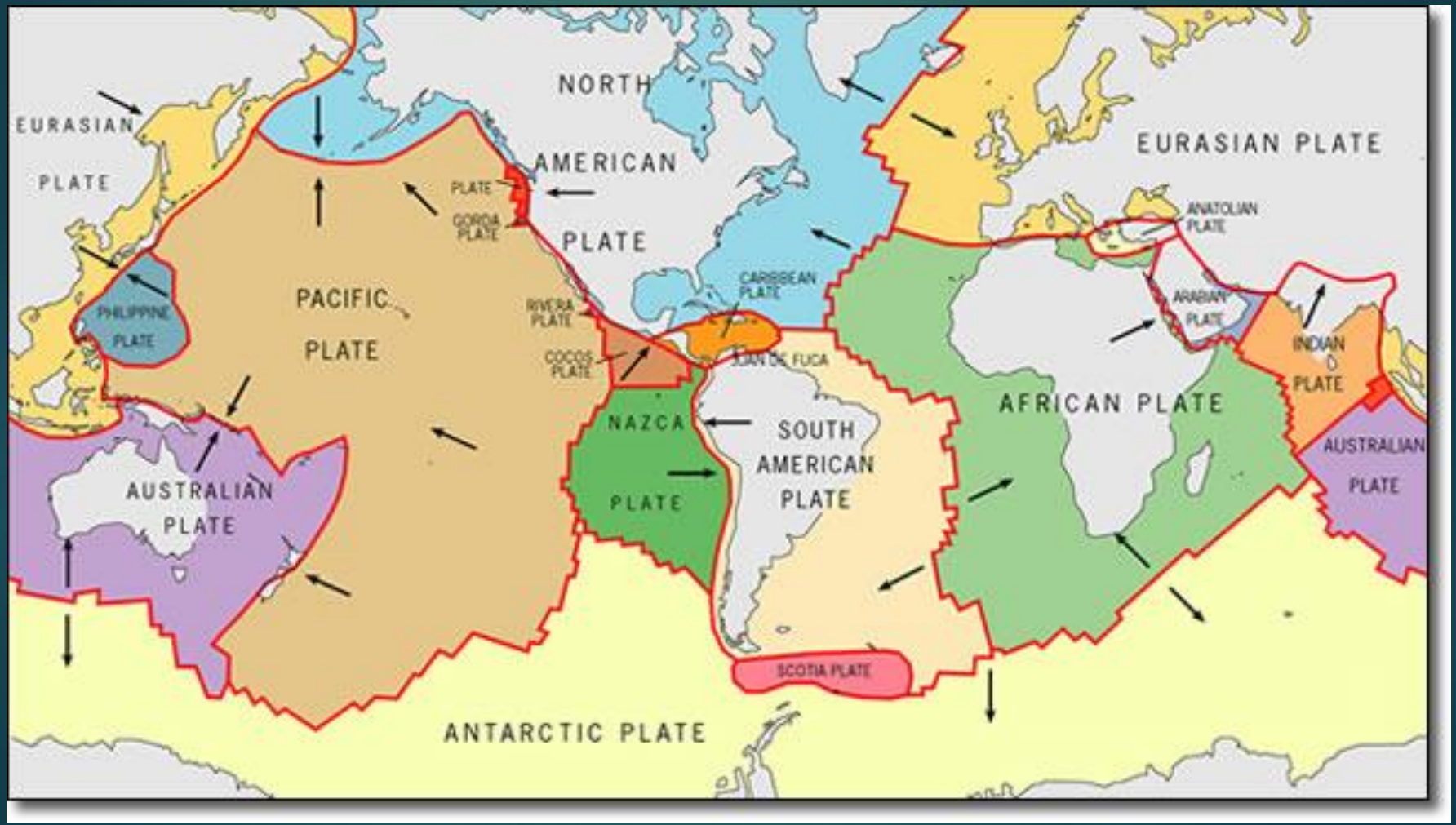
Tectonics and Canada

- Canada is on the ***North American Plate***
- It moves West away from Europe at 2-4 cm per year
- **Mid Atlantic Ridge:** Area of the Atlantic Ocean where the sea floor is expanding.
- Off the west coast of Canada there is a subduction zone.
- **Subduction Zone:** Area where one plate is pulled down beneath another creating volcanoes and earthquakes

- Video: Mid Atlantic Ridge
- Video: Subduction Zone

North American Plate

Tectonic Plates



Creating Landforms

- **Topography:** The natural features of the land's surface.
  - Topography is described using the following terms
    - **Elevation:** Height above sea level
    - **Relief:** The difference in elevation between points
    - **Gradient:** The steepness of slopes
    - **Geology:** Types of rocks and the history of them
    - **General appearance:** What do the features look like

- **Landscape:** an areas landforms together with its cover of vegetation water, ice, and rock.
  - This includes all human features

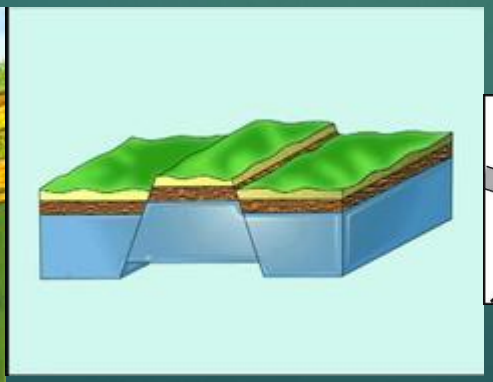
Describe the topography of this photo.

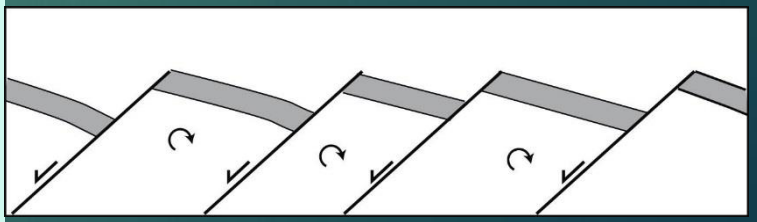
Mountain Making

- **Landforms are created by:**
  - Movement of the earth's crust
  - Volcanoes

Movement in Earth's Crust

1. ***Fold Mountains:*** Occur When two crustal plates push together and the land bends due to the force of compression
2. ***Fault Block Mountains:*** Occur when moving magma separates, or compresses plates
   - Separation causes block mountains
   - Compression causes tilted blocks





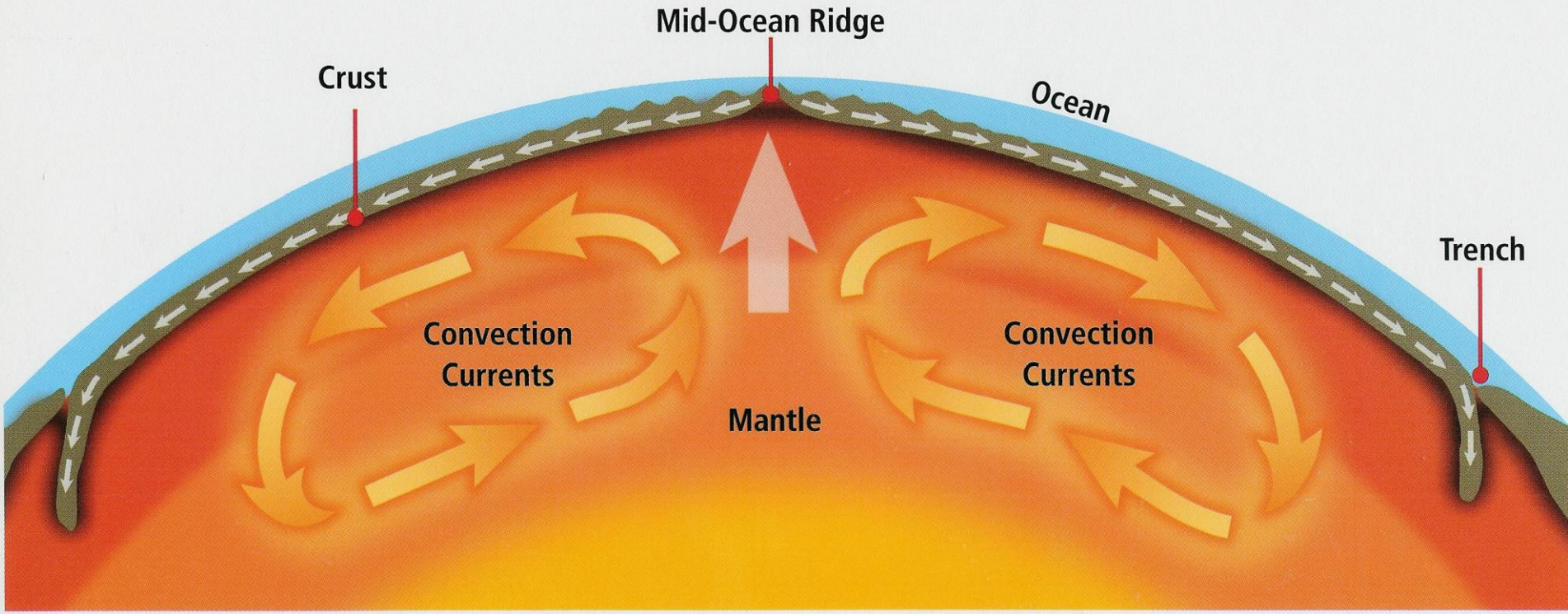
Volcanos

- A volcano is most commonly a conical hill or mountain built around a vent that connects with reservoirs of molten rock below the surface of the Earth.

- Lava (liquid rock), gases and molten rock fragments called Ash OR Cinders flow through a fracture in the crust.

These flows can be either violent eruptions or mild, slow flows!

Convection currents in the mantle



According to one theory, convection currents in Earth's mantle drag along tectonic plates. Here the currents move two plates apart.

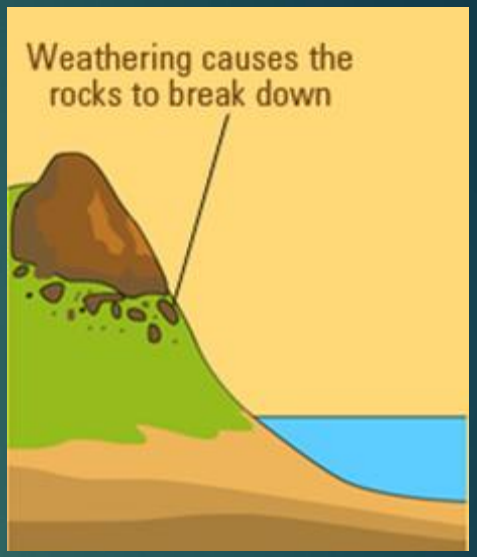
What causes them to erupt?

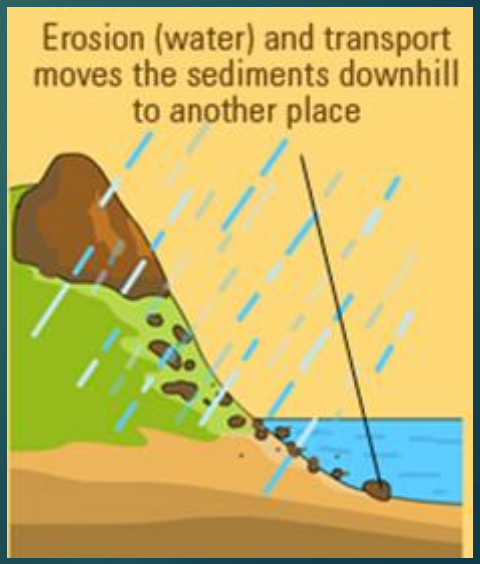
- **Driven by buoyancy and gas pressure…**
- **Molten rock, which is lighter than the surrounding solid rock, forces its way upward and may ultimately break though zones of weaknesses in the Earth's crust.**
- **Molten rock below the surface of the Earth that rises in volcanic vents is known as *magma*.**
- **After it erupts from a volcano it is called *lava*.**

How Landforms are Shaped

- **The topography we see is shaped by four factors:**

1. **Mountain building:** How landforms are created
2. **Weathering:** the wearing down forces of the atmosphere.
3. **Erosion:** The moving of weathered material
4. **Deposition:** Where eroded materials are dropped create new forms





Canada's Landform Regions

- Canada has ***eight*** landform regions that are based on:
  - **Age of rock**
  - **Type of rock**
  - **Relief**
  - **Gradient**
  - **Process that has shaped the area**

Canadian Shield

- Oldest rock in Canada
  - 2 billion years old
- Foundation for other landforms
- Most of the shield has shallow acidic podzols
  - Support coniferous growth
  - Bad for farming
- Covers most of central Canada

Appalachian Mountains

- Formed around 375 million years ago when the Eurasian plate and the North American plate collided to form the super continent Pangea
- Mountains have been worn down by ice and water
- Typical height of the mountains is 1000m
- Covered mostly by mixed forest
- Found in most of Atlantic Canada

Western Cordillera

- Consists of a series of parallel mountain ranges
  - Coast Mountains
  - Columbia Mountains
  - Rocky Mountains
- Many mountains over 3000m
- Many valleys with farming potential
- West facing slopes have great forests
- Found in British Columbia, Yukon, and Western Alberta

Innuitian Mountains

- Found in the far North
- Many over 2000m tall
- Steep sided
- Too cold for trees to grow

Arctic Lowlands

- Area to the south of the Innutian Mountains
- Mostly tundra
  - Tundra: treeless plain
- Located mostly in Nunavut

Interior Plains

- Found between the Shield and Western Cordillera
- Created when a inland sea receded
- Made up of three prairie planes separated by two escarpments
  - Steep slopes
- Fertile soil known as chernozem.
- Found in Alberta, Saskatchewan, Manitoba, and North West Territories

Great Lakes St. Lawrence Lowlands

- Found to the south of the Canadian Shield
- Flooded by Champlain sea nearly 10000 years ago.
- As sea receded left a flat area of very fertile soil
- Soil known as brown earth
- Extends from South Western Ontario along the Great Lakes and through Quebec

Hudson Bay Lowlands

- A low area of the shield with a build up of Paleozoic rock to a depth of 2000m
- Located in northern Ontario and Manitoba
- Flat and poorly drained
- Covered by swamps and trees

Regionalism

- What is regionalism?
- How are Canada's regions unique?
- What are the regions of Canada?
- How do you identify yourself?
- How are the regions divided up?

- **Group Work- Each group will analyze one region of Canada. Identify the location, physical and cultural attributes and political perspective. Pg. 52- 54 textbook.**