## Unit 2: Chapter 2

Canada's Physical Geography

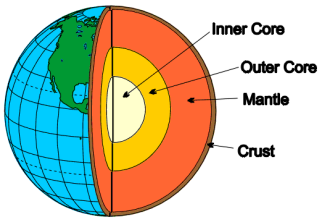
## Intoduction

- Canada's geography (landforms and climate) impacts Canadian Identity.
- We will start this chapter with two questions in mind.
  - What are Canada's landforms?
  - What is Canada's climate?
- Through these two questions you should begin to learn how where we live impacts who we are as a people.

## Building Landforms

- Before we can look at what is on the surface of the earth we must look at what is below the surface.
- Canada has some of the oldest rocks in the world. Many of them dating back to 4 billion years ago. As we work our way below the surface we find that the earth is divided into many layers.

## Layers of the Earth



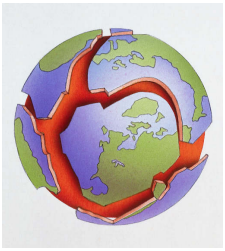

- Using your text define the following terms. Look at the diagram in your book, what term is missing from the diagram on the board. Add it to your list and define it as well.

## Movement of the Crust

- The mantle, is made of a melted rock called **magma**. It is a hot, relatively dense and slow-moving fluid.
- This material causes the earths crust to move. The crust is divided into areas called plates. The movement of these plates is called **plate tectonics.**

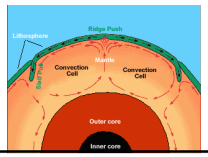
## Plate Tectonics

- Tectonic plates move or float on top of the mantle(more details in world geography). However they do not float freely.

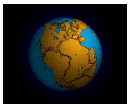


http://hamertech.wikispaces.com/Plate+Tectonics

- The plates are forced in specific directions by the flow of magma beneath. Just like a boat caught in a current plates move with the flow of magma.
- The magma forms convectional currents. The magma closer to the core heats and then rises towards the surface as its density decreases. Once the rising magma reaches the lithosphere it moves in opposite directions.



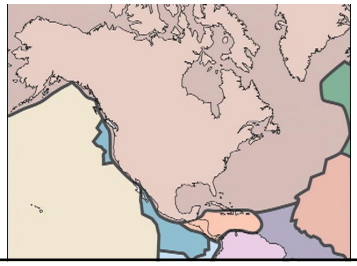

- Because we now know that the earth's plates we can make deductions about the past. A German scientist Alfred Wegener proposed a theory of **Continental Drift**.
- He believed that all the earth's continents were once part of a super continent called Pangaea.



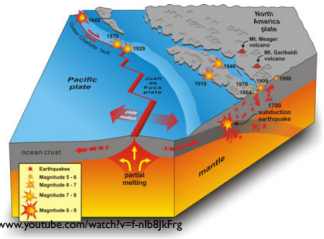
- Using your text write down the evidence for Wegener's theory.

## Canada's Crust

- Canada is located on the northern part of the North American Plate.



- The North American Plate is moving 2 to 4 cm's per year as it separates from the Eurasian Plate.
- The Plate moves against the Pacific Plate creating a **subduction zone**.




- http://www.youtube.com/watch?v=f-nlb8JkFrg

## Assigned Work

1. Using Figure 2.4 and your knowledge of plate tectonics figure out why the edges of the Pacific Plate has been nicknamed the "Pacific Ring of Fire"?
2. Explain why Eastern Canada experiences relatively few major earthquakes.