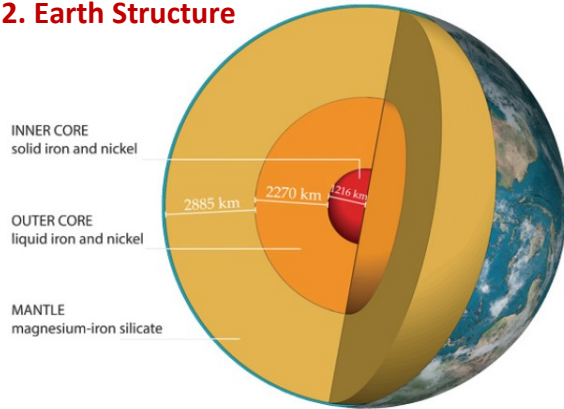


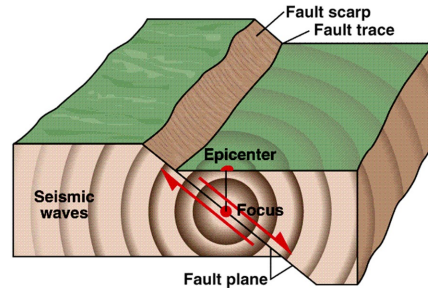
# GEOGRAPHY 8.3. HAZARDS

## 2. Earth Structure

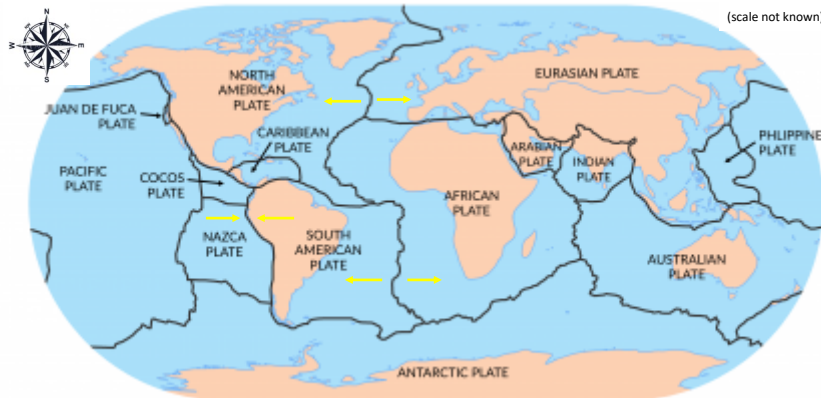


## 5. Earthquake Concepts

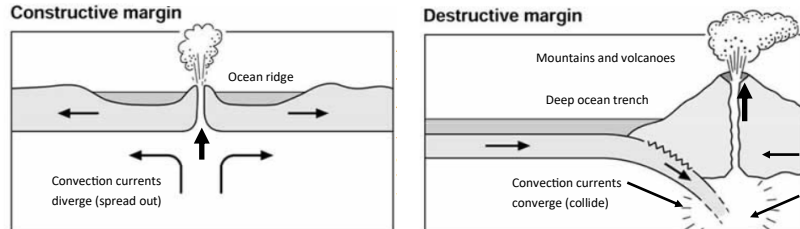
Earthquakes are a violent release of strain energy within the crust of Earth. The constantly churning convection currents in the mantle are responsible for slowly moving the crust around. However, the tectonic plates making up the crust are often being forced together or past each other and get stuck—building up huge amounts of energy; eventually it has to be released!



## 3. Tectonic Plate Boundary map



## 4. & 5. Tectonic Plate Boundaries



Convection currents under the crust in the mantle are slowly dragging the crust apart. To fill the gap, magma bursts up onto the seafloor (or out of volcanoes sometimes above sea level at these margins) and cools as lava forming new crust. This effectively means the seafloor is spreading and the continents on either side are moving apart. Volcanoes and earthquakes are gentle in these locations.

Convection currents here are converging (colliding). The denser oceanic crust sinks and grinds past the thicker, less dense continental crust. The friction destroys and melts the oceanic crust turning it into magma. The buckled and cracked continental crust allows the magma to violently break through out of volcanoes. Huge pressures released along these boundaries when the plates move cause massive earthquakes.

## Natural Events

These natural events just happen in nature:

- Volcanic eruption
- tsunami
- Blizzard
- drought
- tornado
- earthquake
- Tropical storm
- wildfire
- Avalanche
- mudslide
- flood

## The Human Factor



The actions and locations of people put them at risk. For example, living on floodplains, living near tectonic boundaries, living in poverty and changing the climate all contribute to increased risk to people.

## 1. Natural Hazards

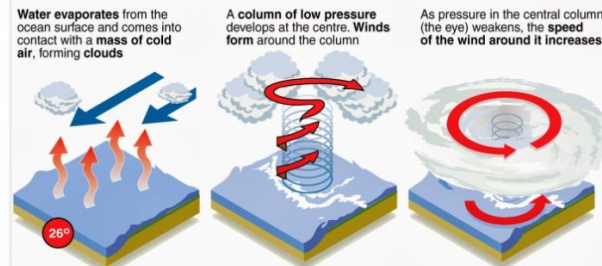
13km deep focus	Maximum estimates say around 316,000 were killed	Illnesses in refugee camps	Half of the country's schools affected
Magnitude 7.0 on Richter scale	Already was the poorest country in western hemisphere.	A local tsunami added to the hazards of the quake	Thousands of orphaned children
300,000 people injured	Epicentre very close to the capital city Port-au-Prince	1 million made homeless	20% of people lost their jobs as a result
3 million affected	7 years later in 2017, there are still 2.5M in need of aid	\$3.1Bn raised in international aid afterwards	300,000 buildings destroyed

## 6. Haiti 2010 earthquake example

## 8. Tropical storm formation

### How tropical storms are formed

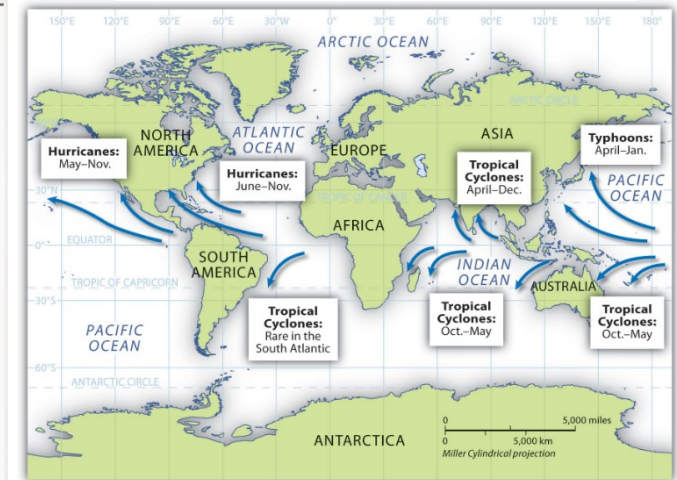
High humidity and ocean temperatures of over 26°C are major contributing factors



### Saffir-Simpson hurricane wind scale

Category 1	Category 2	Category 3	Category 4	Category 5
Minimal damage	Moderate damage	Extensive damage	Extreme damage	Catastrophic
Winds 119-153 kph	Winds 154-177 kph	Winds 178-208 kph	Winds 209-251 kph	Winds 252 kph and more

## 7. Tropical storm names and locations



## Natural Hazards key terms

Natural event	natural hazard	mantle	oceanic crust	continental crust
tectonic plates	convection currents	converge	diverge	magma
volcano	Earthquake	focus	epicentre	Fault line
Richter scale	constructive margin	destructive margin	tropical storms	
	hurricanes	cyclones	typhoons	Saffir-Simpson scale
	storm surge	low pressure	eye	eyewall
				thunderstorms

<b>Continental crust</b>	Less dense that has the continents one
<b>Oceanic crust</b>	Dense crust under the oceans
<b>Tectonic plates</b>	Slabs of crust making the surface of Earth
<b>Plate margin</b>	A joint in the crust between two plates
<b>Epicentre</b>	The location on the surface above an earthquake
<b>Focus</b>	Origin of earthquake within the crust of Earth
<b>magma</b>	Molten rock in the mantle under the crust of Earth
<b>Fault line</b>	A weakness or crack in the crust
<b>Seismic waves</b>	The shockwaves given off during an earthquake