GEOGRAPHY TERM 2

Dear Grade 7s, through these difficult times it is important for you to still focus on your education and be the best that you can be. The world will soon go back to the way it was and so will school. I have created some summaries for the Geography work for Term 2 please study them and then attempt the activities from your textbook.

Regards, Miss Ankiah

P.S. Term 2 Geography is pretty exciting!

Section 1: The structure of the earth (3 hour lesson)

Topics to be covered in this section:

- Earths Core
- Earths Mantle
- Earths Crust
- How the Earths Crust moves
- Introduction to tectonic plates
- Tectonic plate movement

Definitions

Earth

n. The third planet in the solar system and the only one with life.
"The Earth has a great variety of living things."

core

n. the central part if the Earth made up of two parts: the inner core, probably made of solid iron and nickel and a molten (liquid) outer core.
"The Earth's core is incredible dense."

mantle

n. the portion of the Earth, about 2900 km thick, between the crust and the core.
"The outer mantle is made of molten rock and minerals."

crust

n. the outer layer of the Earth, about 35 km deep under the continents and 10 km deep under the oceans
"The Earth's crust is made up of tectonic plates."

lithosphere

n. the crust and upper mantle of the Earth.
"The lithosphere is constantly changing due to the action of erosion, Earthquakes and volcanoes."
hydrosphere

n. the water on or surrounding the surface of the globe, including the water of the oceans and the water in the atmosphere.
"The oceans are part of the hydrosphere."
atmosphere

n. the gaseous envelope surrounding the Earth; the air.
"The Earth's atmosphere is a very thin layer of gas that protects us from the harmful rays of the Sun and the vacuum of space."
Earthquake

n. a series of vibrations induced in the Earth's crust by the abrupt rupture and rebound of rocks in which energy has been slowly accumulating.
"Japan frequently suffers Earthquakes."
volcano

n. a vent in the Earth's crust through which lava, steam, ashes, etc., are expelled, either continuously or at irregular intervals.
"Mt.Vesuvius is a dormant volcano."
tectonic plate

n. the two sub-layers of the Earth's crust (lithosphere) that move, float, and sometimes fracture and whose interaction causes continental drift, Earthquakes, volcanoes, mountains, and oceanic trenches.

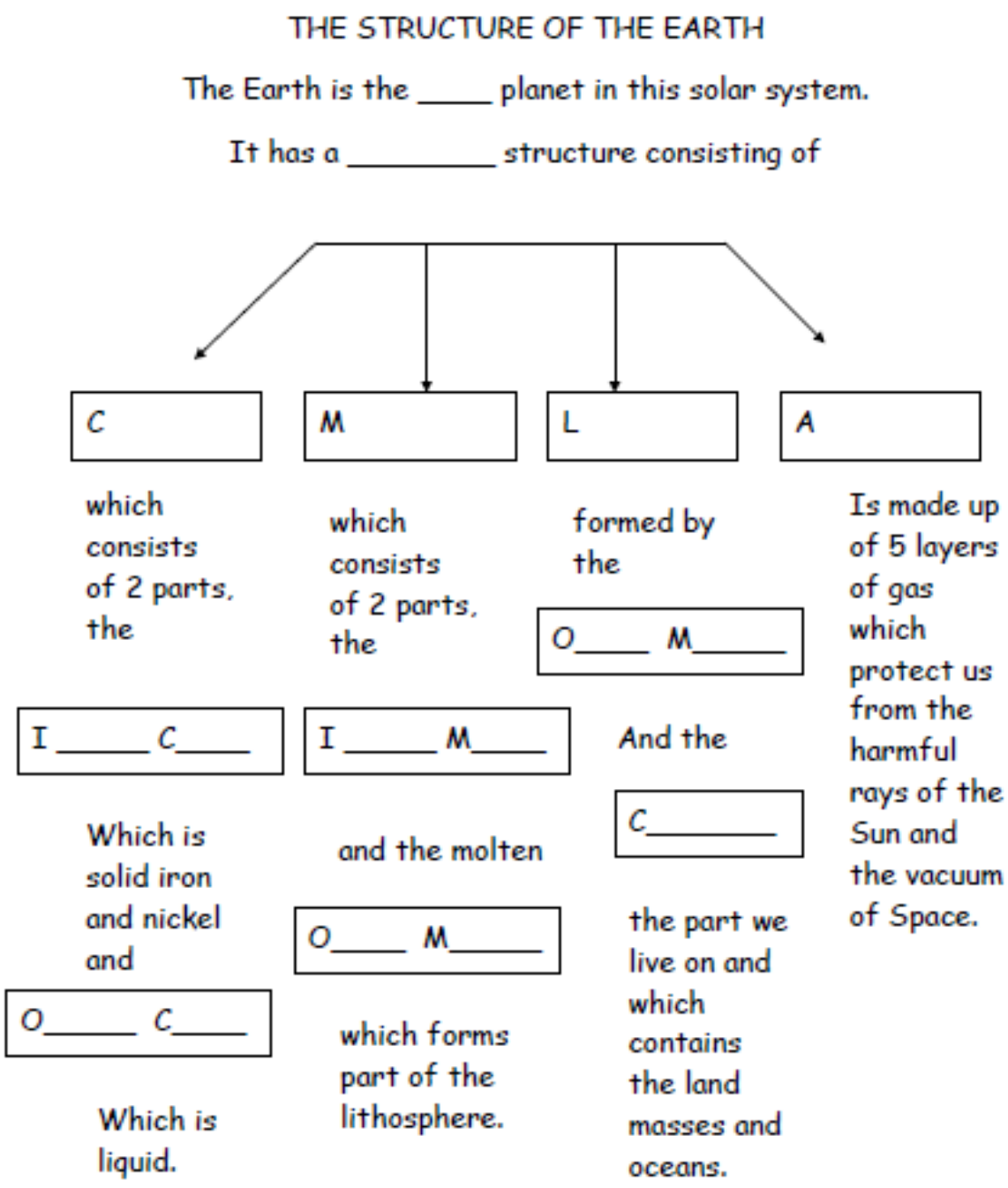
continental drift

n. the lateral movement of continents resulting from the motion of crustal plates.
"Continental drift has caused the surface of the Earth to change over long periods of time."
geology

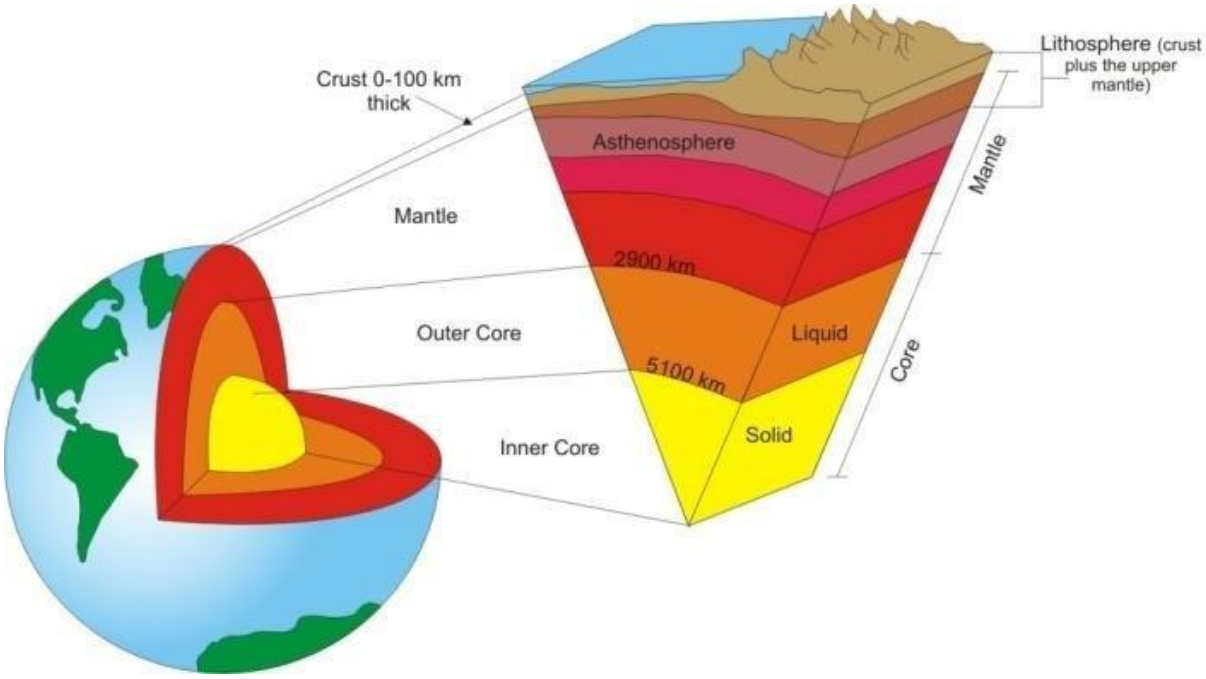
n. the science that deals with the dynamics and physical history of the Earth, the rocks of which it is composed, and the changes that the Earth has undergone or is undergoing.

"Someone who studies geology is called a geologist."

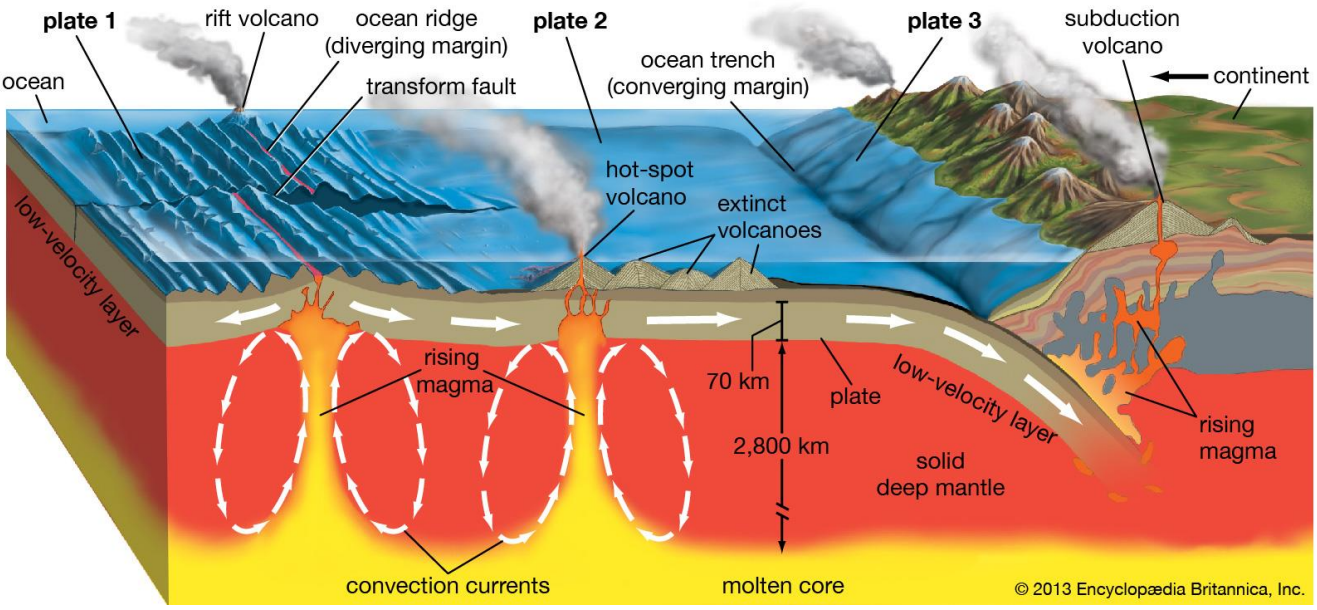
From studying the above definitions attempt the activity below:



Below is a diagram representing the internal Earth, be sure to study and remember this diagram extensively



Below is a diagram representing various tectonic plate phenomenon. You need to learn and understand this diagram to know basic tectonic plate concepts



Tectonic Plates and Earthquakes EXPLAINED 😊

Tectonic plates are basically parts of the earths crust that are no longer connected to another. These parts of the earths crust float around due to various factors such as gravitational acceleration. These broken pieces of the earths crust, known as tectonic plates float above hot magma (liquid rock). When these tectonic plates move too fast, they create the possibility of bumping into one another.

When two tectonic plates "bump" into one another the cause a collision known as an "Earthquake". Earthquakes though are not only caused by plate tectonic collisions they can also be caused by human beings who over mine the earth and drill to deep into its crust. If this happens, we then get a manmade earthquake. Certain mining processes are very harmful to the earth and can damage its crust causing dangerous earthquakes. Earthquakes can also be felt due to volcanic eruptions.

So, an easy way to understand what an earthquake is, is to understand that anything which causes a crack/break/disruption upon the earth can be known as and earthquake.

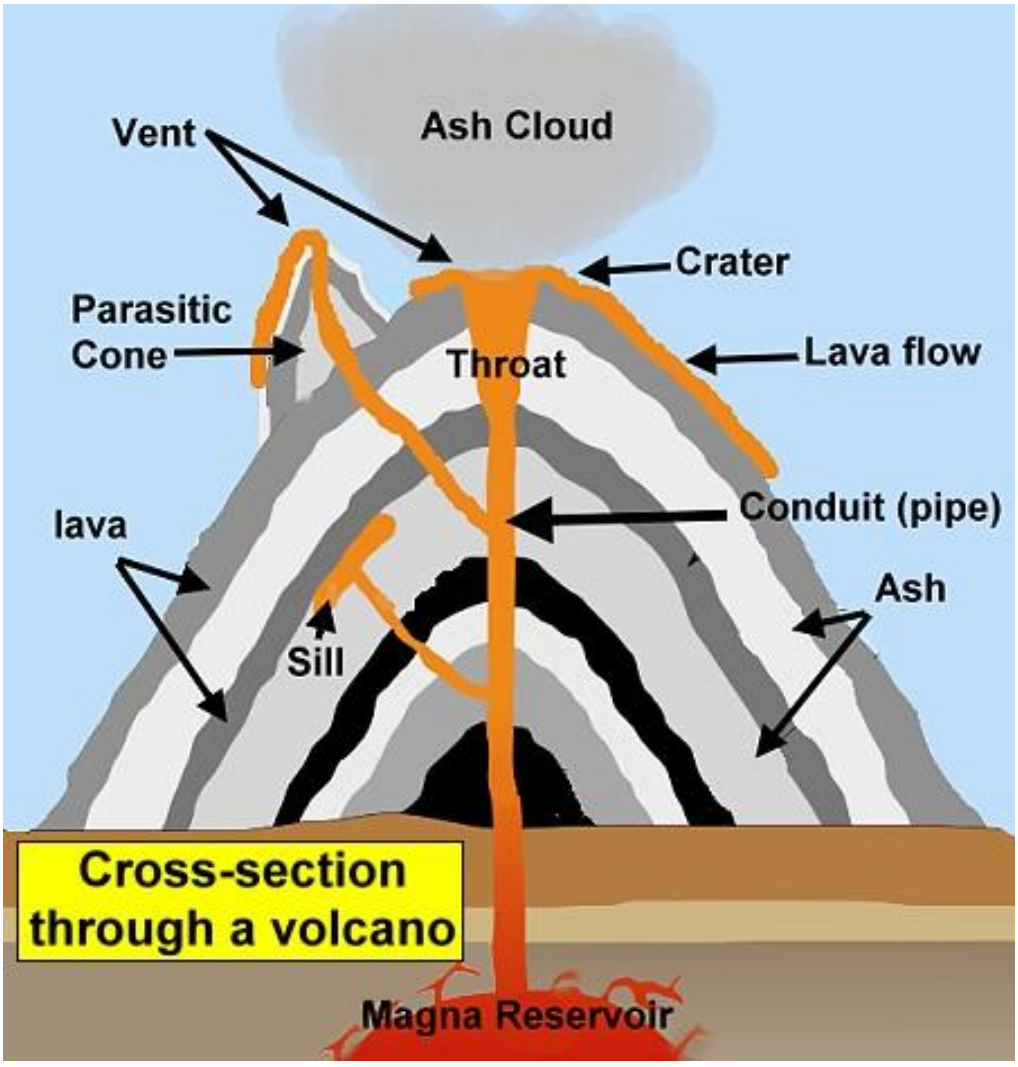
The diagram I have given you to learn summaries the concepts that I have just explained. When school starts, I will teach this diagram to you extensively in class. In the mean time practice redrawing and labelling it.

Section 2: Volcanos (1 hour lesson)

Topics to be covered in this section:

- Locations of volcanos around the world
- What causes a volcano to exist
- Co-relation between volcanos and earthquakes

Below is a diagram representing the internal of a volcano, be sure to study and remember this diagram extensively

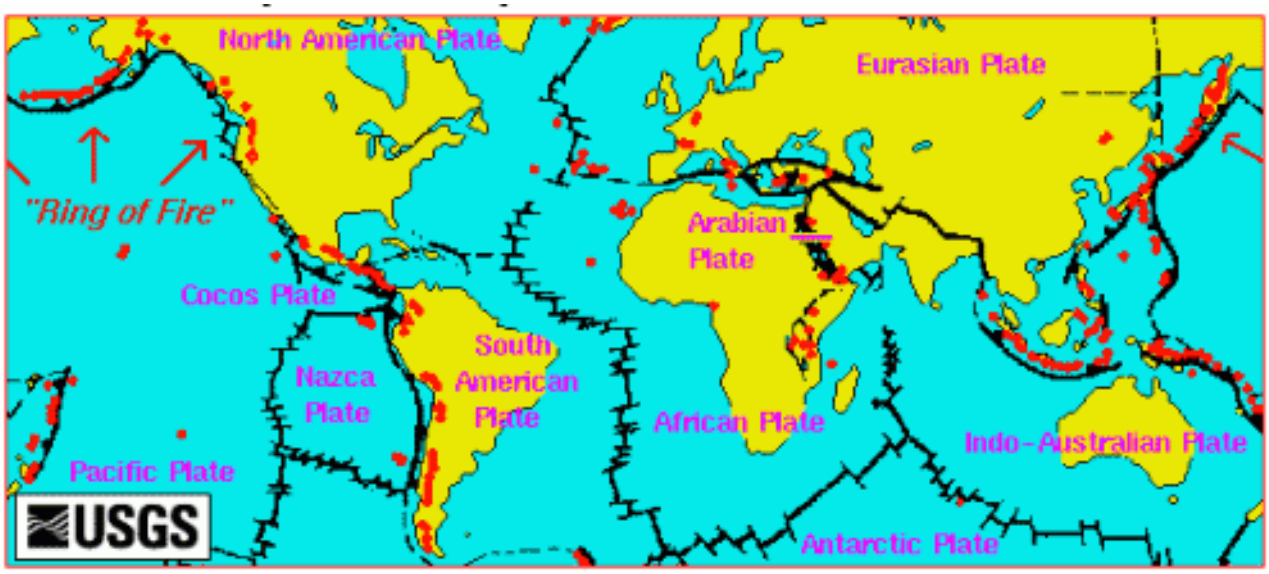


Volcanos EXPLAINED 😊

A volcano is a rupture in the crust of a planetary-mass object. A planetary-mass object can be any type of planet anywhere within the universe, such as Earth. A volcano allows hot lava, volcanic ash, and gases to escape from a magma chamber below the surface of the Earth.

So, sometimes the Earth doesn't feel too good inside, when this happens it "overheats" due to a huge amount of pressure when the pressure can no longer be contained underneath the Earth, it causes a huge explosion through a volcano, this can be known as a volcanic eruption. The volcano itself is a basically a tall mountain with a deep hole in the middle that allows the magma from underneath the earth to flow through it as molten lava. When the pressure underneath the earth's surface exceeds all that it can handle the magma under the earth gets released into the volcano and becomes molten lava this molten lava then overflows along the sides of the volcano.

Volcanos can be found mostly along tectonic plate hot zones. Meaning areas upon the earth with the most tectonic plate movement. It is important to understand that Tectonic plate movement can lead to earthquakes and also the creation or eruption of volcanos.



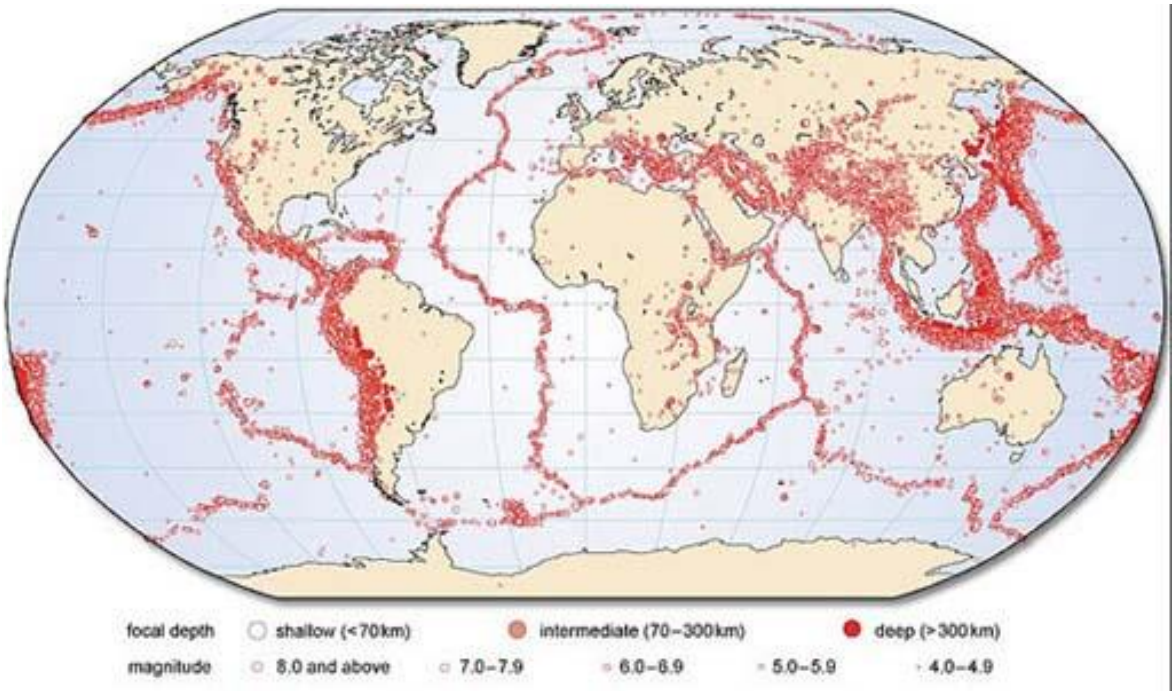
The red dots in the map above is where we can find most of the volcanos upon the earth.

Section 3: Earthquakes (4 hour lesson)

Topics to be covered in this section:

- Locations of Earthquakes around the world
- Causes of Earthquakes
- Effects of Earthquakes (injury, death, disease, displacement of humans, damage to infrastructure, fires and tsunamis
- Demographics of why some communities are at higher risk than others
- Demographics of how to reduce the impact of an earthquake
- Çase studies

In section 1 & 2 we discussed extensively the various types of Earth movements that can be found on our planet. These consist mainly of tectonic plate movement, earthquakes and volcanic eruptions. In this section (section 3) we will look at the complexities of Earthquakes.



The image above is a global map representing the areas upon the earth where we most commonly find Earthquakes. It is interesting to note that Africa doesn't experience many earthquakes, especially in South Africa. The reason for this is because our country is situated upon the hardest curst of the earth. Meaning that we don't experience much tectonic plate movement thus we don't experience tectonic plates bumping into one another therefore we will hardly ever experience earthquakes. From this diagram it is also important to

note that earthquakes can occur under the ocean upon oceanic crust. When this happens the strong underwater movements, due oceanic crustal movement causes extreme tidal waves known as tsunamis. Tsunamis can be very dangerous but if you live in south Africa you will probably never experience one.

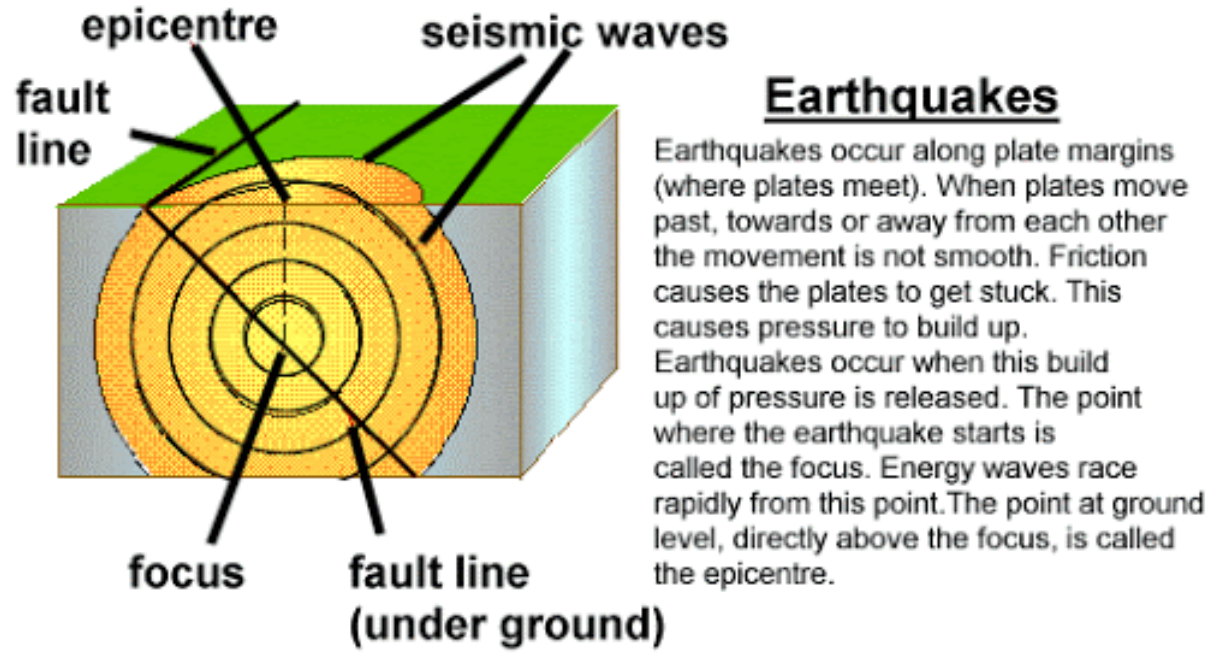
Why do earthquakes occur?

Earthquakes occur when the ground is subjected to so much force that it fractures or breaks. Tectonic plates usually always move slowly, but if they get stuck at their edges due to friction the stress/pressure on the edge needs to overcome the friction, thus an earthquake occurs releasing energy in waves that travel through the earth's crust and cause the shaking that we feel.

Watch the Youtube video in the link provided, it explains the key concepts about earthquakes:

https://www.youtube.com/watch?v=dJpIU1rSOFY

https://www.youtube.com/watch?v=FN6QX43QB4g



Above is a diagrammatic explanation of what causes an earthquake to exist, be sure to study and remember this diagram

Demographical effects of earthquakes:

Study and discuss the images below. If you're at home discuss them with your family members.

Effects:

So, from a realistic and scientific point of view earthquakes do not affect the earth, they affect the people on the earth. Sometimes it is naturally essential for the earth to experience an earthquake because it doesn't have a choice and that is how nature intended the earth to work. But for us human beings an earthquake can destroy lives, create poverty, cause disease and malnutrition. An earthquake basically destroys that part of the earth in every way not just in a physical aspect. When a very bad earthquake occurs people and the government have to work together to rebuild the damage. Sometimes countries run out of food because everything was destroyed in the earthquake, kids can't go to school or learn because their school may have been destroyed in the earthquake, your parents might be without jobs because the companies they work for may have been destroyed etc. In times like this and also in times like the corona virus the people of the earth suffer immensely but we have to keep having faith, helping one another and doing as we are told.

Discuss with your friends and family members creative ways in which we can help prevent the damage caused by earthquakes.

Section 4: Floods (3 hour lesson)

Topics to be covered in this section:

- Causes of Floods
- Effects of Floods (injury, death, disease, displacement of humans, damage to infrastructure, fires and tsunamis
- Demographics of why some communities are at higher risk than others
- Demographics of how to reduce the impact of a Flood
- Çase studies

Floods

Floods happen when there is too much water on the land, causing rivers, lakes and dams to overflow.

Certain things within our environment can cause floods to occur, these are:
- Heavy rain can quickly fill rivers and dams
- Steep slopes cause rainwater to run off the land very quickly
- Water flows fast over land that has lost its vegetation due to fires or too many animals grazing
- Tsunamis and big storms can flood coasts

Human beings also can be involved causing floods by:
- Building dams that can fill and overflow
- Removing natural vegetation to make fields for farming
- Covering the ground in cities with streets and buildings, causing water to flow fast
- Filling in wetlands and lakes that would normally store water from heavy rain

People and the earth can be affected by floods in many ways such as:
- People drown or are injured
- Crops and animals are destroyed, resulting in food shortages
- Fertile soil can be washed away by soil erosion, leaving land infertile
- Buildings, property and transport systems can be destroyed
- Sewage can be washed out of sewerage works, polluting food and water
- Diseases spread easily after a flood
- Coastal flooding can cover the land with salt water, poisoning the soil and plants

Millions of people across the world live with the danger of floods because their homes are close to rivers. Why do people live next to rivers?
- They use river water for drinking, cooking and washing
- They need water for watering their crops
- Land next to the river is flat and easy to build on
- There is not enough suitable land elsewhere, or it is too expensive
- They have ways to protect themselves against floods

Floods are natural and can't be stopped from happening, but people can reduce the damage by:

- Building walls and barriers along river banks and coasts
- Improving drainage to get rid of water from heavy rain
- Building settlements away from river banks
- Making laws to prevent people living in high-risk flood areas
- Teaching people about the dangers of flooding
- Using lakes, wetlands and natural vegetation to slow down water flow

Activity

Read newspaper articles about these and other floods that occurred recently. Make your own comprehensive list of the CONSEQUENCES a flood has on the lives of people as well as on their socio-economic activities.

Below are some images of floods, discuss these images with your friends and family members. Once you are done, compile your findings in a 50-word paragraph.