**I&S notebook**

Unit 1: Natural Hazards

*KC:*

*RC:*

*GC:*

*SOI:*

Hazard: A disaster which has happened mainly due to natural causes and doesn’t affect lives

Disaster: Mainly due to man-made causes and effects lives

Magma: Lava inside the earth surface

Lava: Lava on top of the earth surface

**Layers of the earth:**The 4 layers of the earth are: Crust, Mantle, Outer core and inner core

Crust:

Mantle:

Outer Core:

Inner core:

Earthquakes are caused when the tectonic plates which are in the crust of the earth, when those plates collide, move, shake or overlap each other, that causes seismic waves which causes earthquakes

There is a motion in the mantle known as the convection current and that current is in a circular movement. This causes the earth’s crust to move as well.

**Types of plate movements:**

When plates moves away from each other is called diverging plates

When plates are moving towards each other, they are known as converging plates.

When plates run parallel to each other and rub each other, they are called transforming plates, they cause friction.

Diverging plates move away from each other and they form a crack in the tectonic plates and then the lava from the mantle shoots up and causes volcanos

Converging plates move towards each other so when they converge, they often overlap each other and they collide hard and that results in mountains

**ATL Activity**

**1: Identify which description and which example match up with each type of plate boundary.**

Divergent: When two plates move away from each other. New crust is formed due to this process. (Mid Atlantic ridge)

Convergent (oceanic and continental): At this boundary, oceanic crust is sub ducted under the continental crust. Volcanic activity can occur due to magma that is forced upwards. (San Andreas fault)

Convergent (continental and continental): When two plates meet each other and subduction does not occur. Mountains can be formed by the pushing upwards of the crust at the plate boundary. (The Himalayas, the meeting of the indo-Australian and Eurasian plates)

Transform: Where two plates slide against each other, sometimes resulting in earthquakes. (Meeting point of the Nazca and South American Plates)

**Causes and consequences of hazard**

**Causes:**

1. When the tectonic plates move away from each other than that creates a crack in the earthen surface and a lot of magma is released from the mantle through the crack and that results in earthquakes
2. When plate tectonics move towards each other and when they collide, they often cause earthquakes because of the movement and collision and also form mountains
3. When tectonic plates move parallel to each other than that causes friction between the plates which causes earthquakes and a lot of heat is generated as well.
4. Because of the convectional current happens, the shaking of the surface causes earthquakes
5. Because of the water weight thrashing on the ground through dams and reservoirs, the weight causes earthquakes
6. Taking out ground water from the surface, then that de-stabilizes the land and create an earthquake.
7. The heat and friction resulting from the geothermal energy causes earthquakes as well.
8. When some fluids get injected into the deep ground/wells then that can make the tectonic plates slippery
9. Skyscrapers often cause earthquakes as it puts too much pressure on the ground beneath it.

The richer scale:

This is how we measure the intensity of the earthquake

The point of measuring earthquakes is so we can predict further earthquakes

My answer for why we need to classify earthquakes

I think that it is important to classify earthquakes in terms of their strengths because we can then analyse the data and predict where the different earthquakes will strike and where earthquakes occurring are the most. The purpose of this can be so we can prepare people before the actual earthquake so that they can get ready

The disaster management handles the earthquakes related stuff

**Consequences of earthquakes:**

How earthquakes will affect different areas:

|  |  |  |
| --- | --- | --- |
| Impact on: | Short term effects | Long term effects |
| Human Impacts: | * Some people may get injured whilst the earthquake is going on | * People may get long term injuries and bruises like a broken spine, or a broken leg etc. |
| Social Impacts: | * Some venues like malls or parks may be damaged and that may ruin the social interactions between people and communities | * Some people whilst a major earthquake may lose their family or friends and that will affect their social interactions a lot in the long term also since there will be really sad. |
| Economic Impacts: | * Some people may loose some important and valuable things whilst the earthquakes are going on and that will take money to get back which will result in some economical problems | * The long term problems with economy will be related to the government as they will need to send care packages for people who have lost their homes and other things and also people with no insurance on their things will have a economical loss. |
| Political Impacts: | * The government will immediately need to provide resources to the people who got unlucky whilst the earthquake so that they don’t have any more deaths | * The government will need to start to revive the infrastructure and agriculture now because they need to have a smooth functioning country or town |
| Environment Impact: | * There will be huge environmental impacts as many green spaces will probably get thrashed and also people who have lost their homes will camp in these green spaces and make them un sanitary | * Since a lot of the environment may have got thrashed while the earthquake was going on, birds and animal’s long term life will be effected because they may have lost their shelters and food etc. |

What are volcanoes?

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How do volcanoes occur?

**Volcanoes erupt when 2 tectonic plates converge and the convectional current allows the magma from the mantle to shoot up magma which then gets released through the opening in the volcano in the form of lava. This is how a volcano occurs**