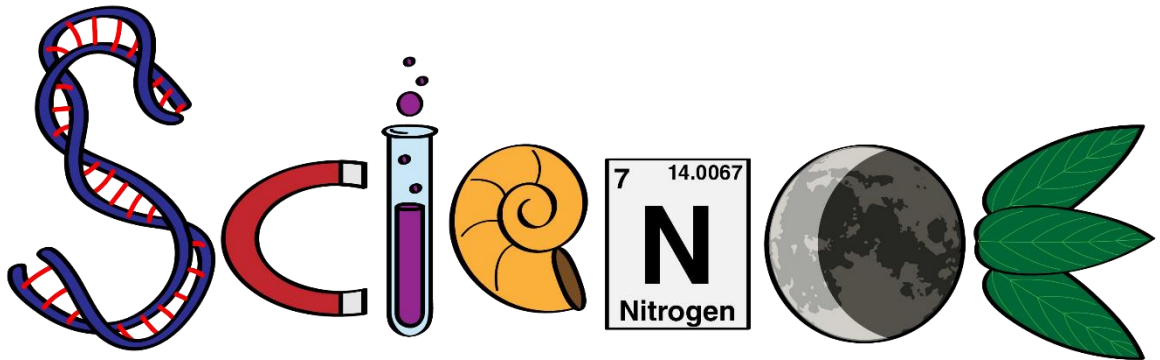




ASPIRE
INTERNATIONAL SCHOOL



Science Department

2023/2024

Year 4

Term 2, Week 6

Summary notes

Name:

Class:

Topics have been covered this term:

- **Unit 4 Earth and its habitats**

- * 4.1 The structure of the Earth

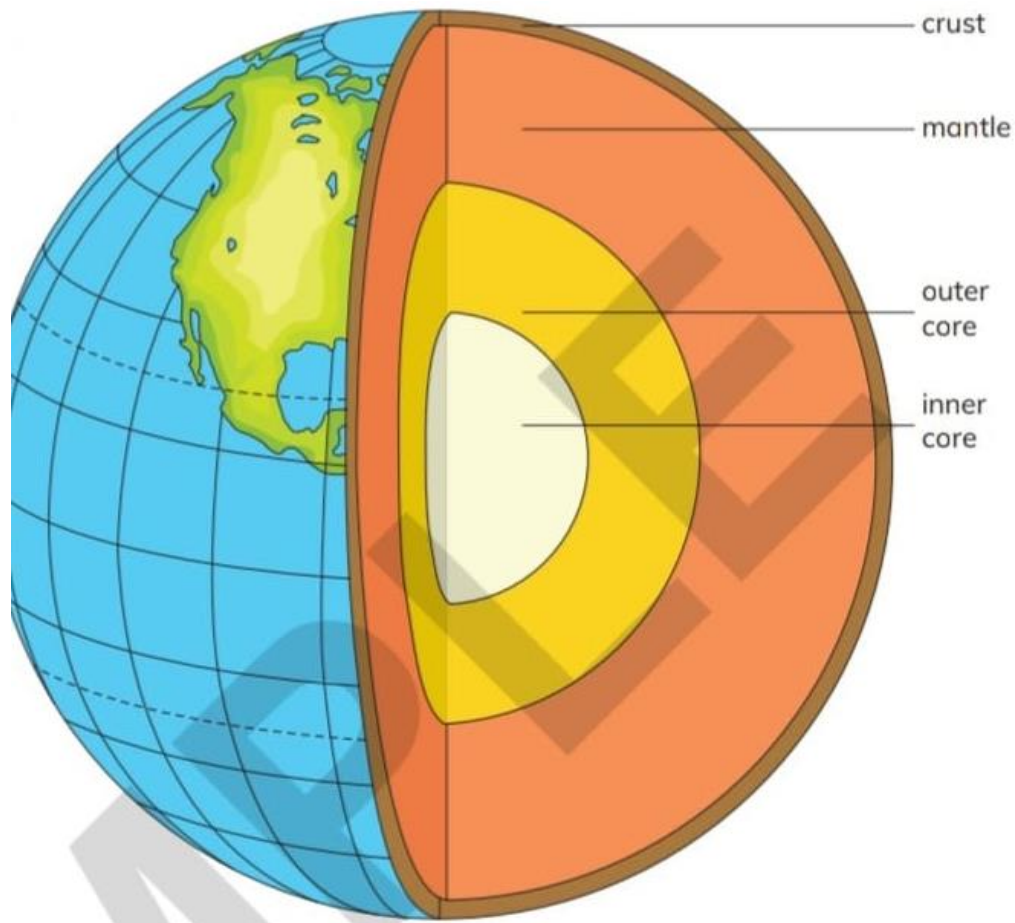
- * 4.2 Volcanoes

- * 4.3 Earthquakes

- * 4.4 Different habitats

4.1 The structure of the Earth

The internal structure of the earth is divided into 3 different layers: **Crust**, **mantle**, and **core**. The core is divided into 2 layers: **Outer core**, and **inner core**.



*** The crust:**

- 1- It's the outer layer of the Earth.
- 2- It's formed of rocks.
- 3- It's 5 Km thick under the oceans.
- 4- It's 70 Km thick under the lands.
- 5- Its temperature is 400°C.

*** The mantle:**

- 1- It's the middle layer of the Earth
- 2- It's formed of melted rocks called "**Magma**", it can move like a liquid.
- 3- It's 3000 Km thick. It's the thickest layer.
- 4- Its temperature is 1000°C.

*** The outer core:**

- 1- It's 3400 Km thick.
- 2- It's made of metals like, Iron and Nickel. The metals are liquid.

*** The inner core:**

- 1- Its temperature is 5000 - 6000°C. It's the hottest layer.
- 2- It's solid, due to the pressure of all the other layers.

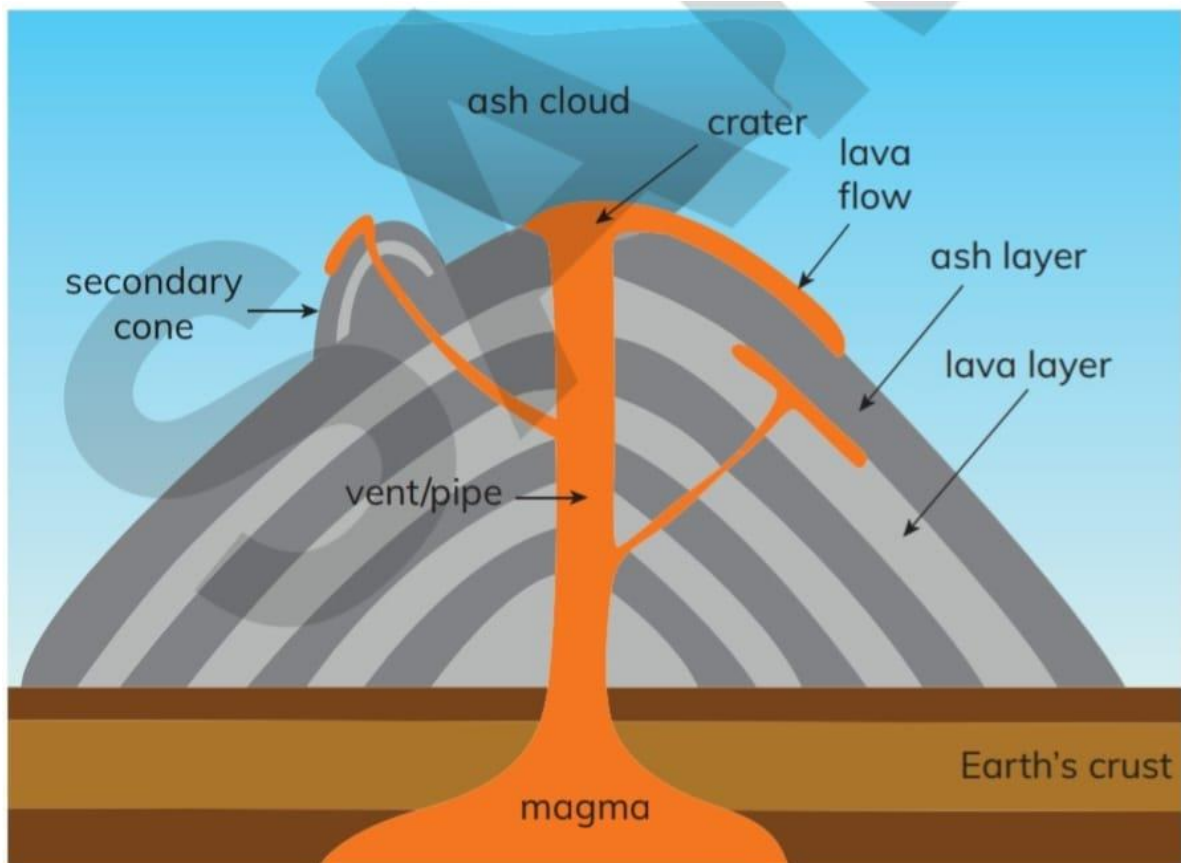
4.2 Volcanoes

How do volcanoes erupt?

Sometimes a big crack develops in the Earth's crust.

How do volcanoes erupt?

Magma from the mantle travels up the crack and erupts on the surface of the earth. This is called volcano. Once the magma erupts on to the surface it's called, "Lava".



* Some volcanoes send out rocks, volcanic ash and gases. All these materials flow up a “**Central pipe / Vent**”.

* During the eruption the vent widens at the surface to form a “**Crater**”.

* In composite volcanoes, the ash and lava build up a cone-shaped mountain with smooth sides. Some magma erupts through the cracks in the sides of the volcanoes we call it “Secondary cones”.

Which parts of the world have volcanoes?

Some areas of the world have a high risk of a volcanic eruption, because there’re many cracks in the Earth’s crust. We call these areas “**The Pacific ring of fire**”.

How do volcanoes affect people?

There’re positive and negative effects.

*** Positive effects:**

1- Underground water is heated by magma, when this water come out to the surface as hot as springs, which are tourists’ attractions.

2- Underground water is hot enough to heat people’s houses and make electricity.

3- Lava makes good soil. Ash fertilises the soil.

*** Negative effects:**

1- People can be injured or killed.

2- Lava burns and buries crops and buildings.

3- People become ill when they breathe in ash and poisonous gases.

Types of volcanoes:

1- The lava which flowed, cooled, and hardened into rocks. The layers of lava form a flat surface called “**Plateau**”.

2- The most common type of volcano is a “**Composite volcano**”, it has layers of ash and lava. The ash is burnt lava.

4.3 Earthquakes

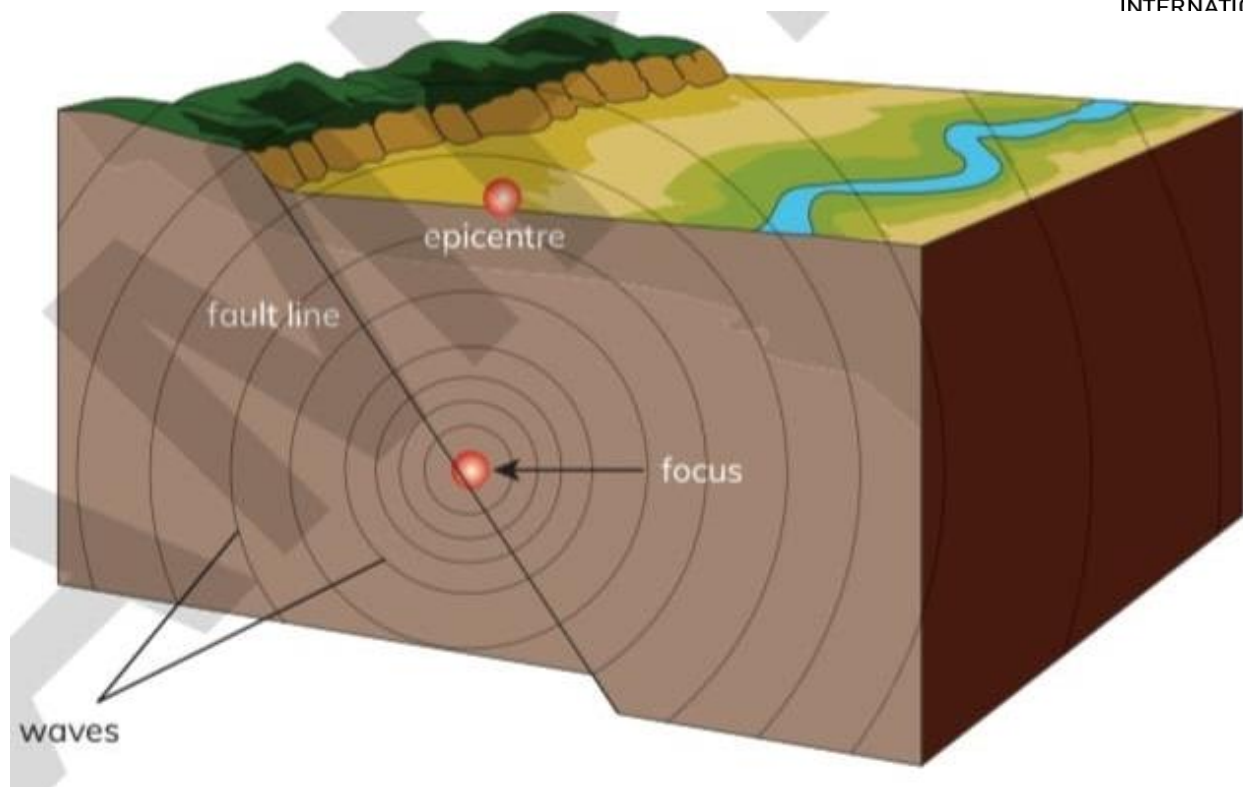
* Strong earthquakes can cause terrible damage. They also cause “**Landslides**”, when soil and mud slide down slopes.

How do earthquakes happen?

* It happens when there're sudden movements of rocks in the Earth's crust.

* The earth's crust is made up of huge piece of flat rocks, when 2 of these rocks meet, they rub together.

* This movement creates energy. The energy changes or transfers into waves. The waves travel from the crust to the earth's surface.



The diagram shows 2 important imaginary points, the “**Focus**” is where the earthquake begins inside the crust. The “**Epicentre**” it’s the worst damage at the surface which is experienced immediately above the focus.

* Tsunami:

- 1- It’s a huge sea wave.
- 2- It happens when there’s an earthquake or a volcanic eruption under the sea.
- 3- When a tsunami reaches a shallow “**Coastal area**”, the area along the border between the land and the sea, the wave can reach a height of 50 M.

4.4 Different habitats

Animals live in a habitat which suits them.

* Fish:

- 1- Fish have gills to breathe under water.
- 2- They have fins which help them swim.
- 3- Some types of fish live in warm water and other types live in cold water.
- 4- Fish sometimes swim very fast to escape or run away from their predators.

* Birds:

- 1- Not all birds can fly. Some birds have wings to fly.
- 2- The habitat that a bird lives in affects what the birds eats.
- 3- Birds have different sizes and shapes of beaks. These different beaks allow them to catch and eat different foods.

* Birds different habitats:

- 1- Birds which live near rivers or sea, they eat fish.
- 2- Birds which live in a grassland habitat, they eat seeds or insects.
- 3- Other birds live in a habitat that has lots of trees, they eat fruits, seeds, and small animals.

*** Types of birds:**

1- Pigeons: Small pointed beaks. They can crack open seeds with their beaks.

2- Starlings: Long pointed beak. They eat insects, worms, and berries.

3- Kingfisher: Large beak with sharp point, which helps them to catch fish.

4- Flamingo: Long flat beak that can strain small plants and animals from the water to eat them.



Thank
you