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🤎 Marie



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Layers of the Earth Guided Notes

- What do scientists use to understand the interior of the Earth?
 - Scientists record and study ______to help them understand the interior of the Earth.
 - Seismic waves are caused by _____, explosions, and ocean movements.
- There are two types of seismic waves.
 - <u>Pressure wave (p-wave)</u> which ______ through ______ and _____.
 - <u>Shear wave (s-wave)</u> which ______ through ______.
 - P waves travel through solid and liquid, but S waves do not travel through liquid. By observing seismic waves, scientists deducted that Earth's ______ is
- What are the layers of the Earth?

_____•

- Through studying seismic waves, scientists have determined 5 distinctive layers.
 - Crust, Upper Mantle, Lower Mantle, Outer Core, and Inner Core
- What is the crust?
 - The _____ outer layer of the Earth that we live on
 - It is the _____ layer.
 - It is either _____ crust or _____ crust.
 - Temperature is around 22 C
- What is Continental Crust?
 - Continental crust is the ______.
 - 8km to 70km thick
 - Mostly made of ______
- What is Oceanic Crust?
 - Oceanic crust is ______.
 - 8km thick

______ than continental crust due to pressure compacting it.

Mainly made of _____

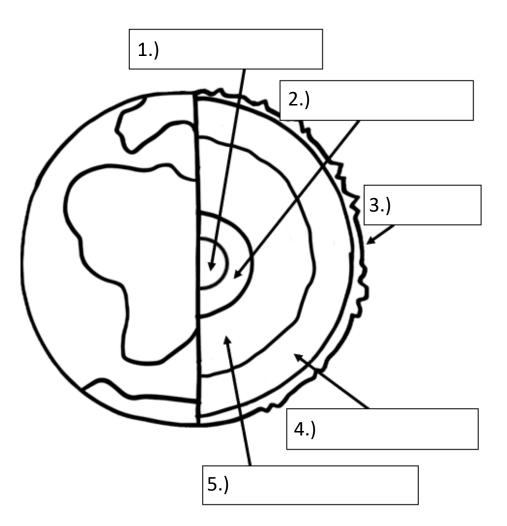
- What is the upper mantle?
 - It is more solid near the surface since temperatures are cooler.
 - As depth increases, it is ______ or ______
 - Its texture is like a ______.
 - Temperature: 1,400 3,000 C
 - Includes distinctive regions: _____ and _____.
- What is the lithosphere?
 - It is the _____ layer at the top of the Earth.
 - It includes the crust and the top part of the upper mantle.
- What is the asthenosphere?
 - This is the more _____ layer under the lithosphere.
 - It is thought to be molten rock, or magma.
 - _____ currents in this layer are thought to move the solid rock above it.
- What is the lower mantle?
 - Surrounds the outer core.
 - The rock is hot enough to melt but is _____ because of the immense
 - Temperature 3,000 C
- What is the outer core?
 - _____ layer of _____, ____, sulphur, and oxygen around the inner core
 - Its movement around the inner core is thought to create our planet's magnetic field.
 - Temperature 4,000 6,000 C
- What is the inner core?
 - Hot _____ of mostly _____
 - It is spinning.
 - Hot enough to melt metal but stays a solid due to the immense pressure surrounding it.
 - Temperature 5,000 to 6,000 C
 - 2500 km wide

Layers of the Earth Guided Notes

- What do scientists use to understand the interior of the Earth?
 - Scientists record and study <u>seismic waves</u> to help them understand the interior of the Earth.
 - Seismic waves are caused by <u>earthquakes</u>, explosions, and ocean movements.
- There are two types of seismic waves.
 - <u>Pressure wave (p-wave)</u> which moves through liquids and solids.
 - <u>Shear wave (s-wave)</u> which won't travel through liquids.
 - P waves travel through solid and liquid, but S waves do not travel through liquid. By observing seismic waves, scientists deducted that Earth's outer core is liquid.
- What are the layers of the Earth?
 - Through studying seismic waves, scientists have determined 5 distinctive layers.
 - Crust, Upper Mantle, Lower Mantle, Outer Core, and Inner Core
- What is the crust?
 - The solid outer layer of the Earth that we live on
 - It is the thinnest layer.
 - It is either continental crust or oceanic crust.
 - Temperature is around 22 C
- What is Continental Crust?
 - Continental crust is the ground we walk on
 - 8km to 70km thick
 - Mostly made of granite
- What is Oceanic Crust?
 - Oceanic crust is land under the oceans.
 - 8km thick
 - More dense than continental crust due to pressure compacting it.
 - Mainly made of basalt
- What is the upper mantle?

- It is more solid near the surface since temperatures are cooler.
- As depth increases, it is molten rock or magma.
- Its texture is like a thick fluid.
- Temperature: 1,400 3,000 C
- Includes distinctive regions: lithosphere and asthenosphere.
- What is the lithosphere?
 - It is the solid rock layer at the top of the Earth.
 - It includes the crust and the top part of the upper mantle.
- What is the asthenosphere?
 - This is the more pliable layer under the lithosphere.
 - It is thought to be molten rock, or magma.
 - Convection currents in this layer are thought to move the solid rock above it.
- What is the lower mantle?
 - Surrounds the outer core.
 - The rock is hot enough to melt but is solid because of the immense pressure.
 - Temperature 3,000 C
- What is the outer core?
 - Liquid layer of iron, nickel, sulphur, and oxygen around the inner core
 - Its movement around the inner core is thought to create our planet's magnetic field.
 - Temperature 4,000 6,000 C
- What is the inner core?
 - Hot dense ball of mostly iron
 - It is spinning.
 - Hot enough to melt metal but stays a solid due to the immense pressure surrounding it.
 - Temperature 5,000 to 6,000 C
 - 2500 km wide

CAN YOU IDENTIFY THE LAYERS?



6.) This layer is hotter than the upper mantle but is solid due to the immense amount of pressure.

7.) This layer can be continental or oceanic.

8.) This layer is a dense solid ball made of iron.

9.) This layer is solid and the thinnest layer. It is the one we walk on.

10.) This layer contains magma. It has a texture of thick liquid.

11.) This liquid layer surrounds the inner core.

12.) This layer is primarily made up of granite and basalt.