

Geography Lesson

Year 3

Wednesday 24th February

Can I explain the layers of the Earth?



Write your date and title
in your exercise book.

Our new year 3 topic for this half term is called:

Earthquakes and Volcanoes!

Today's Aim

- Describe and understand key aspects of physical geography in the context of what is under the surface of the Earth.

Success Criteria

- I can recognise that there is rock under all surfaces.
- I can list the layers that make up the Earth.

Look at these photos



This is a Geologist.

What do you think they do?



This is a volcanologist.

Why are they dressed like that?

Answers:



This is a Geologist.

A **geologist** is a scientist who studies the different rocks that make up the Earth



This is a volcanologist.

A **volcanologist** is a geologist who studies the processes involved in the formation and eruption of volcanoes.

This volcanologist is wearing a suit that will protect them from the extreme heat of the lava in front of them.

Lava is melted rock!

What would you find?



Imagine you are digging this hole.



What is at the bottom of the hole?

What different things might you find as you are digging?

Where would you end up?



**Welcome on board the
Underground Explorer!**

Photo courtesy of Kecko @flickr.com) - granted under creative commons licence – attribution

**Let's go on a
journey
underground.**

**Close your eyes and
imagine you are
being lowered down
a deep sink hole.**

**What might you
see?
What might it feel
like?**



Layers of Soil – The Earth's Crust

Humus

The very top layer of soil, made up of dead and rotting leaves and animals.

Topsoil

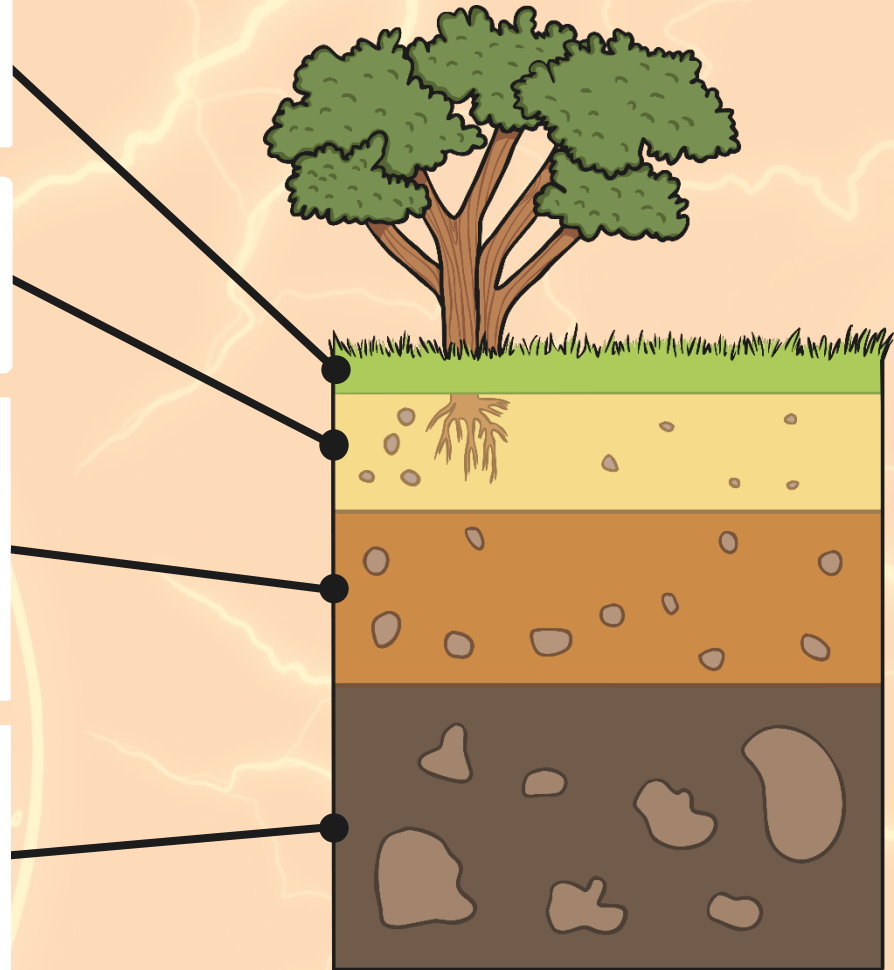
Where plants grow their roots.
Very few rocks.

Subsoil

More rocks and stones in clay. This soil is full of nutrients. Tree roots may reach into this soil. You might find fossils here.

Bedrock

A mass of rock such as granite, basalt, quartzite, limestone or sandstone. You might find fossils here.



What's that like?



Watch this video comparing the Earth's structure to a peach

How is the comparison accurate?

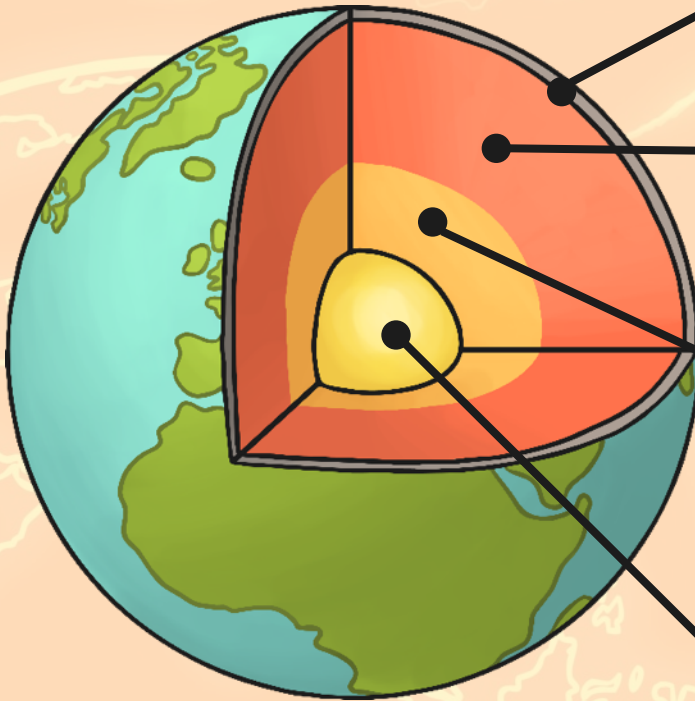
How is the structure of the Earth different to that of a peach?



<https://www.bbc.co.uk/bitesize/clips/zwwxn39>

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Layers of the Earth



The **crust** is the thin outer layer of cold hard rock that covers the world (10km-90km thick).

The **mantle** (extremely hot rock that often flows like treacle) is 3,000 km thick.

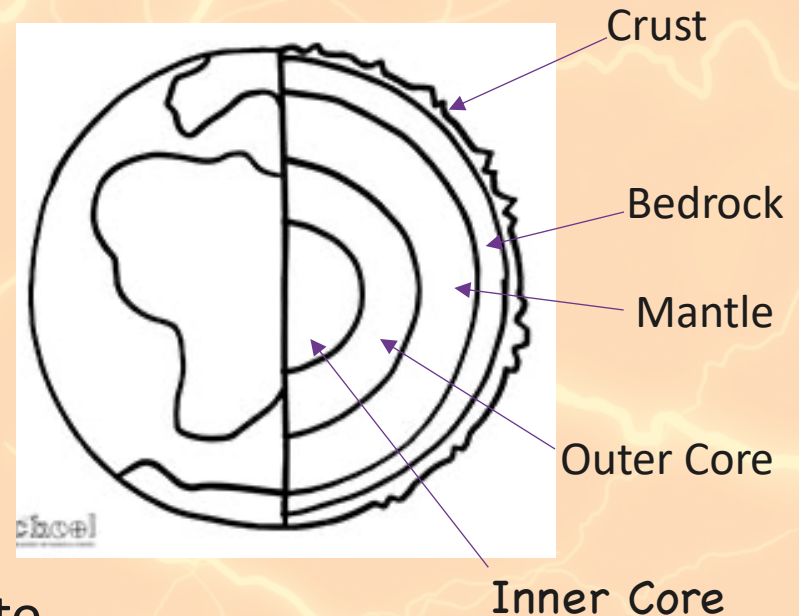
The **outer core** is mostly made of iron with some nickel. It is over 4000°C. It is mostly liquid with some rocky parts. Because the outer core moves around the inner core, Earth's magnetism is created.

The **inner core**, which is made of iron and nickel, is the hottest layer at over 5000°C. It melts the metals in the outer core to form magma.

Task:

1. Draw a diagram of the Earth's layers.
2. Label each layer. (Use a ruler!)
 - Crust (Includes topsoil and subsoil)
 - Bedrock
 - Mantle
 - Outer Core
 - Inner Core
3. Underneath your diagram, write sentences to explain what each layer is like. (Use subtitles)

Layers of the Earth



Challenge

Over the next few weeks we are going to be learning about **volcanoes**.

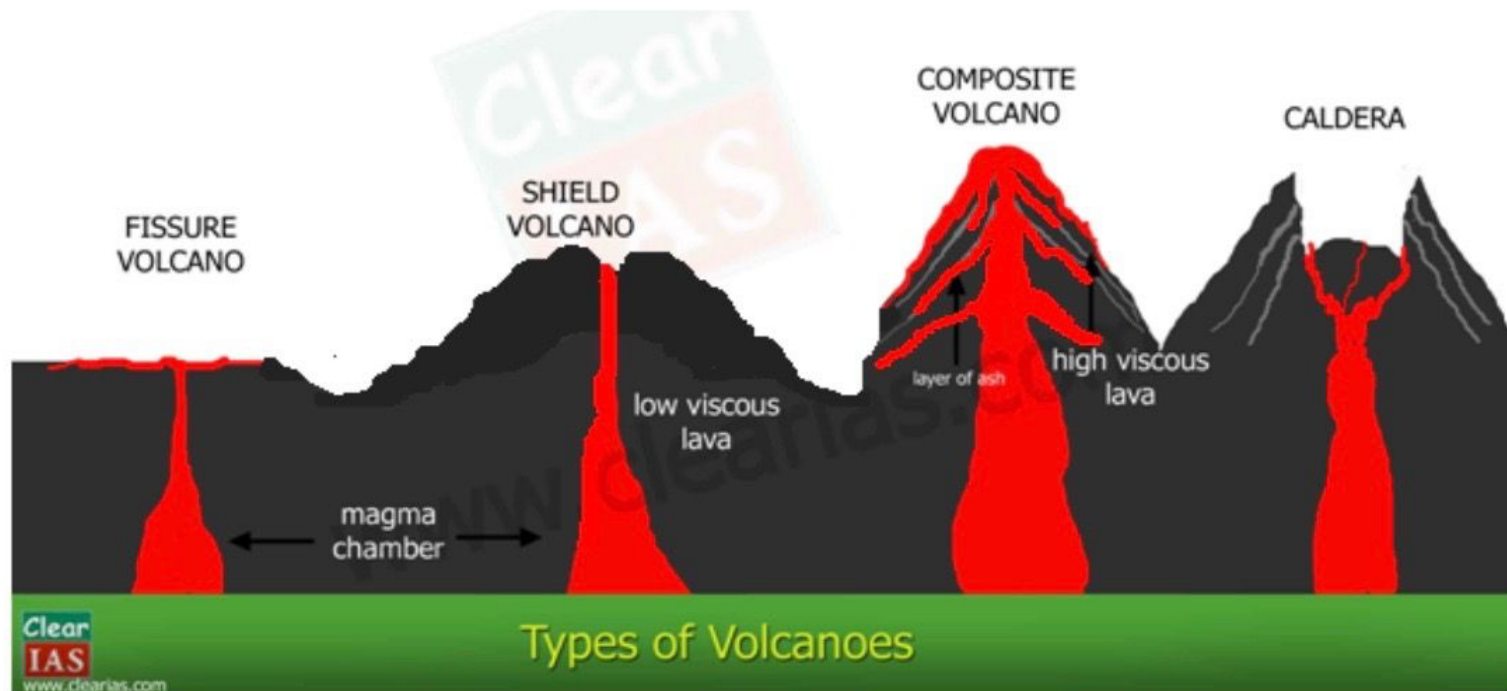
Why don't you do your own bit of research on volcanoes?

You can use: dictionaries, information books, computers and iPads!

1. Investigate the different types of volcano. Explain what they are in your books.
 - Active
 - Dormant
 - Extinct
2. Investigate the different shapes of volcano. Explain what they are in your books.
 - Shield
 - Cinder cone
 - Composite
 - Lava dome

Types of Volcanoes

Volcanoes are classified on the basis of nature of eruption and the form developed at the surface.



Aim



- Describe and understand key aspects of physical geography in the context of what is under the surface of the Earth.

Success Criteria

- I can recognise that there is rock under all surfaces.
- I can list the layers that make up the Earth.
- I can compare the Earth's structure to a familiar object.

What is under your feet?



How did you do?



Don't forget to post a photo of your work on Class Dojo!

