

Earth Structure



Our Planet

The Earth has three main layers. We live on the outer layer, the crust, and are surrounded by a mixture of gases, the atmosphere.

Structure

The Earth is almost a sphere. These are its main layers below and they have different properties

Crust

Temperature: Around 22°C

State: Solid

Composition: Oceanic crust made up of iron, oxygen, silicon, magnesium and aluminium.

Continental crust made up of granite, sedimentary rocks and metamorphic rocks.

The Earth's surface is covered by its thinnest layer, the crust. Land is made of continental crust, which is 8km to 70km thick and made mostly from a rock called granite. The layer beneath the ocean bed is made of oceanic crust, which is about 8km thick and made mainly from a rock called basalt.

Inner Core

Temperature: 5,000°C - 6,000°C

State: Solid

Composition: iron and nickel

The Earth's inner core is a huge metal ball, 2,500km wide. Made mainly of iron, the temperature of the ball is 5,000°C to 6,000°C - that's up to 6,000 times hotter than our atmosphere and scorching enough to make metal melt! The metal at the inner core stays solid because of the incredible pressure surrounding it.

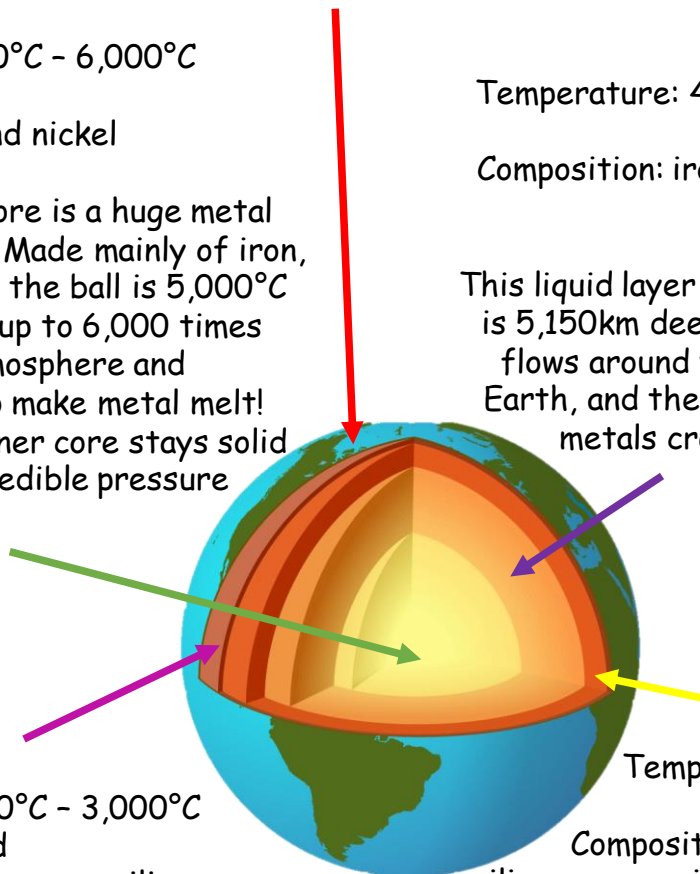
Outer Core

Temperature: 4,000°C - 6,000°C

State: Liquid

Composition: iron, nickel, sulphur and oxygen

This liquid layer of iron and nickel is 5,150km deep. The outer core flows around the center of the Earth, and the movement of the metals creates our planet's magnetic field.



Upper Mantle

Temperature: 1,400°C - 3,000°C

State: liquid / solid

Composition: iron, oxygen, silicon, magnesium and aluminium

This layer is up to 670km below the Earth's surface. The lower part of the upper mantle is made from both solid and melted rock (liquid), while the rock in the upper region is stiffer, because it's cooler

Lower Mantle

Temperature: 3,000°C

State: solid

Composition: iron, oxygen, silicon, magnesium and aluminium

The lower mantle is found between 670km and 2,890km below the surface, and is made from solid rock. The rock is hot enough to melt but is solid because of the pressure pushing down on it.

Earth's Structure

LO: To understand the Earth's structure

Task 1: Label the diagram of the Earth's structure



Task 2: Fill in the table about the different layers that make up the Earth

Layer	Depth (Km)	Temperature (°C)	Composition (what it's made from)
Crust			
Upper Mantle			
Lower Mantle			
Outer Core			
Inner Core			

Task 3: Describe how a Creme egg can be used to show the basic structure of the Earth

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