



Composition of the Earth

Learning objectives

- 1 Identify and label the layers of the Earth.
- 2 State the properties of each layer of the Earth.
- 3 Deduce the most abundant elements and their proportion in each layer from incomplete information.

Introduction

Formed around **4.5 billion years** ago, Earth is the only planet in our solar system known to support life.

As early as the 5th century BC the ancient Greeks documented the idea of its spherical structure. Since then, our understanding has developed and the current model is a **layered structure**. Each layer has unique chemical and physical properties.

Instructions

- Complete the information cards.
- Use the infographic poster and fact sheet to find out the most abundant elements in each layer of the Earth.
- Choose from the labels provided in the table.
- Once you have completed the cards, cut them out and add them to your diagram of the Earth.

Extension

Complete the pie charts showing the most abundant elements in each layer of the Earth. Label each section with the correct proportion and create a key to show the elements present in each layer.



Information cards

Oceanic crust

State	
Thickness	5-10 km
Temperature	

Composition

Element	Proportion
Oxygen	46%
Silicon	
Aluminium	
Iron	
Calcium	

Notes

Continental crust

State	Solid
Thickness	
Temperature	

Composition

Element	Proportion
Oxygen	46%
Silicon	
Aluminium	
Iron	
Calcium	

Notes

Mantle

State	
Thickness	
Temperature	

Composition

Element	Proportion
Oxygen	
Magnesium	
Silicon	21%
Iron	6.3%

Notes

Outer core

State	Liquid
Thickness	
Temperature	

Composition

Element	Proportion
Iron	
Nickel	
Sulphur	

Notes

Inner core

State	
Thickness	
Temperature	5000-6000°C

Composition

Element	Proportion
Iron	
Nickel	
Sulphur	

Notes

Choose from the labels below. You may use some of the information more than once:

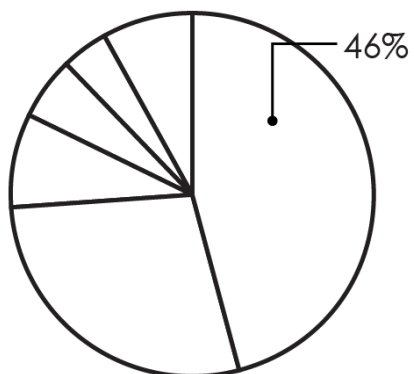
State	Solid / Mostly solid / Liquid
Thickness	5-10 km / 10-70 km / 1220 km / 2200 km / 2900 km
Temperature	0-70°C / 1400-3000°C / 5000-6000°C / 4000-6000°C

Add notes to describe each layer at the bottom of each information card.



The most abundant elements in the Earth

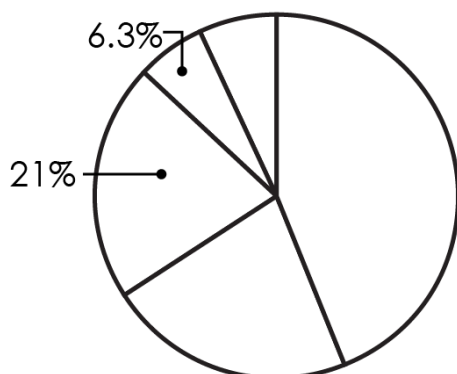
Crust

 Oxygen

Iron

Other

Mantle



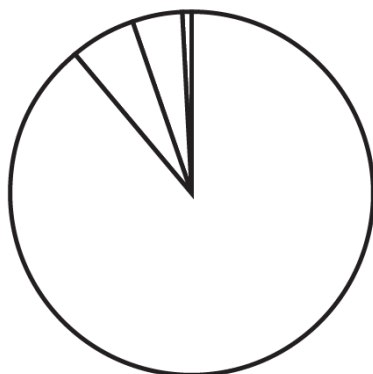
Magnesium

Silicon



Iron

Core



Iron



Other



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