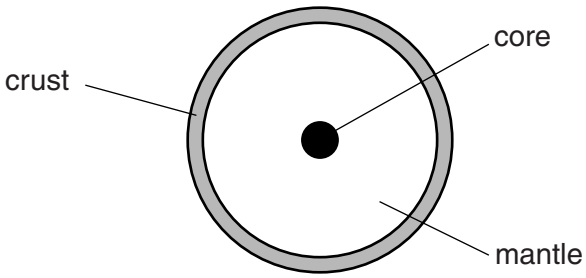
1 Look at the diagram. It shows the structure of the Earth.



(a) The **lithosphere** is part of the structure of the Earth.

What is the lithosphere?

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..... **[2]**

(b) Scientists study volcanoes.

Explain why.

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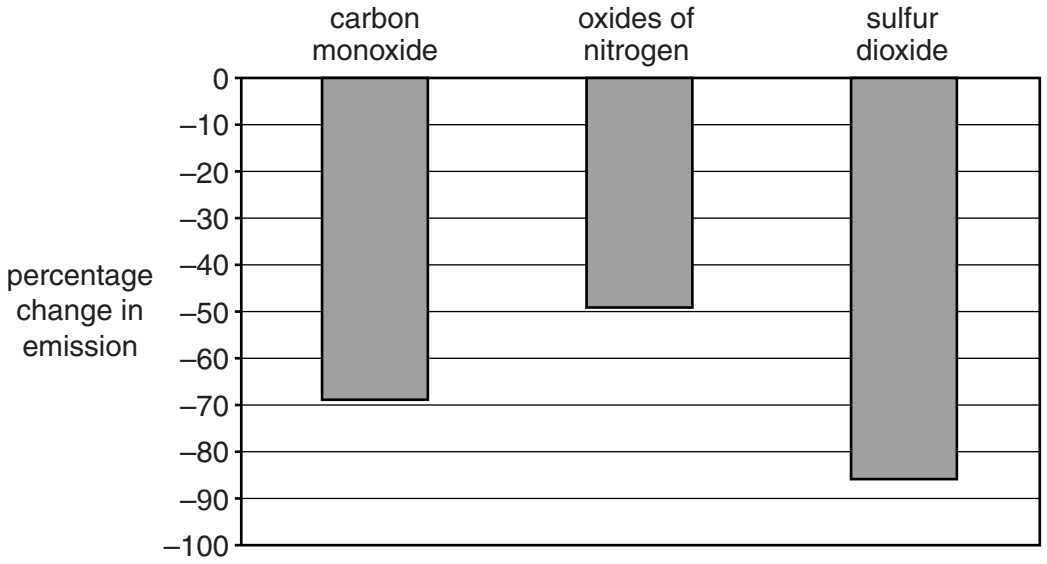
..... **[2]**

[Total: 4]

2 This question is about air pollutants.

Look at the graph.

It shows how the levels of some pollutants found in UK cities have changed from 1990 to 2008.



The levels of these pollutants have decreased.

Explain, using a chemical equation, possible reasons for these changes.

Explain why it is important that air pollution is controlled.

The quality of written communication will be assessed in your answer to this question.

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..... **[6]**

[Total: 6]

3 Look at the photograph of an erupting volcano.

(a) There were serious volcanic eruptions in many countries in 2010.

Many people's homes were destroyed.

Suggest why geologists did not predict all these eruptions.

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..... **[1]**

(b) In 1914, Wegener used evidence to propose his 'continental drift theory'.

In the late 1950s, this became part of a new theory called plate tectonics.

Today, the theory of plate tectonics is widely accepted by scientists.

Explain why.

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..... **[2]**

[Total: 3]

4 This question is about the atmosphere.

(a) The air we breathe is a mixture of gases.

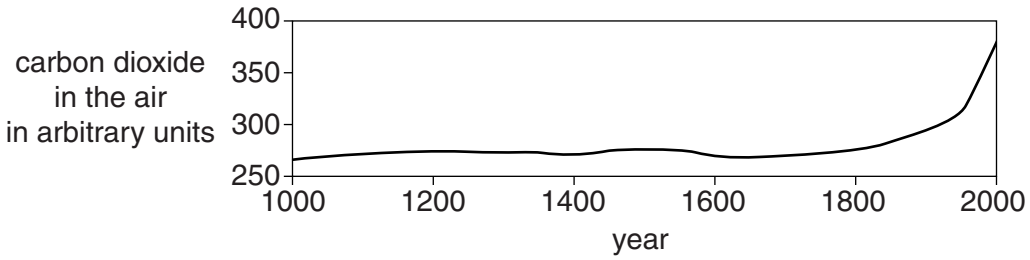
Look at the table. It shows the percentage of gases in clean air.

gas	percentage in clean air
nitrogen	.....
oxygen	21
other gases	1
carbon dioxide	0.035

Complete the table. **[1]**

(b) Look at the graph.

The graph shows the carbon dioxide levels in the air from the year 1000 to the year 2000.



Look at the table.

It shows the population of the world in the year 1000, 1800 and 2000.

year	1000	1800	2000
world population in millions	275	1000	6000

Compare the data for population and carbon dioxide levels.

Does an increase in population **directly** cause an increase in carbon dioxide levels?

Explain your answer.

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..... **[2]**

[Total: 3]

5 Scientists accept that the surface of the Earth is made up of **tectonic plates**.

(a) Describe the theory of plate tectonics and use this theory to explain subduction.

The quality of written communication will be assessed in your answer to this question.

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..... **[6]**

(b) Geologists study the structure of the Earth.

This is not an easy thing to do.

Explain why.

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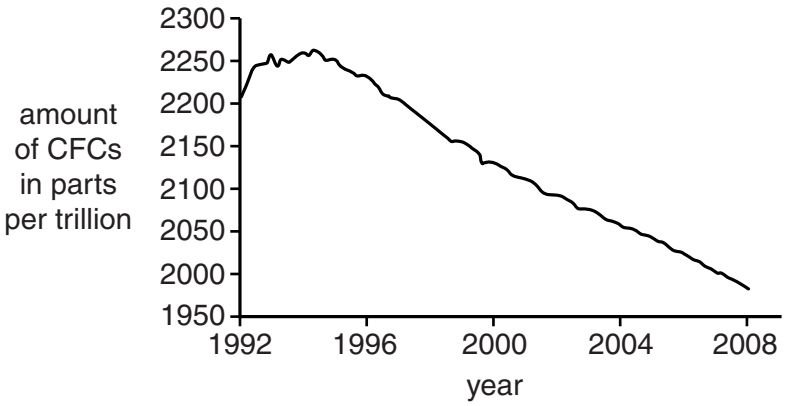
..... **[2]**

[Total: 8]

6 This question is about CFCs.

Look at the graph.

It shows how the amount of CFCs in the air has changed from 1992 to 2008.



(a) Describe the pattern shown on the graph.

Explain why this has happened.

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(b) Scientists' attitudes to CFCs have changed since CFCs were first introduced in the 1950s.

Describe how and explain why.

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..... **[3]**

[Total: 5]