the Earth

KS3 Chemistry · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Name the layers of the Earth from the surface to the centre.

Step 1 · Outside

Crust (thin, solid rock).

Step 2 · Middle

Mantle (solid rock that flows very slowly).

Step 3 · Centre

Outer core (liquid iron and nickel), then inner core (solid iron and nickel).

Answer: Crust → mantle → outer core → inner core

Check: Four layers.

2. Now try one with the steps

The Earth's radius is about 6370 km and the deepest hole ever drilled is about 12 km. What fraction of the way to the centre is that, roughly?

Step 1 · Divide

Step 2 · As a percentage

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. What is the outer layer of the Earth called? [1]

2. Which layer of the Earth is liquid? [1]

3. Which two metals make up most of the core? [1]

4. Which is the thickest layer? [1]

5. Which two elements make up most of the Earth's crust? [2]

6. Is the mantle solid or liquid? [1]

7. Why is the inner core solid even though it is very hot? [2]

8. What are tectonic plates? [1]

9. What makes the tectonic plates move? [1]

10. What evidence do scientists use to work out the structure of the Earth? [1]

11. Oceanic crust is about 7 km thick and continental crust about 35 km. How many times thicker is continental crust? [1]

12. Name TWO things that happen at the boundaries between tectonic plates. [2]

13. Why is it important that the Earth has a liquid outer core? [2]

14. Give ONE limitation of a 2D diagram of the Earth's layers. [1]

4. Before you hand it in

"The mantle is liquid magma."
The mantle is solid rock that flows very slowly over millions of years.

"The inner core is liquid because it is the hottest."
Huge pressure keeps the inner core solid.

"The crust is thick."
The crust is only 5–70 km thick out of 6370 km.

"Scientists have drilled to the mantle."
Our knowledge comes mostly from seismic waves.