

Scale model of the Earth and its atmosphere

Education in Chemistry

December 2020

rsc.li/2Vpozco

Follow the instructions below to draw a scaled diagram of the structure of the Earth

The image on the next page shows a segment of the Earth's structure. A scale is provided on the right hand side.

- Using the information below, create a scale diagram of the Earth to show its layers.

Use a compass to reflect the Earth's spherical nature.

- The inner core is 1250 km in radius.
- The outer core is 2200 km thick.
- The mantle is 2900 km thick.
- The crust is between 5–70 km thick. Under the oceans it is 5–10 km thick and on land it is 10–70 km thick.

- Add labels to your scale diagram to indicate the composition and properties of each layer.

- The deepest humans have ever drilled down into the Earth was through an approximately 23-centimetre-wide hole named the 'Kola superdeep borehole' in north-western Russia. It reached 12,262 m.

Add the Kola superdeep borehole to your scale diagram.

- The Earth's atmosphere consists of layers. The layer nearest to Earth is called the troposphere. This layer contains three quarters of the mass of the entire atmosphere and is where nearly all the weather conditions take place.

The average height of the troposphere is 11 km.

Add a layer to your scale diagram to represent the troposphere.

