

Materials and the Earth

Lesson 1: Structure of the Earth

Science

Chemistry - Key Stage 3

Miss Willett



What have you learnt already?

1. What is an element?
2. What is a compound?
3. Give the charge, location and mass of a proton.



Properties of the layers

Who am I?!

This is the thickest layer of the Earth

The hottest layer of the Earth, but the iron and nickel are solid

This is the thinnest layer of the Earth



Properties of the layers

Who am I?!

Made of liquid iron and nickel

Made of slow moving, semi-molten rock

Made of rocks and minerals



The layers of the Earth

Q1) List the four layers of the Earth and add annotations to describe each layer



Tectonic plates

Find the mistake!

- Over summer months, tectonic plates move slowly
- Tectonic plate movement is responsible for volcanic activity
- The movements are caused by low pressure in the mantle



Convection currents

True or false?!

When substances are heated, the particles lose kinetic energy

Increased kinetic energy decreases density

Cooler substances sink, because they are more dense



Moving plates

Explain what causes tectonic plate movement



Bringing it all together..

Use your knowledge of the Earth's structure and tectonic plate movement to complete the following:

Questions to answer:

- Describe what causes magnetic fields on Earth.
- Compare the layers of the Earth in terms of material and temperature.
- Explain a possible cause of earthquakes.



Bringing it all together..

Use your knowledge of the Earth's structure and tectonic plate movement to complete the following:

