
Earthquakes
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The Earth's Crust

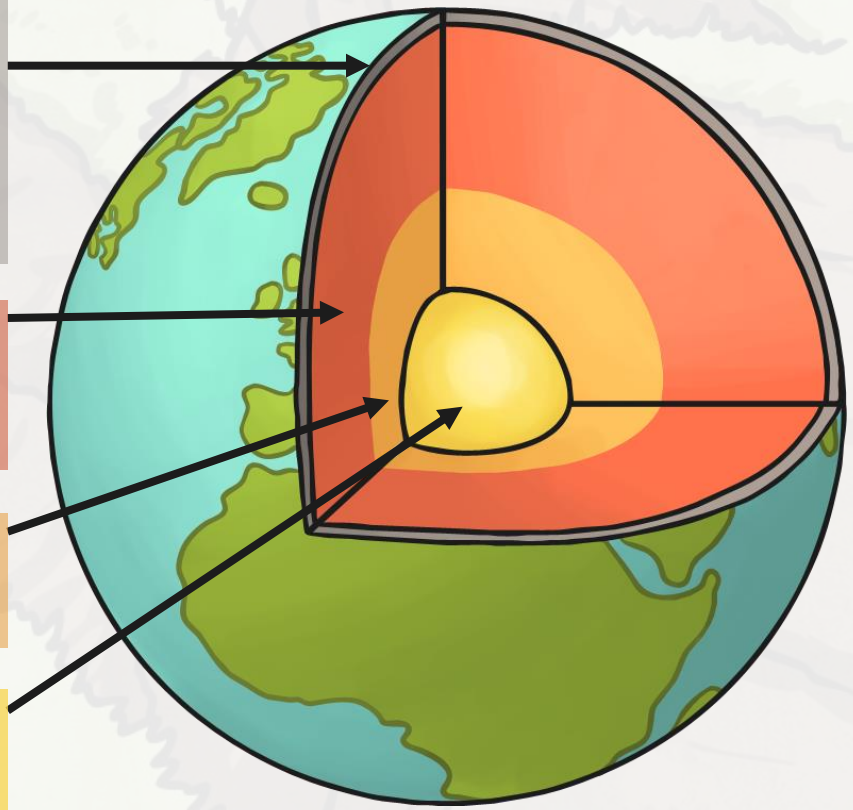
The Earth has four layers:

The crust: This is the outermost layer. The land we stand on is not just one solid piece. It is made of many pieces called plates. These plates fit together like puzzle pieces.

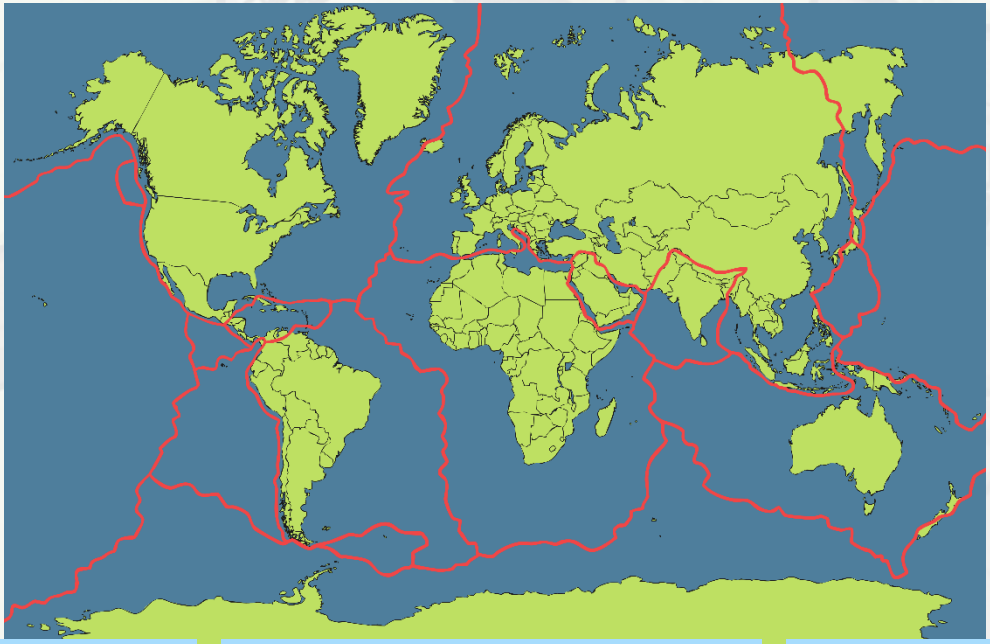
The mantle: This the widest part. It is extremely hot and is consists of semi-molten magma.

The outer core: This area is made of iron and nickel. It is very hot!

The inner core: This is the warmest layer. Temperatures can reach 5,500°C.



The Earth's Plates



The Earth's plates are always moving. They move so slowly that we usually can't feel it.

The edges of plates are called faults. Faults can rub together, push toward each other, or pull away from each other.

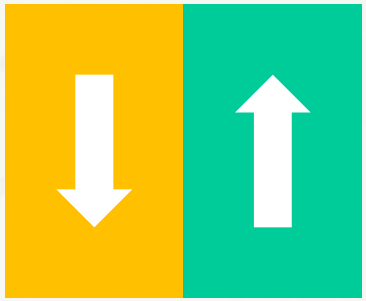
Have a look at the Earth's plates. What do you notice about where New Zealand is?

How Can You Move Your Plates?

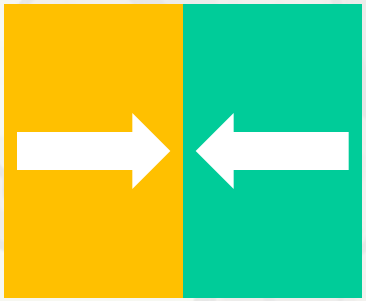
Use the two pieces of paper you have been given.

Can you remember the different ways the plates around?

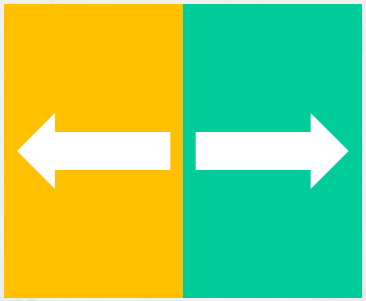
Rubbing together



Towards each other



Away from each other



This kind of movement causes earthquakes.

Where do Earthquakes Occur?

Look at the map. Earthquakes happen frequently in these areas. What do you notice about where they happen?

Preparing for an Earthquake

Plan	Practise	Find Safe Places
You need to have an emergency plan at home and school. Have your survival kit or getaway kit ready to go.	At school we practise our emergency drills, we need to do this at home too. Remember: COVER, DROP, HOLD!	Before an earthquake make sure you know where the safe places are – under a strong table, away from glass, in a doorway, near a wall...

Preparing for an Earthquake

No one can predict when an earthquake will occur. You need an emergency plan and an emergency survival kit.

Packing an Emergency Kit:

Include the following items:

- plenty of water;
- a torch and spare batteries;
- emergency whistles;
- spare shoes and clothes;
- a first aid kit;
- a battery operated radio.

What else could you include in an emergency kit?

During an Earthquake

Inside	Outside
Drop, cover and hold, stay away from windows. Do not try to run out of the building during strong shaking, hold tight until the shaking stops.	Drop, cover and hold, try to move away from buildings, trees, power lines and street lights. If you are near a beach, when the shaking stops, go to higher ground in case of a tsunami.

After an Earthquake

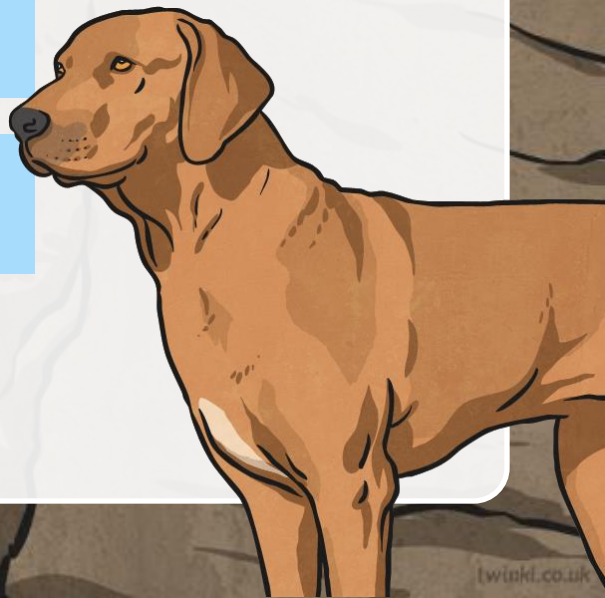
Listen to the radio for information.

Be aware of aftershocks.

Get help if you need it, see if you can help others.

Try to get outside if the building you are in is damaged.

Look after your pets, they will be scared too!

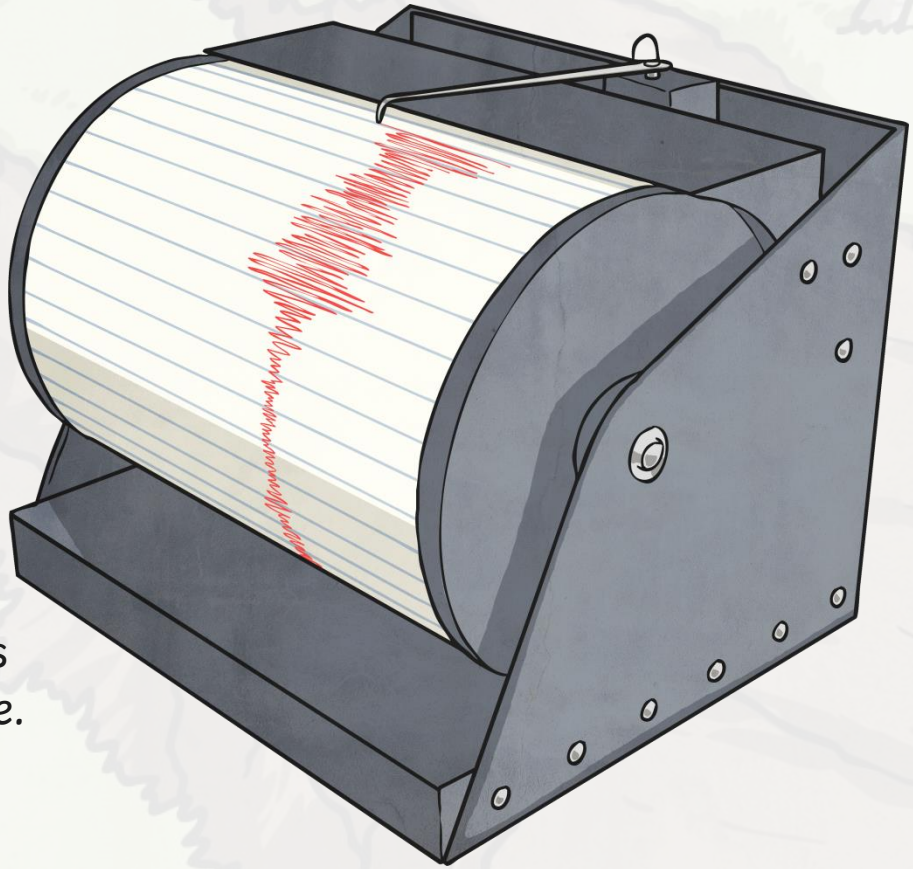


How Strong Is It?

There are two main ways to measure the power of an earthquake.

Machines called seismographs measure the power of an earthquake at its epicentre on a scale called the Richter scale.

Another measure is the Mercalli scale, and this is based on people's observations during an earthquake.



Comparing Earthquakes

Mercalli Intensity	Effect
I	Felt by no one.
II	Felt by very few people. Hanging objects may swing.
III	Felt by many but they don't realise it is an earthquake.
IV	Felt indoors by most people. Vibrations similar to a lorry hitting a building.
V	Felt by nearly everyone. Sleeping people may be woken. Trees and telegraph poles sway.
VI	Felt by all. People run outside. Furniture moves. Slight damage to property.
VII	Felt by all. People run outside. Moderate damage to buildings
VIII	Specially designed buildings damaged, others collapse.
IX	All buildings damaged. Cracks appear in ground.
X	Many buildings destroyed.
XI	Almost all buildings destroyed. Wide cracks in the ground. Water, gas and electric out of action.
XII	Total destruction. The ground moves in waves or ripples.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