



# Tectonic Plates

Information PowerPoint

# Aim

- I can understand how the continents of the world have changed over time.

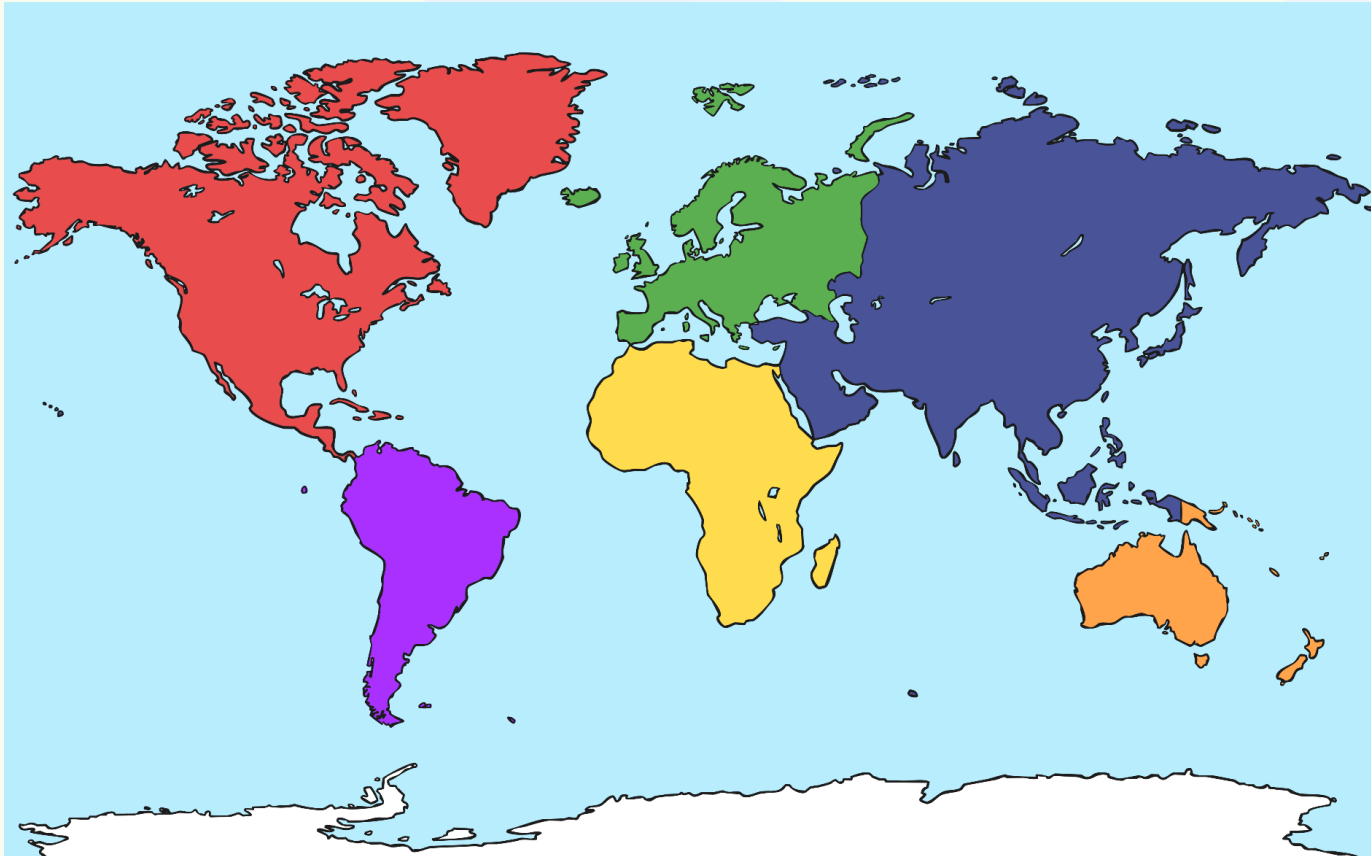
## Success Criteria

- To know that the Earth's surface is made up of tectonic plates.
- To know that tectonic plates move over millions of years.
- To describe how the position of landmasses has changed over time.



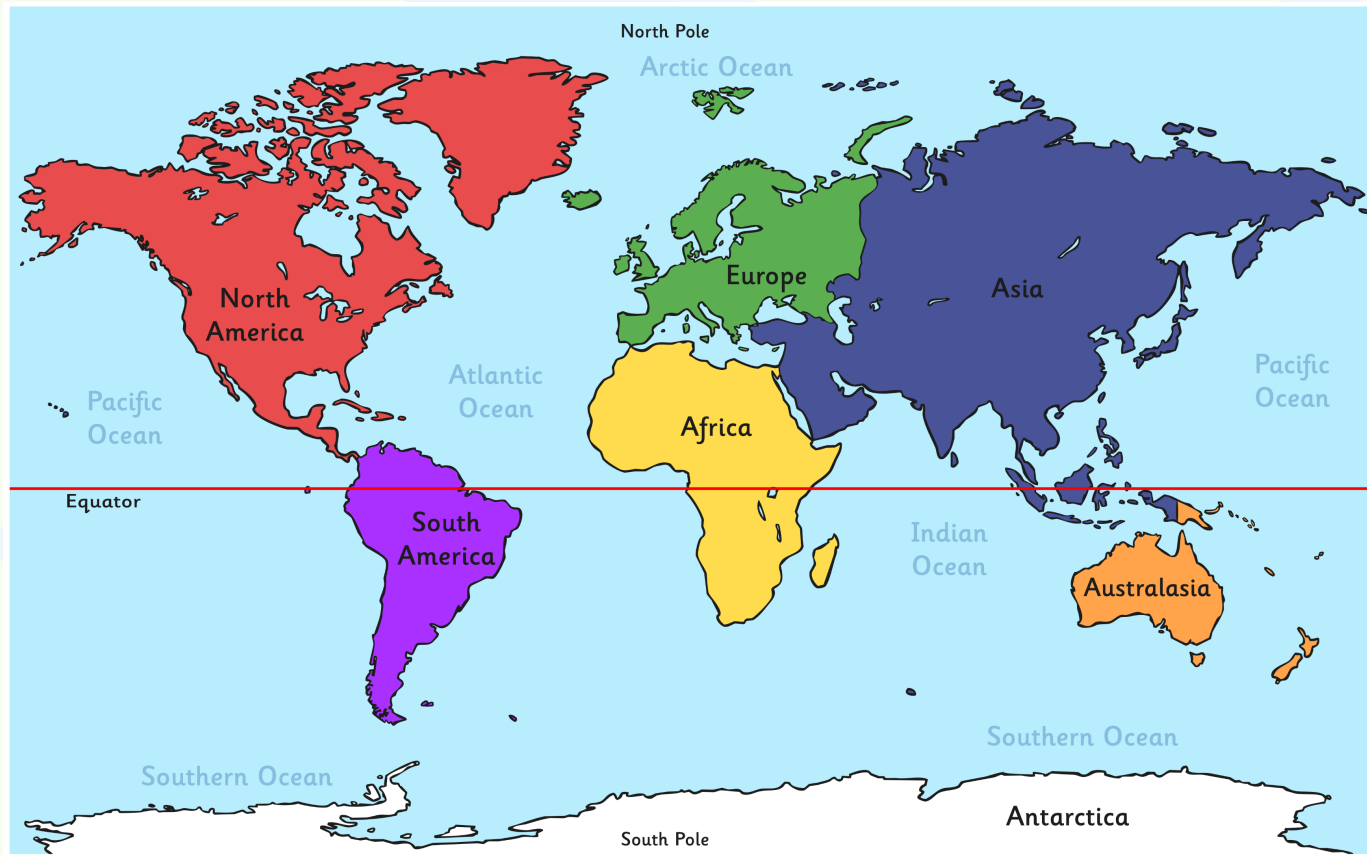
# The Continents

Can you remember the names of the continents?



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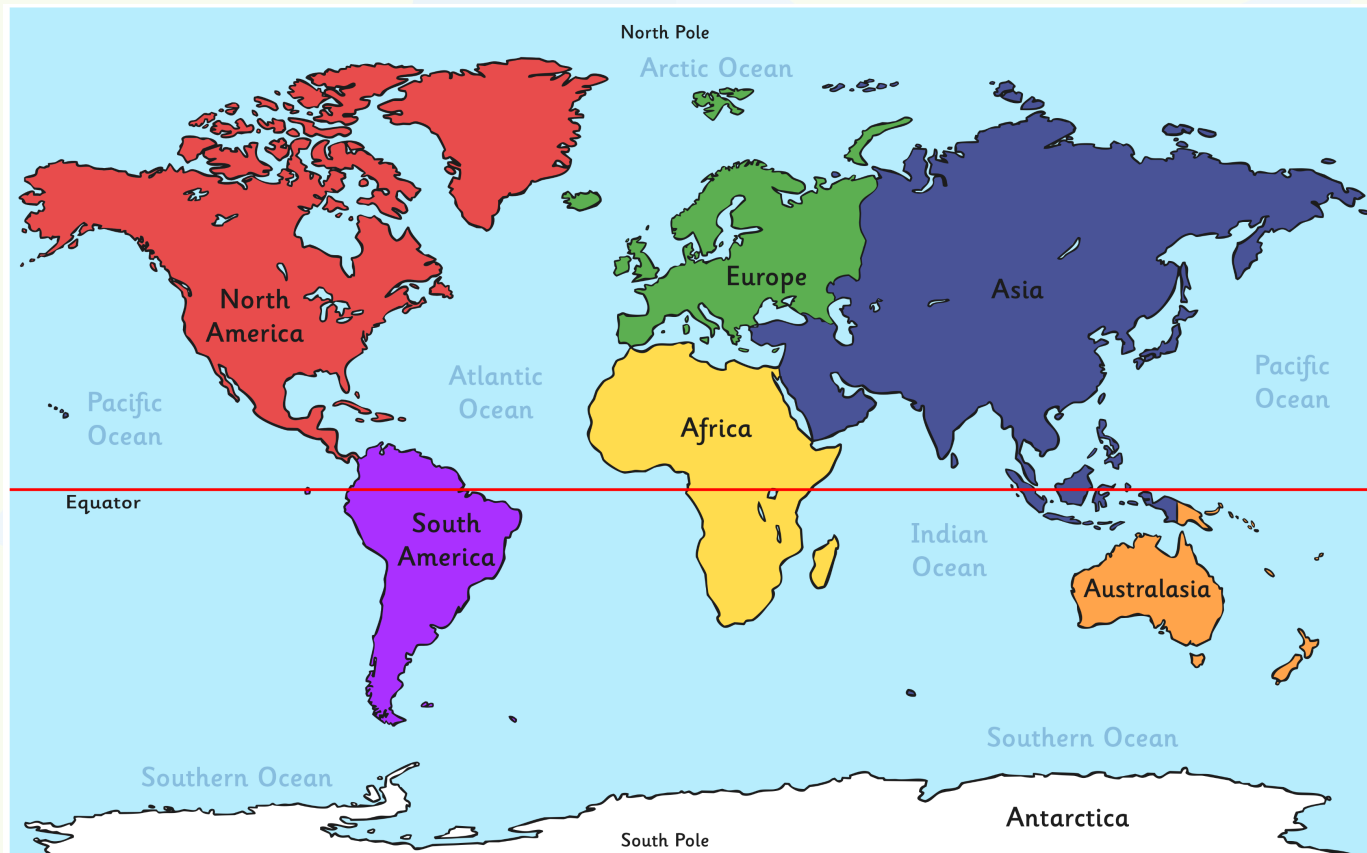
# Tectonic Plates



- The Earth's surface is called the crust.
- It is made up of different rocky sections called tectonic plates.
- This map shows where the plates are.
- Tectonic plates can move about on the softer mantle underneath them.

# Tectonic Plates

If we could slide South America towards Africa, do you think the two landmasses would fit together like a jigsaw puzzle?



# Continental Drift

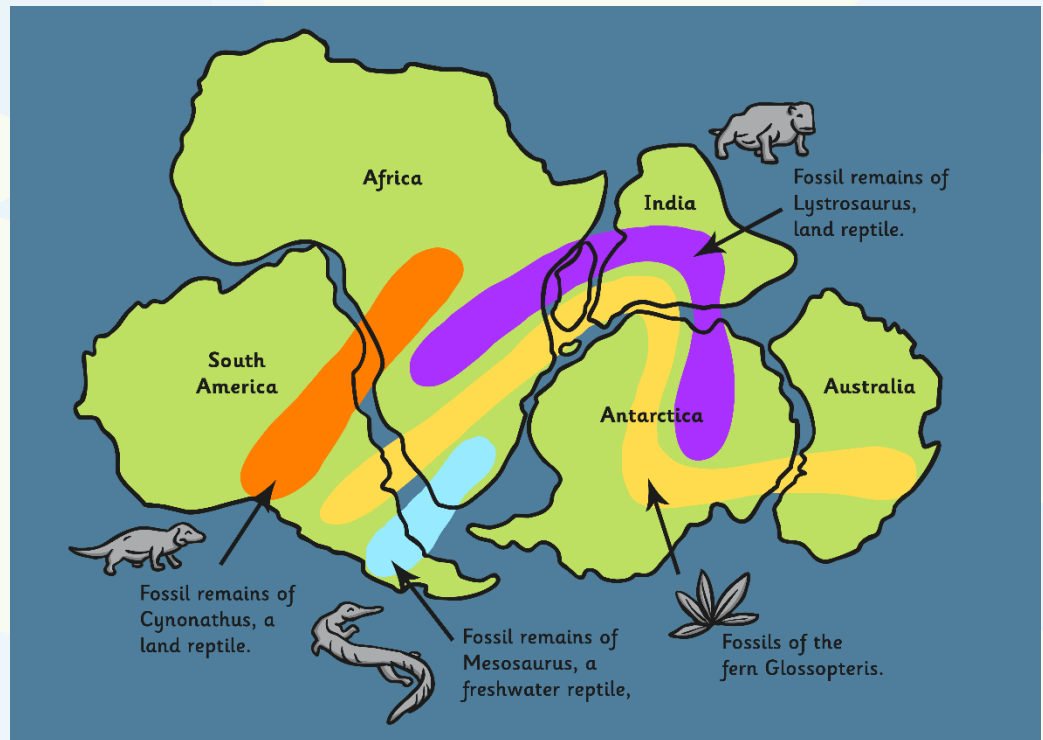


- In 1910, a German scientist called Alfred Wegener, was the first to study the idea that the continents might have once been a single landmass.
- However, it wasn't until 20 years after Wegener died, that geologists realised he was right.
- The continents and ocean floors really do “float” on moving rock plates, and have been drifting for millions of years.



# Continental Drift

- Alfred Wegener came up with some very convincing evidence to support his idea.
- He looked at where different fossils were found and was able to piece the continents back together into one landmass.





# How the Continents Formed



## **Permian Period**

250 million years ago

- 250 million years ago, all the land on Earth was one large landmass.
- Wegener named this landmass Pangaea.

# How the Continents Formed



**Triassic Period**  
200 million years ago

- The moving tectonic plates started to split Pangea apart.
- 200 million years ago, the land was split into two landmasses – Laurasia and Gondwanaland.

# How the Continents Formed



## **Jurassic Period**

145 million years ago

145 million years ago, the continents we know today were starting to become visible.

# How the Continents Formed



**Cretaceous Period**  
65 million years ago

Which landmasses can you spot on this map of Earth, 65 million years ago?

# How the Continents Formed



**Present Day**

Over 250 million years, the movement of the plates has created the land masses we recognise today.

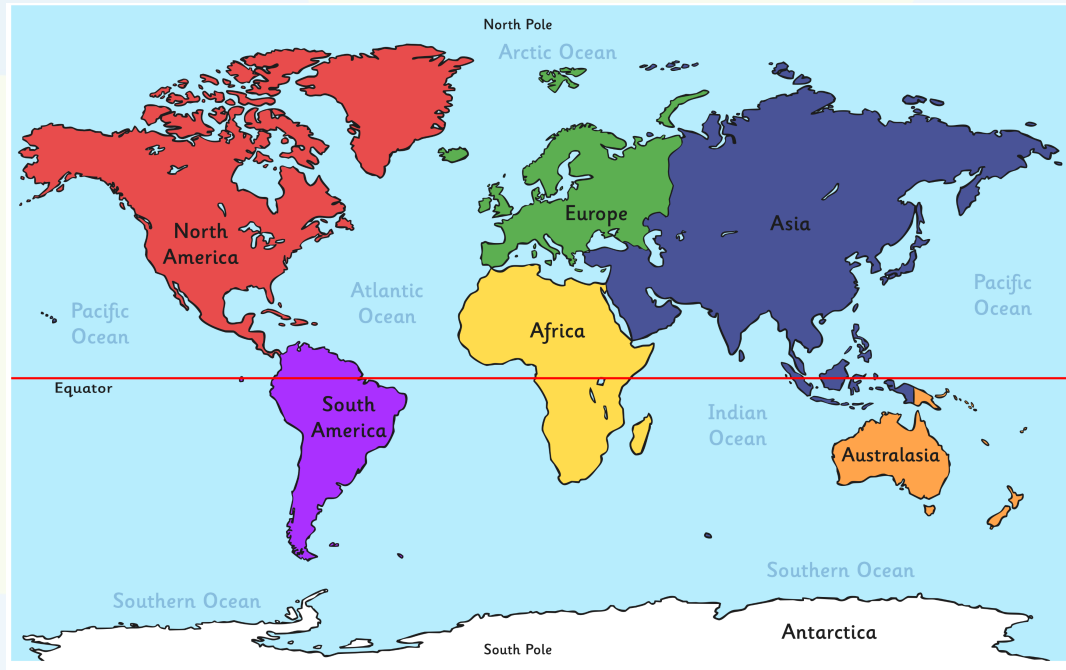
# Are the Plates Still Moving?



- The plates move about 1 to 10 cm every year.
- Plates can move towards each other, away from each other or rub alongside each other.
- Watch this [video](#), which shows a part of Iceland where the North American and Eurasian plates are moving apart.

# 50 Million Years From Now...

- South America is moving towards North America.
- North America is moving away from Europe.
- Australasia is moving towards Asia.



Can you imagine what the world will look like in 50 million years time?



