

# Drifting Continents



Continental Drift is a hypothesis that all the continents had once been joined together in a single land mass and have since drifted apart.

Alfred Wegener formed this hypothesis.

Wegener named this single landmass or supercontinent **Pangaea**.

According to Wegener:

- existed **300 million** years ago
- reptiles and **winged** insects first appeared.
- great tropical forests, which later formed **coal deposits**, covered large parts of Earth's surface

Alfred Wegener gathered evidence to support his hypothesis from many different scientific areas.

1. landforms
2. fossils
3. climate

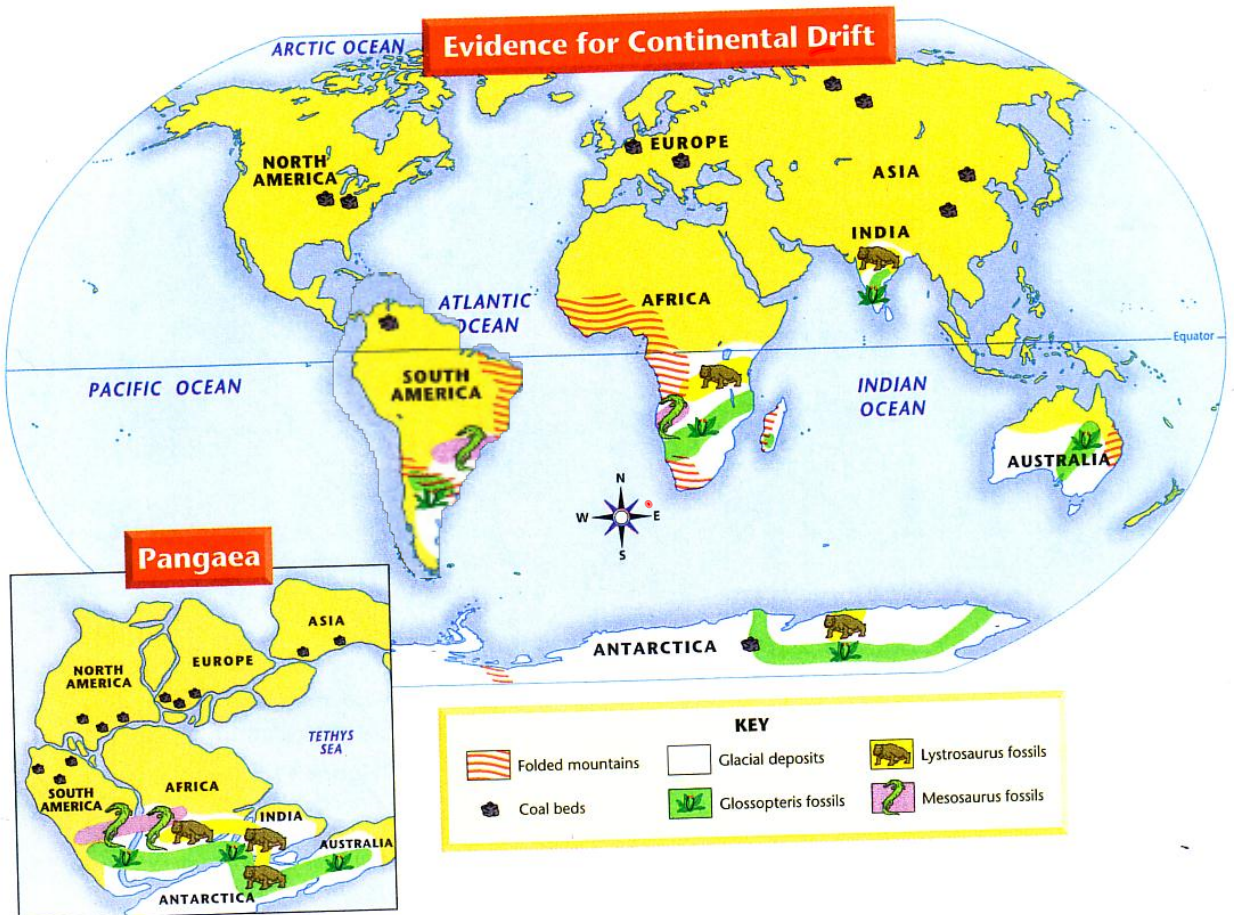
Alfred Wegener published all his evidence for continental drift in a book called *The Origin of Continents and Oceans*

# Evidence from Landforms

Mountain ranges and other features on the continents provide evidence for continental drift.

Wegener noticed:

- Mountain range in South America lined up with a range in Argentina
- European coal fields match up with coal fields in North America





# Evidence from Fossils

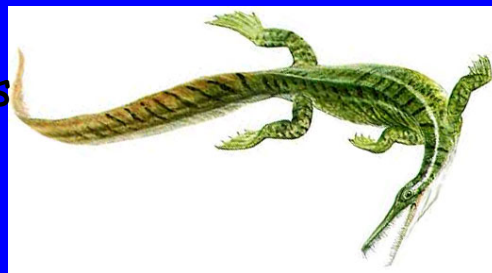
**Fossil:** any trace of an ancient organism that has been preserved in rock.

EX> Mesosaurus and Lystrosaurus have been found in places now separated by oceans. Neither could have swam that far.



Lystrosaurus

Mesosaurus



**Glossopteris:** fernlike plant. Fossils of this plant have been found in Africa, South America, Australia, India, and Antarctica.





## Evidence from Climate

Areas in South Africa showed deep scratches on the rocks. This showed that continental glaciers once covered South Africa.

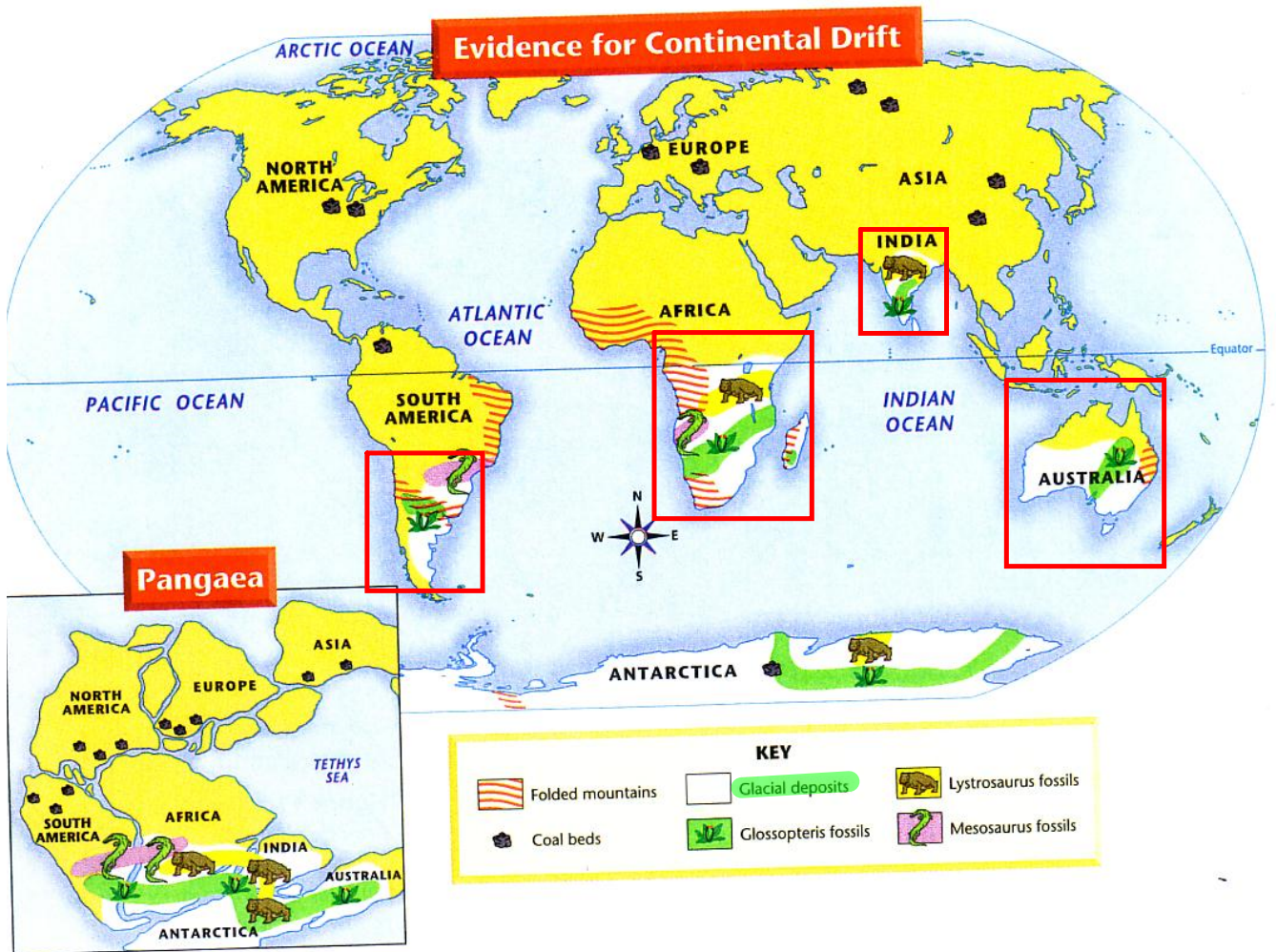
Continental Glaciers: thick layers of ice that cover hundreds of thousands of square kilometers

Climate of South Africa today is too mild for continental glaciers to form.

The island of Spitsbergen, found north of Norway, is ice covered and has a harsh polar climate. Fossils of tropical plants are found on the island.

Wegener concluded that as continents moved the climates of the continents changed.





## Scientists Reject Wegener's Theory

Wegener also offered a new explanation on how mountains form. When drifting continents collide, the edges crumple and fold.

Wegener could not provide a satisfactory explanation for the forces that push or pull the continents.

Most geologists rejected his ideas.

Edit

### Q.1



What is the name of the scientist that formed the Theory of Continental Drift

A Costea

C Wegener

B Geologist

D Hess

Drifting Continents Study Guide

Name: \_\_\_\_\_ Period: \_\_\_\_\_  
 Define Continental Drift: \_\_\_\_\_

\_\_\_\_\_

What was the name of the scientist that formed the theory of continental drift? \_\_\_\_\_

The single landmass or supercontinent is called: \_\_\_\_\_

At this time

- \* Pangaea existed \_\_\_\_\_ years ago
- \* Reptiles and \_\_\_\_\_ insects first appeared
- \* Great tropical forests, which later formed \_\_\_\_\_, covered large parts of Earth's surface

Alfred Wegener gathered evidence to support his theory from many different scientific areas.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Alfred Wegener published a book that outlined his theory and the evidence to support it. The book was called \_\_\_\_\_

**Evidence from Landforms**

\_\_\_\_\_ and other features on the continents provided evidence for continental drift.

Mountain ranges in South Africa lined up with mountain ranges in \_\_\_\_\_

European coal fields match up with coal fields in \_\_\_\_\_

**Evidence from Fossils**

Define fossil: \_\_\_\_\_  
 \_\_\_\_\_

Mesosaurus and Lystrosaurus have been found in places now separated by \_\_\_\_\_. South America, Africa, India, and Australia are a few of the places they were found.

\* Glossopteris: \_\_\_\_\_: Fossils of this plant have been found in rocks in Africa, South America, Australia, and Antarctica. The seeds could not have traveled the great distances between the continents. The seeds were too large to be carried by wind.

**Evidence from Climate**

The island of Spitzbergen, found north of Norway, is ice covered and has a harsh polar climate. Fossils of tropical plants are found on the island.

Areas in South Africa show deep scratches in the rocks. This shows signs that \_\_\_\_\_ once covered South Africa.

Climate of South Africa today is much too mild for \_\_\_\_\_ to form.

Wegener concluded that as the \_\_\_\_\_ moved the climates of the continents changed.

**Scientists Reject Wegener's Theory**

Theory: a set of statements or principles devised to explain a group of facts or phenomena, especially one that has been repeatedly tested or is widely accepted and can be used to make predictions about natural phenomena.

Wegener offered new evidence on how mountains form.

Explain the way Wegener said mountains form: \_\_\_\_\_  
 \_\_\_\_\_

Wegener could not provide a satisfactory explanation for the force that \_\_\_\_\_ or \_\_\_\_\_ the continents.

Wegener's new evidence was \_\_\_\_\_