Inside Earth 1.3 Drifting Continents

Continental Drift

The Earth once had a single landmass that broke up into large pieces, which have since drifted apart.

This giant land mass was called Pangea.

Alfred Wegener proposed the theory of continental drift.

Evidence From Fossils

A fossil is any trace of an ancient organism that has been preserved in rock.

Evidence from fossils supports Wegener's theory of continental drift.

Example: Fossils of an extinct plant, Glossopteris, are located in rocks 250 million years old in South Africa, Australia, India and Antarctica. Its seeds were too large to be carried by the wind and too fragile to be carried by ocean waves.

Evidence From Land Features

When the continents of Africa and South America are "pieced" together, rock formations on each continent match up.

Example: Coal fields with distinctive layers in Brazil line up with coal fields with identical layers in Africa

Other evidence includes matching folding mountain chains in Africa and South America, and limestone from coral reefs in areas that are not tropical.

Evidence From Climate

Fossils of tropical plants are found on islands in the Arctic Ocean.
Traces of glacial erosion can be found in South Africa.

Wegener’s Hypothesis Rejected

Initially, Wegener’s hypothesis was rejected, because he could not explain how the continents moved. Today, his theory of continental drift is widely accepted.