The Continental Drift Theory

In the early 1900s a German scientist studied the outlines of the earth's land masses. Alfred Wegener believed that the land masses could all fit together. In 1915 he published a book explaining his continental drift theory.

Wegener believed that 200 million years ago the land on earth was one large land mass, which he called Pangaea, meaning "all earth." His theory stated that the large continent split up, and the pieces drifted apart from each other, eventually forming the continents as we know them today.

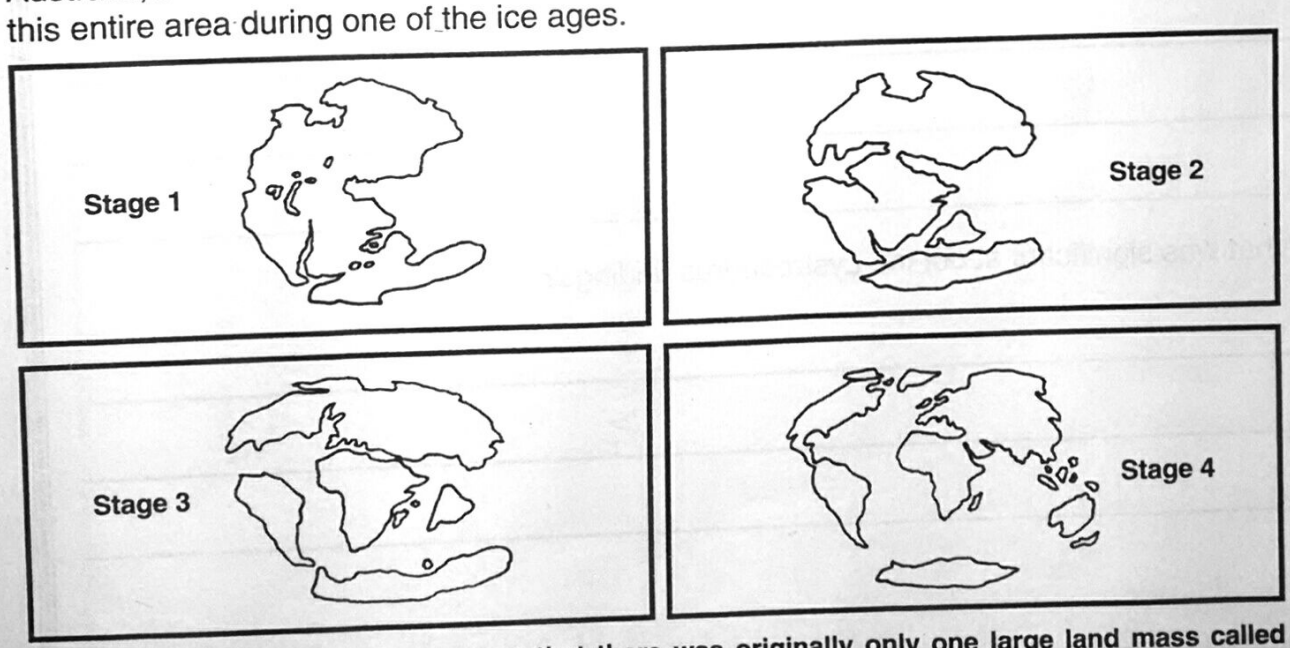
Wegener's theory was not well received and was generally not accepted. He did not seem to have enough hard evidence or proof to support his ideas. In the 1960s, however, scientists uncovered new evidence that seemed to support Wegener's theory.

Scientists located a fossil known as Glossopteris, a seed fern that lived 250 million years ago. These fossils were found in South Africa, Australia, and India. Scientists believe that the seeds of this ancient plant were too big to have been carried by wind. They cannot explain how the plant could have traveled the great distances represented by the current placement of the continents.

Other fossil evidence included a swamp-dweller known as Lystrosaurus. This hippo-like reptile is believed to have lived 200 million years ago. Fossil bones have been found in Africa and South America, and teeth have been uncovered in Antarctica. Scientists do not believe this animal would have been able to swim the vast oceans that currently separate these land masses.

Rocks have also provided support for Wegener's theory. The folded Cape Mountains of South Africa correlate with the folded mountains found near Buenos Aires, Argentina. It is very likely they belonged to the same mountain range at one time.

Scientists have also found similar glacial deposits in South America, Africa, India, Australia, and Antarctica. Their findings indicate that the same ice sheet may have covered this entire area during one of the ice ages.



The continental drift theory proposes that there was originally only one large land mass called Pangaea, which began to split up and drift apart until today we have seven continents.

Name _____ Date _____

For the student:

1. What made Wegener believe the continents may have all been one unit at one time?

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2. Why wasn't Wegener's theory accepted, initially?

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3. How long was it before new evidence emerged to support Wegener's original theory?

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4. What was significant about finding Glossopteris fossils on three different continents?

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5. What was significant about the Lystrosaurus findings?

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