



Section 12.1

Evidence for Continental Drift

Study Notes

By the end of section 12.1 you should be able to understand the following:

- Evidence suggests that all the continents were once together, then split and drifted apart by continental drift.
- The coasts of the continents seem to fit together like puzzle pieces, and rocks, mountains and fossils that are now very far apart are very similar, suggesting they were once at the same location.
- Climates now are much different on the continents than in the past.
- Sea floor spreading is the mechanism that allows continental drift to occur. The continents are attached to large tectonic plates that slowly move along Earth's surface.

NOTES

What evidence did Wegener first observe to support the idea of continental drift theory? What name did Wegener give the original "supercontinent" that split apart? What other pieces of evidence did Wegener also compare to support his theory?

- 1.
- 2.
- 3.
- 4.
- 5.

What evidence did Wegener find regarding geologic structures and rocks to support his theory on continental drift?

- 1.
- 2.
- 3.

NOTES

What was *Mesosaurus*, and why was it important to the theory on continental drift? What other fossils did Wegener study?

1.

2.

3.

4.

5.

Why were scientists studying paleoglaciatication puzzled by evidence of ancient glaciers in Africa and India? What was another piece of climate evidence that reveals that the continents were not always in their current positions?

1.

2.

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How did mapping the locations of volcanoes and earthquakes help to support the continental drift theory? What is a tectonic plate? What is the Mid-Atlantic Ridge?

1.

2.

3.

NOTES

What was discovered about the age of the rocks found near the Mid Atlantic Ridge?
How did the thickness of sediments change the further away from the ridge scientists studied?

- 1.
- 2.

What is magnetic reversal?
How does magnetic striping, discovered during the early studies of paleomagnetism, help to support the continental drift theory?
What is the name of the process that occurs at the Mid Atlantic Ridge, and which helps to explain the theory of continental drift?

- 1.
- 2.
- 3.

What were the nine pieces of evidence Hess presented to support the idea of sea floor spreading?

- 1.
- 3.
- 5.
- 7.
- 9.

- 2.
- 4.
- 6.
- 8.

What is a hot spot?

- 1.

What is the name of the unifying theory of geology?

- 1.

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