

Sec:_____Name:_____

Experiment: Continental Drift
(E. Science 9-10-1b)

Purpose: To reconstruct a model of Pangaea

Materials: tape
attached maps (fig. 33-1) scissors

Methods:

1. Cut out the maps of the continents of the world.
2. Place them on the back of this lab and try to fit the continents into one large landmass.
3. When you have the best fit, tape the pieces to the back of this lab.

Results: - on back of this lab -

Conclusions:

1. Which two continents have the best fit?
2. For the best arrangement, which continent forms the core of Pangaea?
3. Which country is now part of Eurasia but, according to the theory, was originally a separate country that moved northward into its present position?
4. Why isn't the fit perfect if the continents were once part of Pangaea? Suggest at least two reasons.

Discussion:

1. If the continents were drawn on a Mercator map (Ch. 6), would your chances of finding a fit have been improved? Explain.
2. Scientist theorize that the continents are still drifting apart. What will be the eventual position of North America with respect to Eurasia if the Earth was to last that long (see fig. 9 of textbook for help)?
3. How did the Atlantic Ocean form according to this theory?
4. If the continents were once connected, what might be similar about each of the coastlines where they were connected?
- 5a. It is hard to visualize mountains moving, it is even harder to visualize continents moving. In Matthew 17:20 what is needed so one is able to move mountains?
- 5b. The item needed in question 5a is important, but what does I Cor 13:2 mention as being of greater importance?

FIGURE 33-1



Conclusions:

1. Where are the "oldest" marks on the strip of paper?
2. Compare your complete strip with the patterns in fig. 7 in your textbook. What are the similarities and differences?
 similarities
 differences

Discussion:

1. How does this investigation compare with the movement of crustal and mantle material?
2. How do the plates move?
3. What is a magnetic reversal?
4. How does this model answer the question of why the ocean basins have younger crustal rocks than the continents?
5. On average, North America is moving 1.25 cm per year away from the Mid - Atlantic Ridge. Using this rate, determine how much further apart the continents of North America and Africa will be after 200 million year (if Earth were to last this long)?
- 6a. It is very good to think of Jesus as our heavenly father. Yet at the same time He is very powerful and stands in great awe. Comment on what Eze. 38:20 says will happen in the presence of God?
- 6b. When Jesus returns to take us to Heaven, what does Rev. 6:16 say that the people who don't know God will cry out for?
- 6c. God encourages His children to not fear. Comment on what Ps 46:2 says may happen to the mountains yet we, who are in Him, should not be worried about.

7. Section one review. Match the descriptions in Column I with the terms in Column II. Write the letter of the correct term in the blank at the left.

Column I	Column II
_____ 1. Reptile fossil found in South America and Africa.	A. Pangaea
_____ 2. Fossil plant found in Africa, Australia, India, South America and Antarctica.	B. Appalachians
_____ 3. Clues that support continental drift.	C. Continental drift
_____ 4. Mountains similar to those in Greenland & western Europe	D. glacial deposits
_____ 5. Wegener's name for one large landmass.	E. <i>Glossopteris</i>
_____ 6. Slow movement of continents.	F. <i>Mesosaurus</i>
_____ 7. Evidence that Africa was once cold.	G. fossil, climate, and rock