Name: _____

Continental Drift Activity

In 1912, Alfred Wegener, a German geophysicist and meteorologist, hypothesized that the continents used to be part of one large landmass. He first thought of this because to him, all of the continents looked like they fit together like puzzle pieces. As he traveled around the world on different expeditions, he also found that similar fossils were found on multiple continents. These animals were not long distance swimmers, so how did they get from one continent to the other? He found similar plant fossils as well, on multiple continents. How did those plants get hundreds of miles away from each other? He then discovered that at the edges of some plates, the rock types were the same as well. Another scientific phenomena that Wegener found interesting was evidence of glaciers in locations that currently aren't cold enough for glaciers to have existed. He concluded that these continents were probably once part of a supercontinent that he called **Pangaea**, which means "All-Earth," and that the continents overtime drifted apart. He called his hypothesis, **Continental Drift**. His idea was not accepted by most geologists of his day.

Some of the fossils he found are listed below. Use the internet to fill out the following table.

Fossil Name	Time period in which the organism lived.	Which continents were the fossils found on?	Describe the current climate where these fossils were found.	Describe the prehistoric climate where these fossil organisms used to live.
Cynognathus				
Mesosaurus				
Lystrosaurus				
Glossopteris				

On the attached sheet, you will see pictures of the continents and India. Cut those pictures out. You don't necessarily need cut perfectly on the lines. Just don't cut across the edges of the landmasses. Now using the locations of the different fossil and mountain range evidence, re-create **Pangaea**. If you have a digital device take a picture of your version of **Pangaea** and share that image with your teacher. If you don't have a digital device, then glue or tape **Pangaea** to the back of this paper.

1. **Why would understanding the current climate and the prehistoric climate of fossils be important to the idea of continental drift?**

2. **Are the fossil ages similar to each other? How would any age discrepancies be justified?**

3. **Why would finding out the relative ages of the fossils be important in helping provide evidence of the idea of continental drift?**

4. **What would be some reasons that scientists might come up with that would put holes into Wegener's hypothesis?**

5. **When putting Pangaea together you should have noticed that they don't fit perfectly. Why do you thing that might be the case?**

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Continental Drift Activity Answer Key

Fossil Name	Time period in which the organism lived.	Which continents were the fossils found on?	Describe the current climates where these fossils were found.	Describe the prehistoric climate where these fossil organisms used to live.
Cynognathus	[redacted]	[redacted]	[redacted]	[redacted]
Mesosaurus	[redacted]	[redacted]	[redacted]	[redacted]
Lystrosaurus	[redacted]	[redacted]	[redacted]	[redacted]
Glossopteris	[redacted]	[redacted]	[redacted]	[redacted]

1. **Why would understanding the current climate and the prehistoric climate of fossils be important to the idea of continental drift?**
   a. [redacted]

2. **Are the fossil ages similar to each other? How would any age discrepancies be justified?**
   a. [redacted]

3. **Why would finding out the relative ages of the fossils be important in helping provide evidence of the idea of continental drift?**
   a. [redacted]

4. **What would be some reasons that scientists might come up with that would put holes into Wegener's hypothesis?**
   a. [redacted]

5. **When putting Pangaea together you should have noticed that they don't fit perfectly. Why do you thing that might be the case?**
   a. [redacted]

This is what Pangaea should look like, there abouts anyway.

Teacher Reflection and Procedures

- **I give this assignment before ever discussing with students what continental drift and pangaea are. This way they are better prepared for the discussion after the assignment.**
- **I let my students work in groups of 2 or 3. I find that groups of four were just too many.**
- **The 5 questions at the end are purely to get students thinking. We discuss these questions as a whole group after the assignment is completed.**
- **The table is filled out using the web to do the searches. The column about the prehistoric climate is there to get students think about some the of fossils that have been found in antarctica were warm blooded mammals so how did they survive down south like that?**
- **This activity can spill into another day.**