Plate Tectonic Changes

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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 phenomenon that Wegener found interesting was evidence of glaciers in locations that currently aren't cold enough for glaciers to have existed. Also, he found coal beds that were once prehistoric warm swampy areas in areas that were currently in temperate or cold climates. 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.

1. Who was **Alfred Wegener**?

2. What were four **observations/questions** Alfred Wegener made during his travels to different continents?
   a.

   b.

   c.

   d.

3. What is **Pangaea**?

4. Explain Wegener's **Continental Drift Hypothesis** in your own words.

Activity:

Part 1:

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

Fossil Name	Description of the Organism	Time in which the Organism Lived	Which Continents the fossils were found on?	Describe the current climate where these fossils were found.	Describe the prehistoric climate where these fossils used to live.
Cynognathus					
Mesosaurus					
Lystrosaurus					
Glossopteris					

Part 2:

1. At your table, use the colored continent pieces to try to recreate the supercontinent of Pangaea. Use the fossil and rock evidence to match up the continents. Make sure to complete the key to identify the different lines of evidence use to put Pangaea together.
2. 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.
3. Now using the locations of the different fossil and mountain range evidence, try to re-create Pangaea.