Continental Drift Notes (Chapter 7 Section 1)

I. Important Terms:

**Pangaea**: means *All Land*

**Continental Drift**: All continents were once connected in a single large landmass. They broke apart about *200 million years ago* and drifted apart to their current positions.

II. Alfred Wegener – Developed Theory of Continental Drift

- *Alfred Wegener* was a German meteorologist (studied weather) credited with development of the Continental drift theory.
- Wegener observed the *east coast of South America* and the *west coast of Africa* fit together like puzzle pieces.
- His ideas were **NOT** accepted by other scientists of his time.
  - The missing piece from his theory was sea floor spreading (the How?). Wegener did not have the technology to travel to the sea floor and collect samples of rock.
  - It was not until after his death that evidence was gathered to support his theory and his theory was finally accepted.

III. Wegener’s Evidence to Support his Theory of Continental Drift

- The *puzzle-like fit* of the South America and Africa

- **Fossils and Plants**
  - Fossils of *Mesosaurus* (a fresh-water, land-dwelling reptile) were found in both Africa and South America.
    - How can it get across a great body of salt water?
  - Fossils of *Glossopteris* (a tropical, fern-like plant) were found in Antarctica, Australia, India, South America and Africa.
    - Strange? Tropical meaning warm temperatures and high humidity; Antarctica meaning cold temperatures and no sunlight for part of the year
    - Is this possible?
  - Other fossil evidence exists as well. (Fossil Safari)
More Evidence that Supported Wegener’s Theory of Continental Drift…

- **Climate Clues**
  - He found evidence of *glaciers* in *tropical areas*.
  - *Glacial deposits* and scoured (scratched) rock surfaces were found in S. America, Africa, India and Australia.
    - How can you explain the presence of glacial deposits in areas where no glaciers exist today?

- **Rock Clues**
  - Similar rock structures are found on different continents.
    - Examples:
      - The *same age* and *type* of rocks from the Appalachian Mountains are also found in Greenland and Western Europe.
      - Similar rocks are found along the coast of South America and Africa.