

Plate Tectonics and Seas of the Paleozoic and Mesozoic Eras

Paleozoic Plate Tectonics

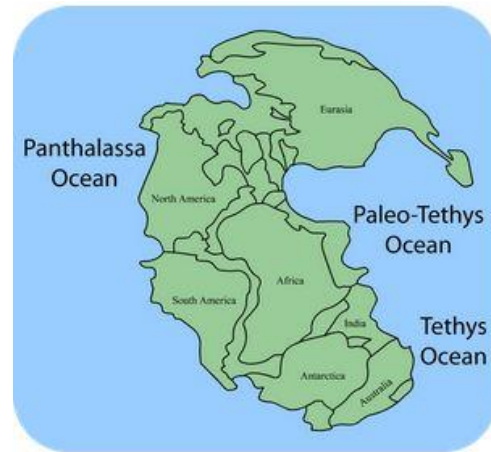
- The **Paleozoic era** began with the splitting up of the supercontinent Rodinia, and ended with the formation of the supercontinent Pangea.
 - Pangea was the last supercontinent on Earth, and was formed approximately 250 years ago.
- Continents collided together to form mountain ranges through **orogeny**, a mountain-building process.

Study Tip

Remember that the continents needed to come together before they split apart.

Mesozoic Plate Tectonics

- Approximately 180 million years ago, Pangea began to break apart into multiple continents.
- Moving continents collided with island arcs and microcontinents, forming mountain ranges on the continents' edges.
- The Panthalassa Ocean separated into individual, interconnected oceans that we see today.



Pangea was the last supercontinent on Earth.

Paleozoic and Mesozoic Seas

- The most important events of the Paleozoic and Mesozoic eras were the changes in sea level.
 - **Marine transgression** is when sea level rises over land and **marine regression** is when sea level retreats from land.
 - These two processes leave behind rock layers called **facies**.
 - Four complete transgression/regression cycles occurred during the Paleozoic era and two more occurred during the Mesozoic era.



The Grand Canyon shows sedimentary facies, which show where prehistoric oceans used to be.

Concept Check

- What was the plate tectonic activity like during the Paleozoic era and the Mesozoic era?
- What is orogeny?
- What is marine transgression and regression? What do they leave behind?