

Parts of ocean floor

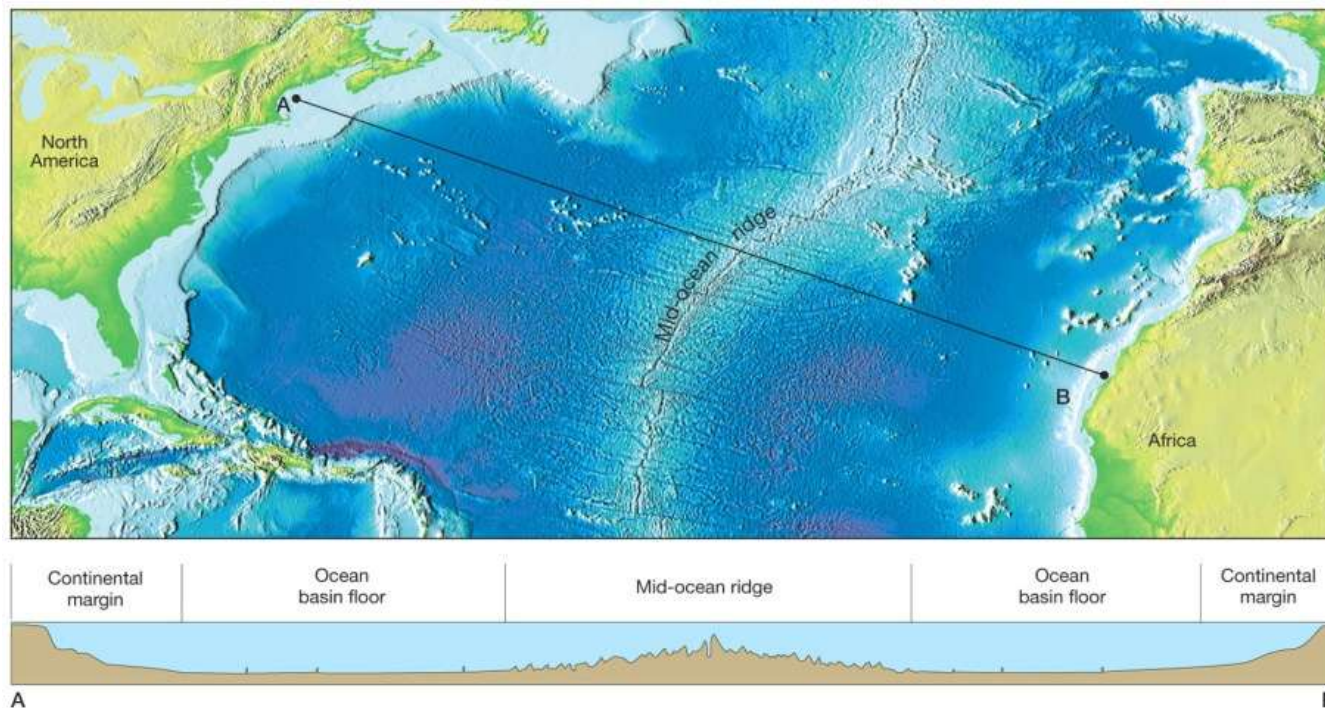
- Continental margins
- Deep ocean trenches
- Abyssal plains
- Mid-ocean ridges



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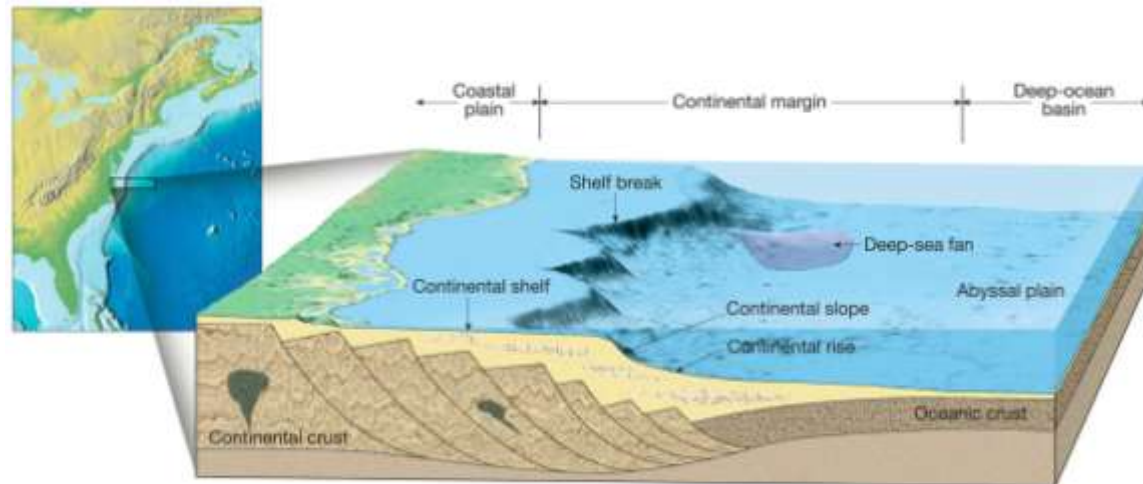
Passive continental margins

- Within tectonic plates
- Edges of oceans that contain divergent plate boundaries
- No earthquakes, no volcanoes



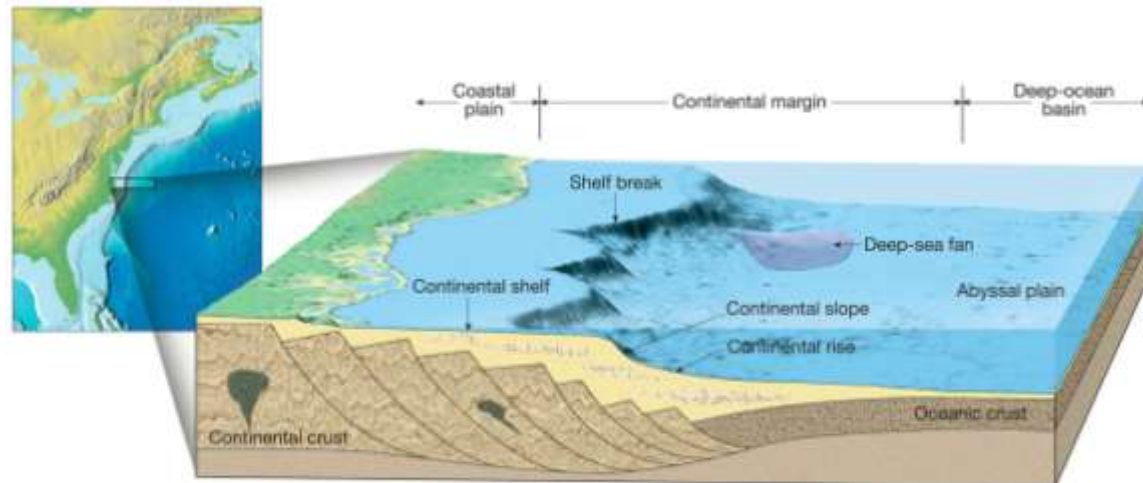
Passive continental margins

- Continental shelves:
 - ❑ < 130 meters (425 feet) deep
 - ❑ As much as 1500 km (930 miles) wide
 - ❑ Very gentle slope
 - ❑ Exposed when sea level is lower



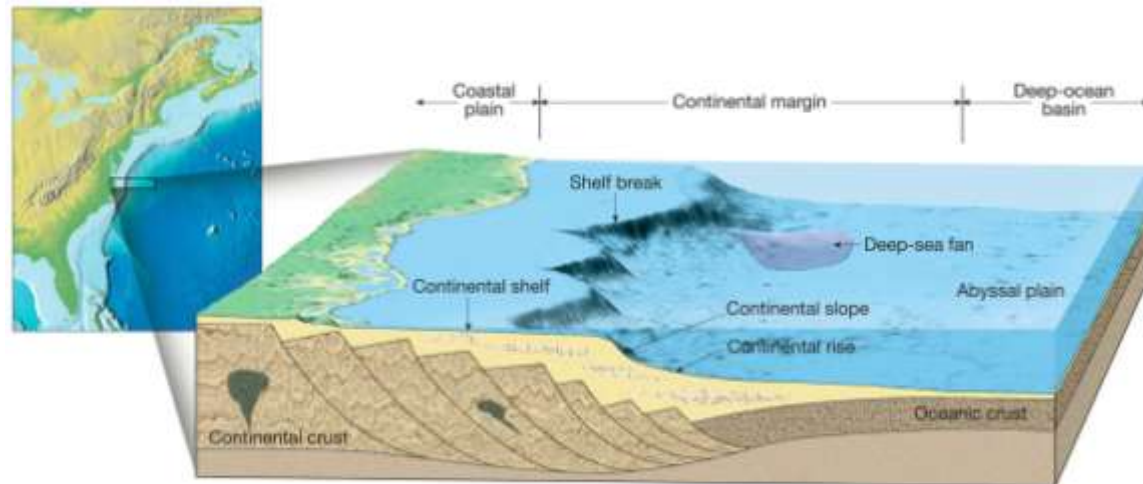
Passive continental margins

- Continental slope
 - ❑ Fairly narrow (20 km or 12 miles)
 - ❑ Elevation drops from continental shelves to deep ocean floor
 - ❑ Cut by submarine canyons



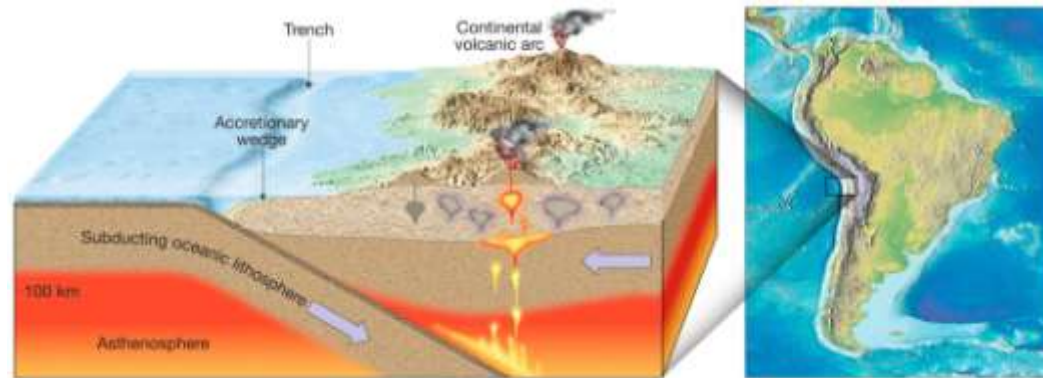
Passive continental margins

- Continental rise
 - ❑ Gentle slope from continental slope to deep ocean floor
 - ❑ Thick piles of sediment carried down slope from continental shelf to ocean floor



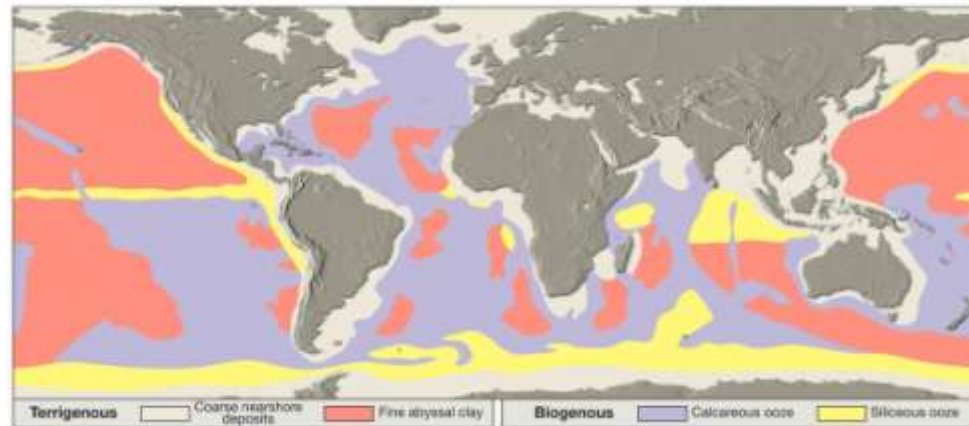
Active continental margins

- Ocean-continent subduction zones
- Deep-ocean trenches
- Volcanic arcs
- Earthquakes
- Steep topography



Abyssal plains

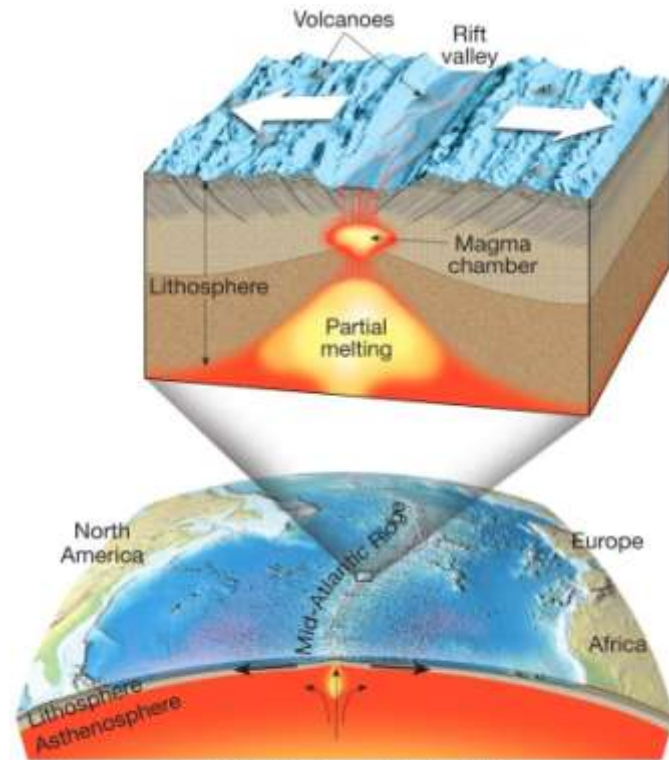
- Most of ocean floor
- Deep (around 4 km/13,000 feet) and flat
- Sediment includes wind-blown dust, calcite mud, quartz-rich mud



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Mid-ocean ridges

- Surface expression of divergent plate boundaries
- 2.5 km (8200 feet) below sea level
- Higher because of hot, young rock
- Hydrothermal vents



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Basic parts of ocean floor

- Continental margins: shallow (< 130 m/425 feet) areas near continents
- Deep-ocean trenches: deepest parts of ocean floor (10 km/33,000 feet deep); surface expression of subduction zones
- Abyssal plains: deep (around 4 km/13,000 feet), flat areas – most of ocean floor
- Mid-ocean ridges: surface expression of divergent plate boundaries; 2.5 km/8200 feet below sea level

Active vs. Passive Continental Margins

Passive Margins:

- Not plate boundary
- Parts:
 - Continental shelf
 - Continental slope
 - Continental rise

Active Margins:

- Convergent plate boundaries
- Narrow continental shelves
- Deep-ocean trenches
- Earthquakes, volcanoes