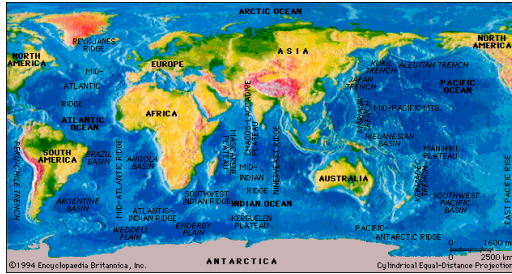


Ch. 19 The Ocean Basin

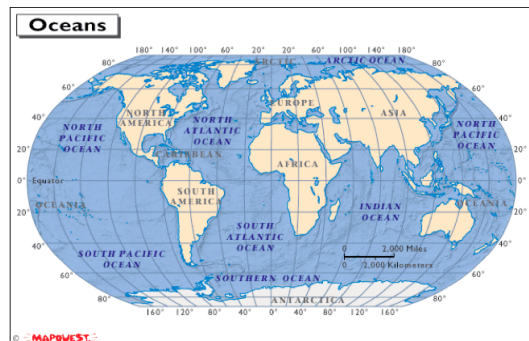
The Ocean Basins

Chapter 19



The Water Planet

- 71% of Earth's surface is covered in salt water (global ocean)
- global ocean contains about 97% of Earth's water
- Pacific > Atlantic > Indian > Southern > Arctic
 - Pacific contains more than half of all ocean water
 - Southern extends from Antarctica to 60°S
- oceanography - study of the physical characteristics, chemical composition, and life forms of the global ocean

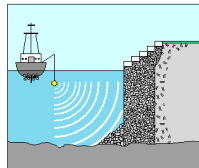


1 MATA: What does oceanography study?

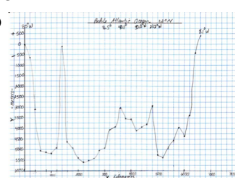
- A physical characteristics of the global ocean
- B waves and currents
- c marine life
- D chemical composition of the global oceans

Mapping the Ocean Floor

- sonar - **s**ound **n**avigation **a**nd **r**anging
- uses acoustic signals (sound waves) and returned echoes to determine the location of objects or to communicate
- sound travels at 4,800 ft/sec in salt water
- measure the time it takes the sound waves to travel from transmitter, to the ocean floor, and back to the receiver
- continuous echoes are plotted graphed to make profiles (maps) of the ocean floor



Click for Sonar video



The Ocean Floor

- 2 major areas: continental margin and deep-ocean basin
- continental margin
 - shallow parts of ocean floor
 - made of continental crust
 - thick sediment
- deep-ocean basin
 - deep parts of the ocean floor
 - made of oceanic crust
 - thin sediment



Ch. 19 The Ocean Basin

2 MATA: What do scientists use to study the ocean floor?

- A sound waves
- B ROVs (remote operated vehicles)
- C sonar
- D echoes

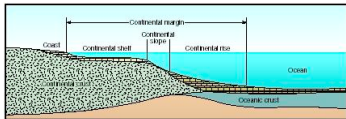


3 Oceans cover both continental and oceanic crust.

- True
- False

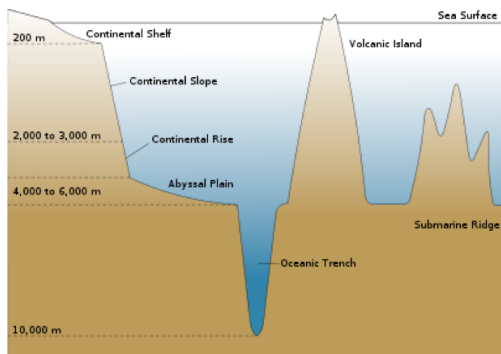
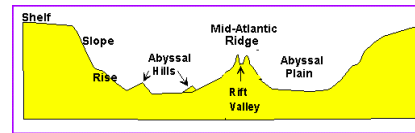
Continental Margin

- continental shelf - part of continent covered with water
important economic and political significance
gentle slope
- continental slope - steep slope that leads into deep water
true edge of continent
- continental rise - thick accumulation of sediment that moved down from shelf to deep-ocean floor



Deep-Ocean Basin

- trenches - long, narrow troughs that are the deepest parts of the ocean
created by subduction of lithospheric plates
sites of volcanic and earthquake activity
- abyssal plains - flattest regions on Earth
- mid-ocean ridges - site of sea-floor spreading
form underwater mountain ranges
- seamounts - submerged volcanic mountains
form over hot spots



4 Scientists are discovering that the ocean floor is pretty flat and uninteresting.

- True
- False