

Addison-Wesley **Earth Science – Terms and Definitions - Chpt.8**
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Chapter 8

The Ocean

Section 1

The Bottom of the Ocean

abyssal plain	Large flat area of the deep sea floor; formed by sediment flows that spill off the continental margins.
continental margin	The region of the ocean bottom near the land areas; contains most of the sediment eroded from the land; separates a continent from the deep sea floor.
echo sounding	A method of using noise (pings) to measure the depth of the ocean.
island arc	A chain of islands, usually curved, that separates a marginal sea from a major ocean.
marginal sea	A smaller body of salt water found along the margin of a major ocean.
mid-ocean ridge	A system of rugged mountains that extends down the middle of the ocean basins.
ocean	The entire body of salt water that covers much of the earth's surface; also, any of its major geographical divisions.
ocean basin	The low-lying earth formation that contains the ocean's water; consists mainly of dense basaltic crustal rock.
rift valley	Deep valley in the center of the mid-ocean ridge; a site of active volcanism.
Ring of Fire	The region of volcanic activity that surrounds the basin of the Pacific Ocean.
trench	A long narrow depression of the deep sea floor; generally has steep sides; usually bordered by areas of volcanic activity.
guyot	A flat topped under water mountain.
seamount	Volcanic cone growing upward from the ocean bottom layer by layer, usually rising more than 1000m above the floor.

Section 2

Properties of Ocean Water

aphotic zone	The part of the ocean that is in total darkness.
disphotic zone	A zone of reduced light in the ocean; between 200m and 1000m deep.
freezing point	The temperature at which a liquid freezes.
icebergs	Floating masses of ice that broke off fresh water glaciers.
pack ice	Sea ice that has been broken and then refrozen into jagged pressure ridges.
photic zone	The uppermost zone of the open ocean and the zone of most light.
salinity	Saltiness; a measure of the amount of total dissolved materials in water; grams of dissolved materials per kilogram of water.
sea ice	Frozen ocean water.
water mass	A large volume of water characterized by a similar temperature, salinity, and density throughout its mass.
water pressure	The force that a mass of overlying water exerts upon a submerged surface.

Section 3

The Circulation of Ocean Water

crest	The highest point of a wave.
gyre	A closed system of rotating ocean currents.
high tide	When the waterline of a body of water reaches its highest point.
low tide	When the waterline of a body of water reaches its lowest point.
rogue wave	A very high wave that forms on the open ocean when high waves of about the same wavelength have their crests coincide.
surf zone	The area where breaking waves occur.
swell	A rhythmic pattern of waves.
trough	The lowest point between two wave crests.
tsunami	A huge wave caused by an underwater earthquake somewhere along the ocean bottom; barely noticeable out at sea.
upwelling	A process by which deep, cold, nutrientrich water is brought to the surface and replaces lighter surface water.
wave base	The point below the surface of water at which the orbital motion of a wave nearly disappears (1/2 a wavelength below the midheight of the wave).
wave height	The vertical distance between a wave's highest and lowest points.
wavelength	The horizontal distance from a point on one wave to the corresponding point on the next wave.