

Ocean Zones

Vertical Divisions

- Scientists divide the ocean into zones both horizontally and vertically.
- They define the water column by depth, splitting it into two zones based on amount of light
 - **Photic Zone:** to a depth of 200m deep, the zone of the ocean in which organisms can photosynthesize. Phytoplankton, creatures supply almost all of the energy to the rest of the creatures in the ocean live here.
 - **Aphotic Zone:** below the photic zone, the area of the ocean in which creatures cannot photosynthesize. Not many creatures live here.
- The absence of light, low temperatures, and high pressure make living at the bottom of the ocean a difficult task.

Study Tip

Look to the roots of the words if you ever get confused about which zone is which! “Photic” comes from the same root as “photosynthesize.” “Intertidal” means that it is in between the high and low tides.



Tide pools like the one pictured occur in the intertidal zone.

Horizontal Divisions

- The ocean is divided horizontally based on distance from the shore.
 - **Intertidal Zone:** region between high and low tidal markers.
 - **Neritic Zone:** region between the low tide marker and the seaward side of the continental shelf.
 - **Oceanic Zone:** the rest of the ocean.

Concept Check

- How is the ocean divided vertically? Describe the zones.
- How is the ocean divided horizontally? Describe the zones.