

MARINE ZONES

What are the different life zones of the ocean?



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- Organisms are found in habitats
- The total surroundings of living things that affect it are called environments
- Environments have living (biological) and non-living (physical and chemical) components



MARINE ZONES

- Biotic - living parts of an environment
 - Examples: grass, trees, insects, and other animals
- Abiotic - non-living parts of an environment
 - Examples: water, light, temperature, salinity, and water pressure
- Interactions between these factors characterize all environments

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Biotic



Abiotic

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- Life Zone - a region that contains organisms that interact with one another and their environment

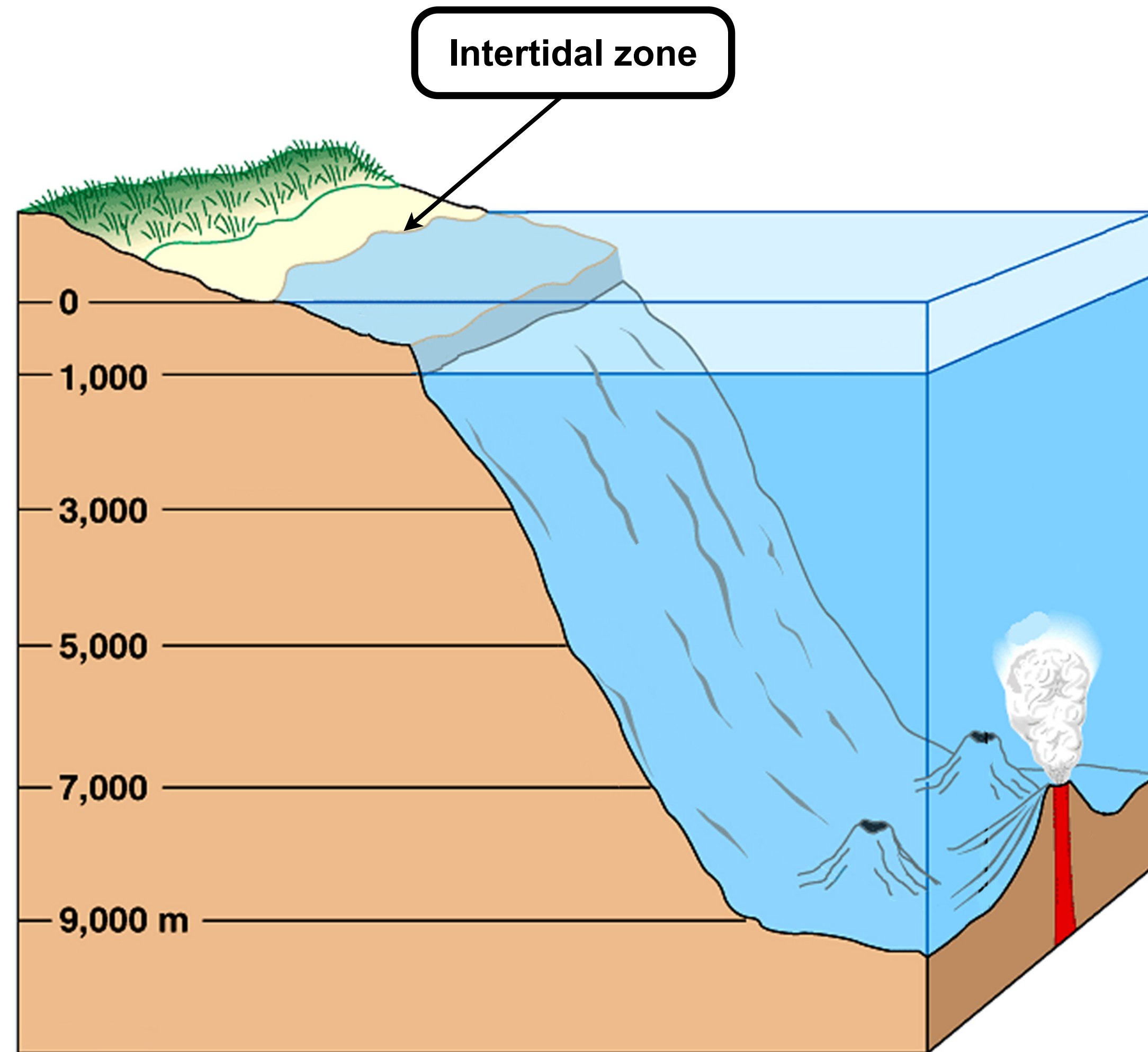


MARINE ZONES

- Intertidal Zone - area located between high and low tide
 - High tide is marked by the strand line
 - Strandline - a long line of seaweed and debris deposited on the beach at high tide



Intertidal Zone with Strandline



Marine Zones

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- Biotic organisms can survive in wet and dry climates
 - Examples: beach fleas, crustaceans, worms, and mollusks





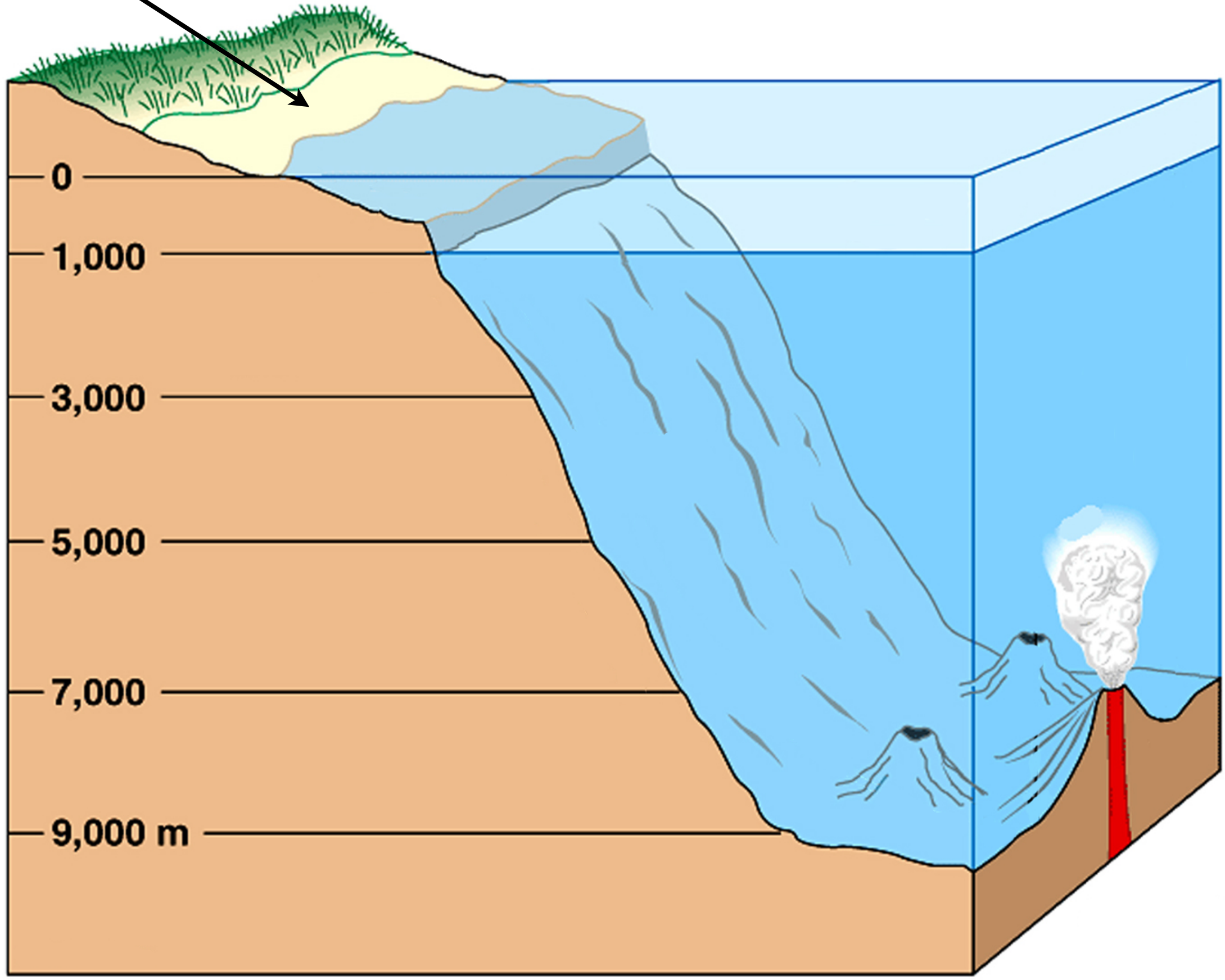
Tidal Pools

MARINE ZONES

- Supratidal Zone - area from the high tide mark to the dunes
 - Limited vegetative growth due to salt spray
 - Grasses, shrubs and small trees begin to grow as you further from the ocean
 - *This is where you put your beach towel*



Supratidal zone



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- Subtidal Zone - area below the low tide mark where coastal life remains underwater
 - This includes the surf zone where there is wave turbulence
 - Organisms in this zone have the ability to attach to the bottom
 - Examples: flat fish, shrimp, crabs, clams, snails, worms, and sponges

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Subtidal Zone Biotic Organisms



Clams



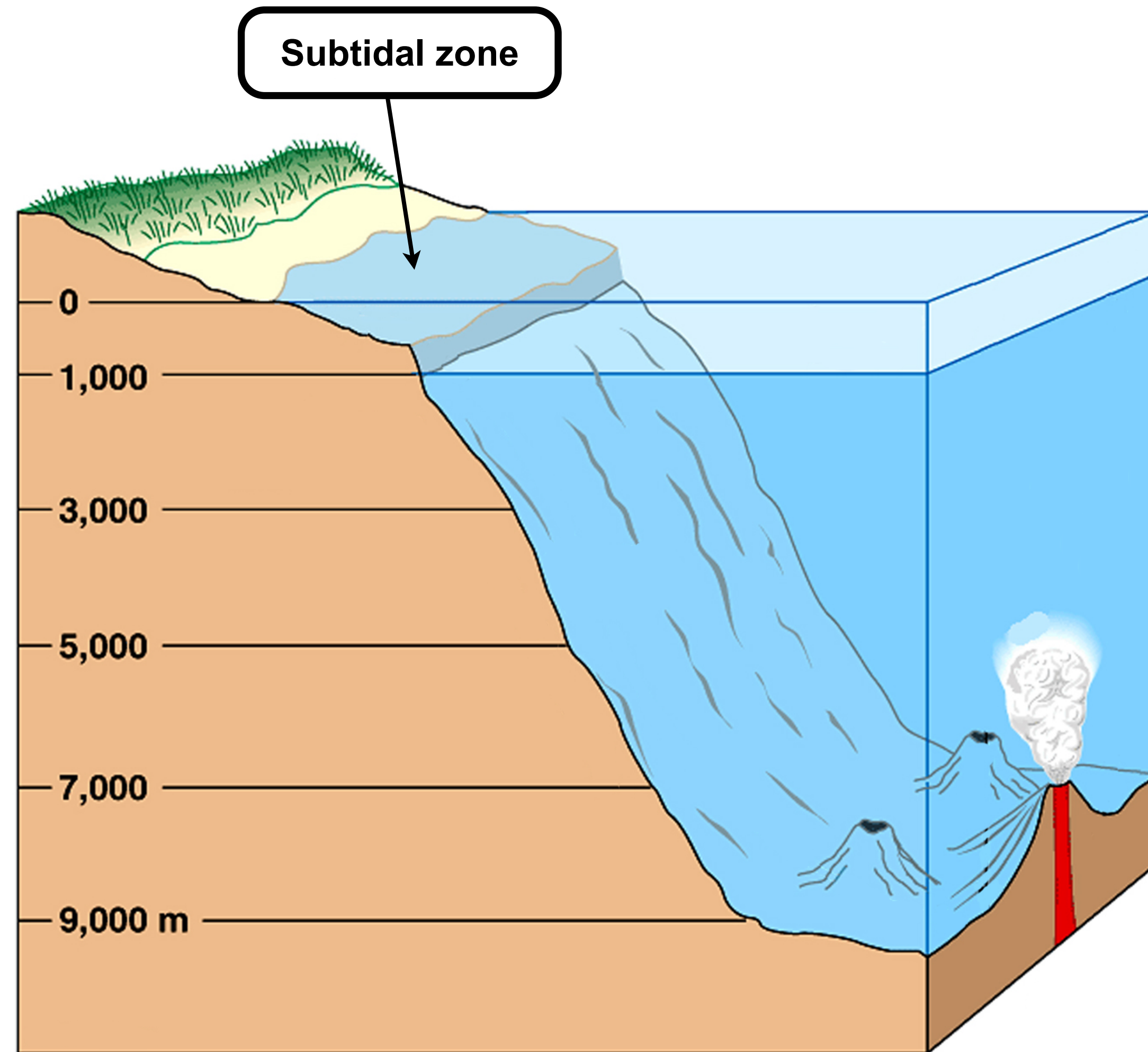
Sponges



Crabs



Where did he go?



Marine Zones



Subtidal Zone

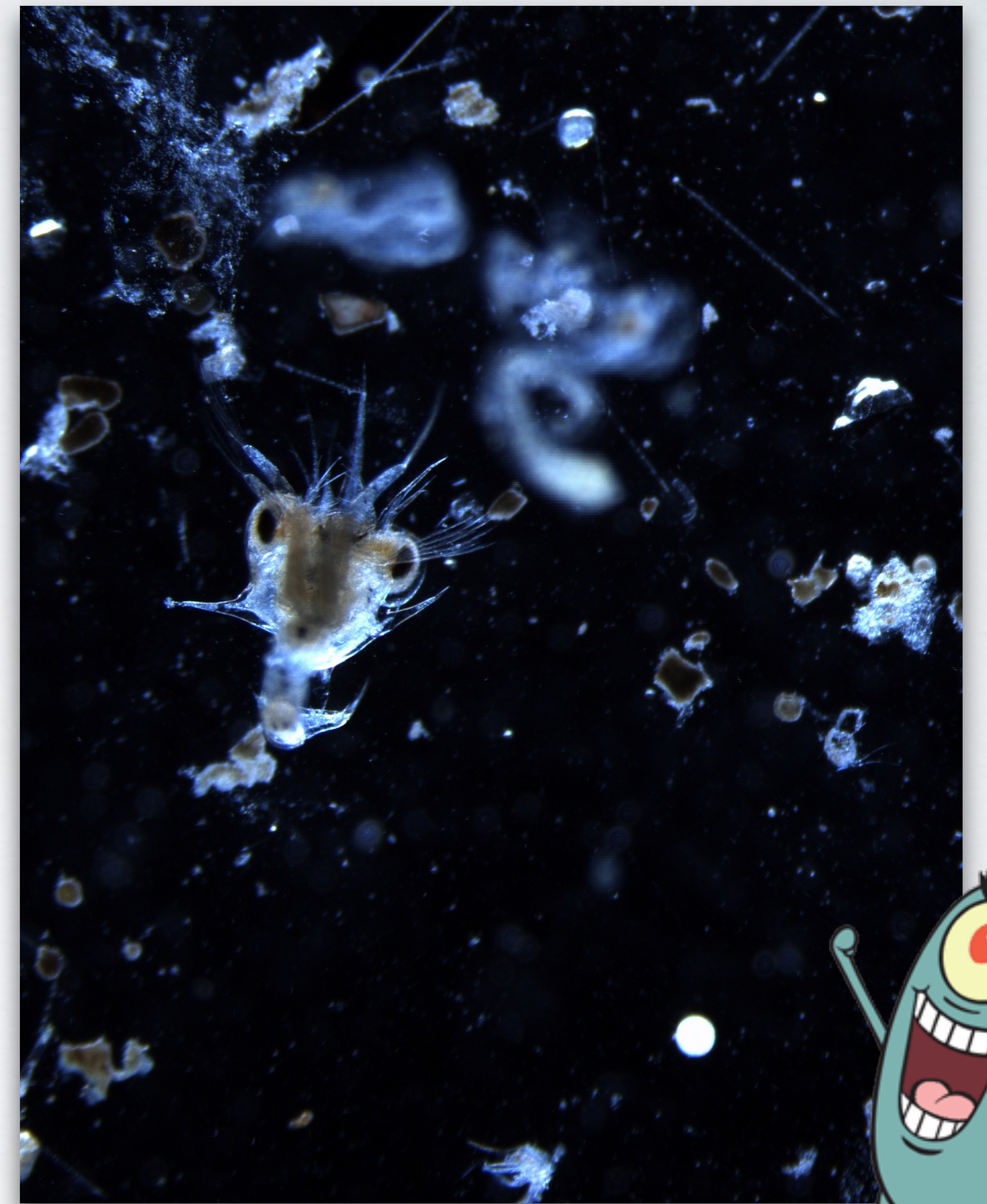
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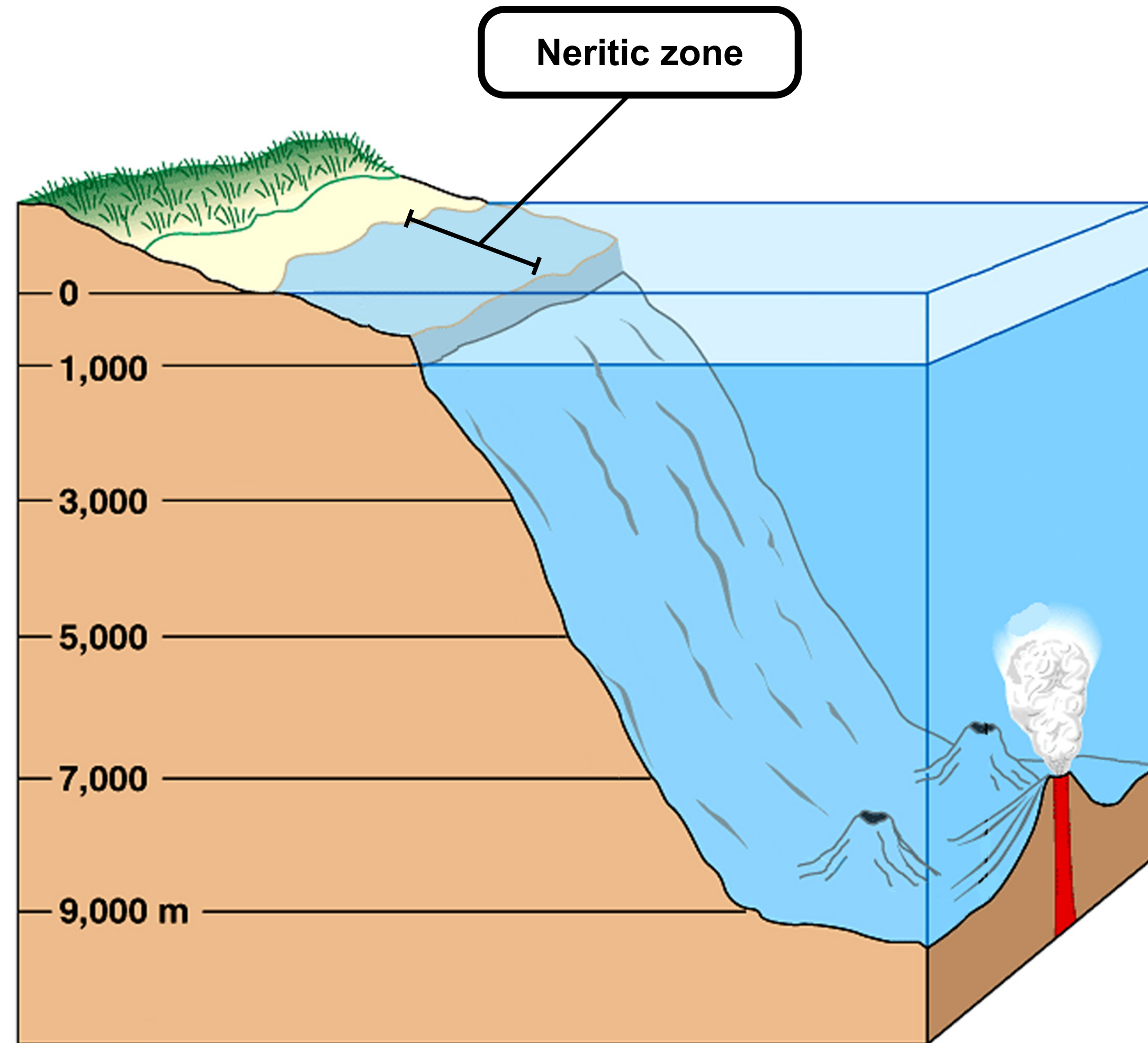
- Neritic Zone - area beyond the subtidal zone
 - Region of water that lies above the continental shelf
 - Most commercial fishing occurs in this zone



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- Neritic Zone (continued)
 - Rivers and runoff provide nutrients for plankton
 - Entirely in the photic zone so that phytoplankton and marine plants can carry out photosynthesis





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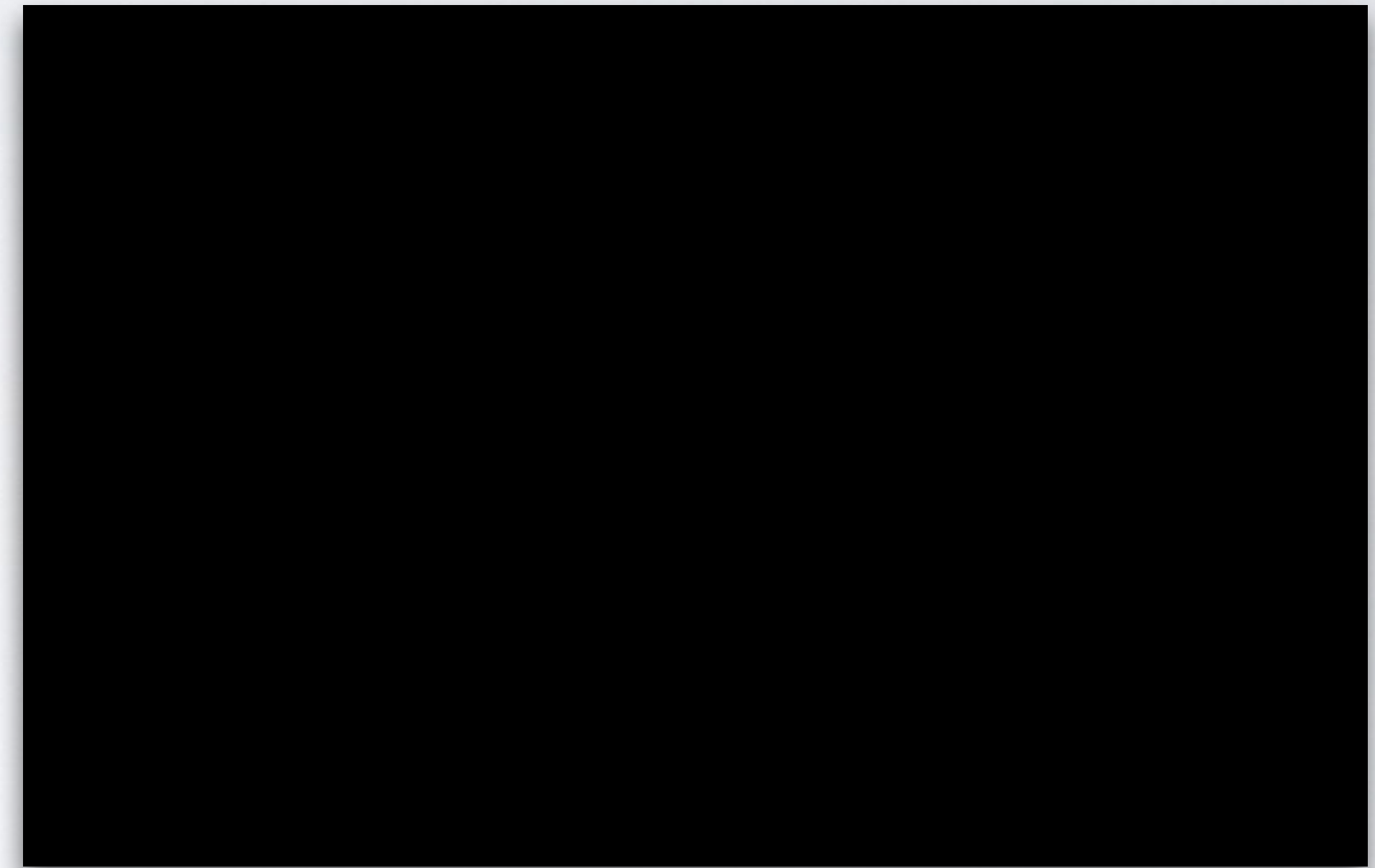
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- Oceanic Zone - area beyond the neritic zone (open ocean) which is divided laterally into two different zones
 - Photic Zone - area which receives light
 - Aphotic Zone - area that does not receive any light

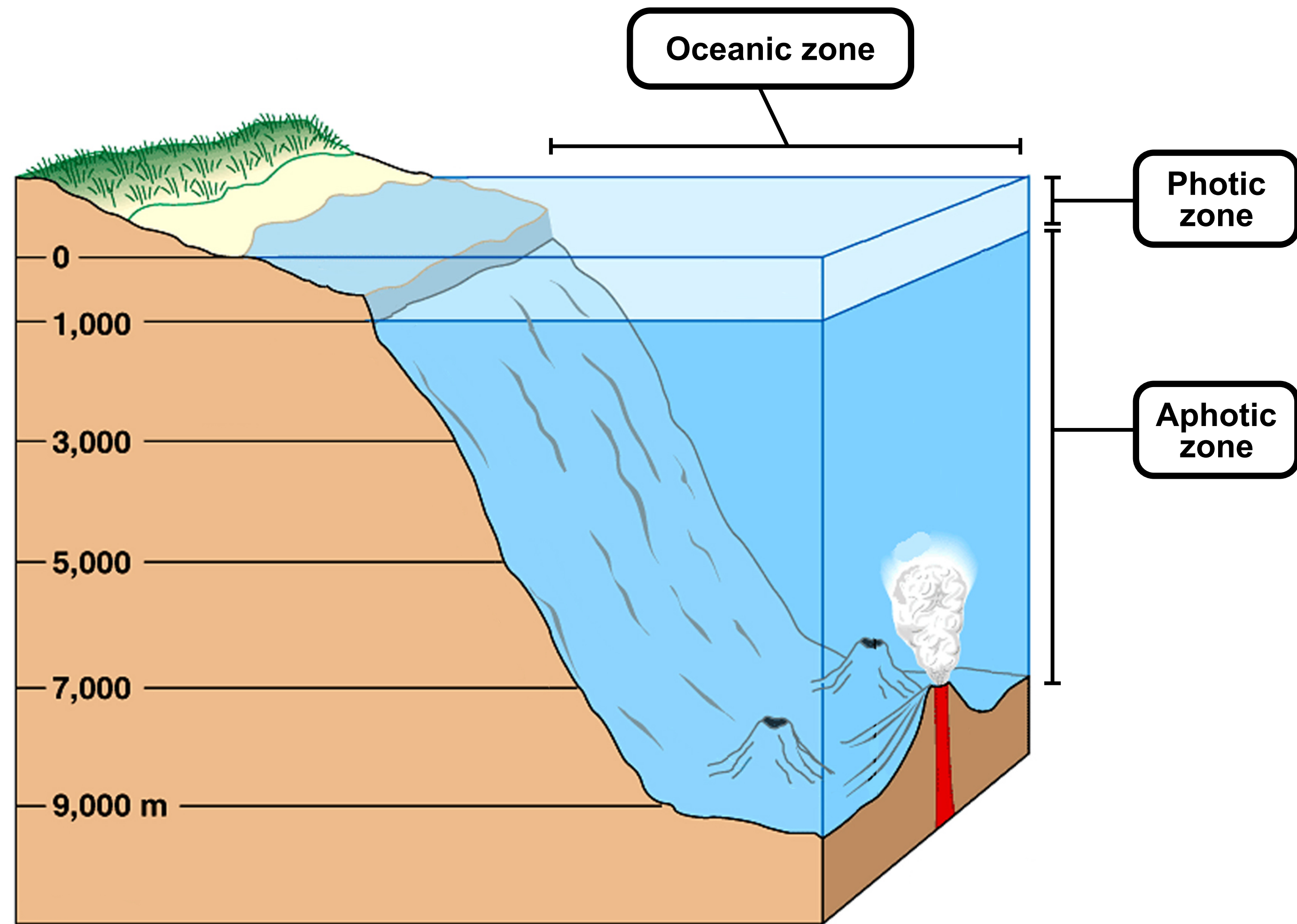
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Photic Zone



Aphotic Zone

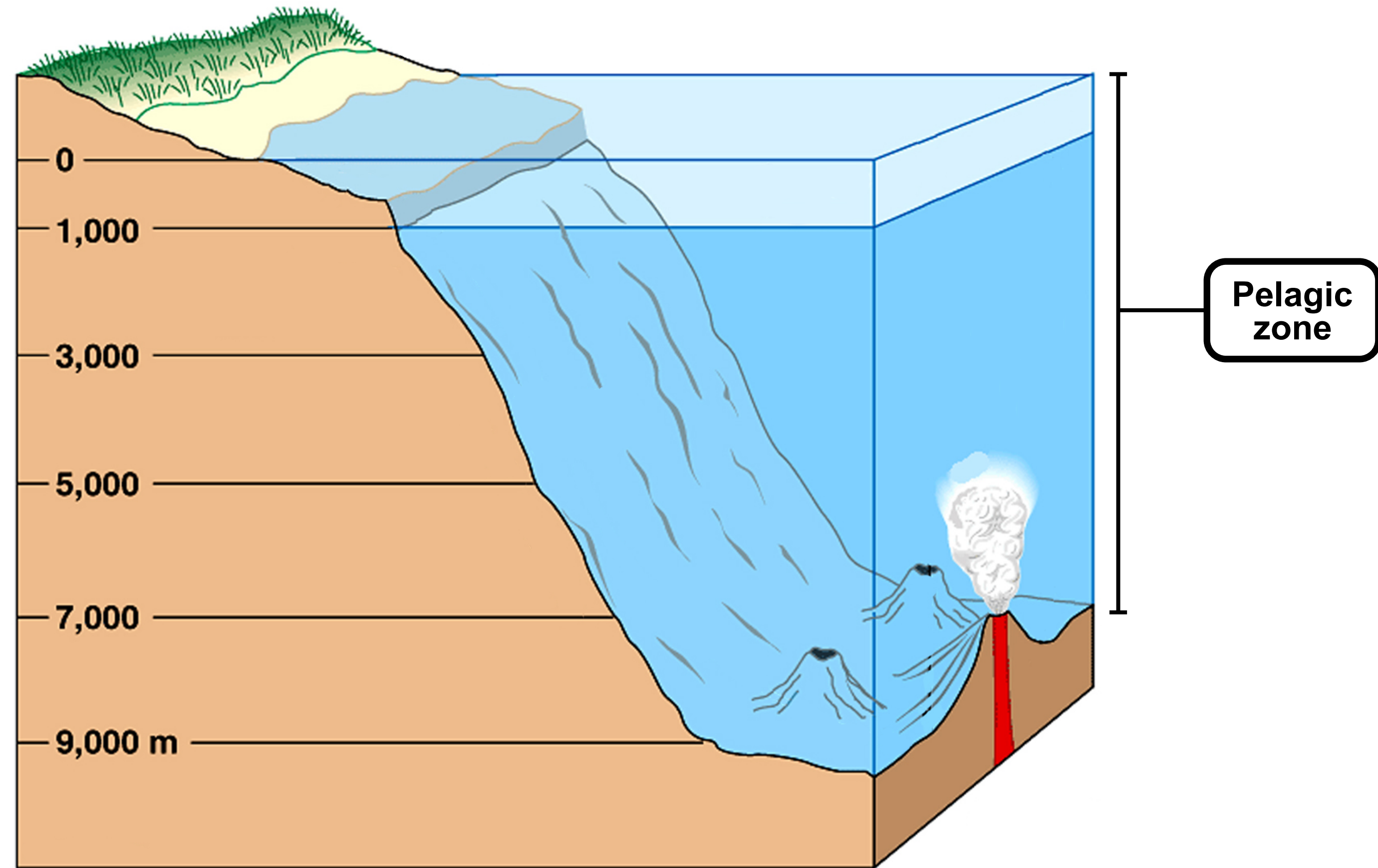


Marine Zones

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- Pelagic Zone - area that includes the neritic zone and the oceanic zone
 - Largest life zone in the ocean
 - Covers the entire ocean above the sea bottom
 - Large schools of fish and marine mammals swim freely





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