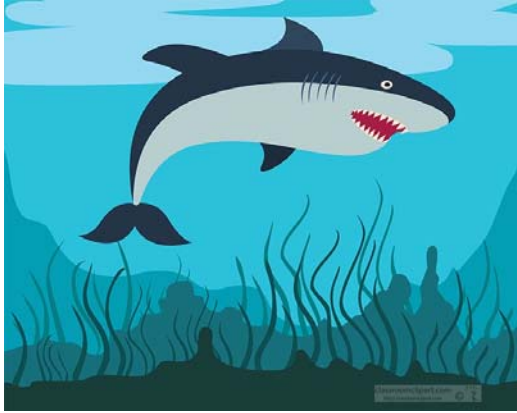


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The Aquatic Symphony: How Sharks Breathe and Move

In the vast ocean, where the rhythm of life pulses in every current, sharks reign as powerful predators. But have you ever wondered how these majestic creatures breathe, and if they need to keep moving to stay alive? Let's dive into the fascinating world of shark respiration and locomotion.

Sharks, like most fish, breathe through gills. These gills are located on the sides of their bodies, hidden beneath a series of protective flaps called gill slits. As water passes over the gills, oxygen is extracted and absorbed into their bloodstream while carbon dioxide is expelled into the surrounding water. This efficient method of respiration allows sharks to extract oxygen from their watery environment, enabling them to thrive in oceans around the globe.

Contrary to popular belief, sharks do not need to keep moving constantly to breathe. While some species, like the great white shark, do practice a type of "ram ventilation" where they swim with their mouths open to force water over their gills, many sharks are capable of buccal pumping. Buccal pumping involves actively pumping water over the gills by opening and closing their mouths while remaining stationary. This allows sharks to rest on the ocean floor or hover in place without sacrificing their ability to breathe.

However, movement still plays a crucial role in a shark's life. For many species, constant movement is essential for hunting, as it helps them maintain their position in the water column and swiftly pursue prey. Additionally, movement aids in oxygenation of the blood by facilitating the flow of water over the gills. Sharks are masterful swimmers, propelled forward by their powerful tails and streamlined bodies, making them perfectly adapted to life in the open ocean.

In conclusion, sharks are remarkable creatures with unique adaptations for survival in their aquatic habitat. Through their efficient gills and diverse swimming techniques, they navigate the ocean depths with grace and power, embodying the wonders of the natural world.