

Look Who Lives in the Ocean! Adaptations 2

An adaptation is a design, function or behavior that has developed over time to help a species better survive. Adaptations may benefit the animal in getting food, hiding, moving, protection, etc. Animals require special adaptations to live in the ocean because it is such a unique and varied environment. Using the book, answer the following questions with complete sentences.

What two organs protrude from the topside of a doris and what purpose do they serve? _____

Why is a deep sea angler fish's skin gelatinous? _____

Why can a stingray breathe without moving while its shark cousins cannot? _____

How does a sea star move? _____

Why don't dolphins have sense of smell? _____

What are "marching molars" in a manatee? _____

How do coral use algae to get food? _____

What adaptation helps diving pelicans survive impact with the water? _____

How do schooling fish swim in perfect unison? _____

How are clownfish able to live in venomous anemones? _____

Why do swordfish appear shiny? _____

Why does a moray eel open and close its mouth so much? _____

What are three adaptations a sea lion has that a seal does not? _____

Why are the markings on a whale's tail valuable to humans? _____

Why does an octopus have an ink gland? _____

What is bioluminescence and how do sea jellies produce it? _____

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Adaptations 2 KEY

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What two organs protrude from the topside of a doris and what purpose do they serve? *At the front of its body a doris has sensory cells called rhinophores for smelling chemicals, and at the back it has gills for breathing.*

Why is a deep sea angler fish's skin gelatinous? *The gelatinous skin (and soft bones) of a deep sea angler fish helps it endure the incredible pressure of depth in the aphotic or midnight zone of the ocean.*

Why can a stingray breathe without moving while its shark cousins cannot? *Stingrays have holes behind their eyes called spiracles, which run water into the stingray's gills, providing oxygen even if they are not swimming.*

How does a sea star move? *A sea star has hundreds of tiny tube feet on its underside that it uses to walk.*

Why don't dolphins have sense of smell? *Dolphins do not have olfactory lobes in their brains.*

What are "marching molars" in a manatee? *Marching molars are teeth in a manatee's mouth that move forward over time and replace previous teeth that have worn down.*

How do coral use algae to get food? *The algae live in the cells of the coral and produce food through photosynthesis, a process that converts sunlight to energy.*

What adaptation helps diving pelicans survive impact with the water? *Pelicans have air sacs in their chest that can be inflated to absorb the impact of diving into the ocean.*

How do schooling fish swim in perfect unison? *Each fish has "lateral lines" of sensory cells (neuromasts) along the sides of its body, which detect minute changes in water pressure, so the fish can respond to movement almost instantly.*

How are clownfish able to live in venomous anemones? *Young clownfish rub against anemones until the anemones' toxins mix with the thick mucus on the fishes' skin. Eventually, the anemone can no longer sense the fish.*

Why do swordfish appear shiny? *Adult swordfish do not have scales.*

Why does a moray eel open and close its mouth so much? *A moray eel's gills are too small to absorb enough oxygen to support the eel, so it must pump water over the gills by opening and closing its mouth.*

What are three adaptations a sea lion has that a seal does not? *1. Sea lions have ear flaps. 2. Sea lions have long front flippers that can hold them upright. 3. Sea lions have rotating hip joints so they can make waking movements.*

Why are the markings on a whale's tail valuable to humans? *Human researchers can use tail markings to identify individual whales.*

Why does an octopus have an ink gland? *The dark liquid in an octopus' ink gland can be squirted out to confuse predators and allow the octopus to make an escape.*

What is bioluminescence and how do sea jellies produce it? *Bioluminescence is a light or glow produced through a biochemical reaction inside the sea jellies.*