-- **Pelagic** animals use a variety of adaptations to help them survive. (pelagic means “relating to the open sea, chiefly shallow layers”)

-- Marine mammals share similar characteristics with land mammals.

**Adaptations…**

-- Ability to **float** (Zooplankton – some produce fats or oils to stay afloat)

-- Ability to **swim** (Nekton – larger fish and marine mammals)

**Microscopic Zooplankton:** Radiolarians, Foraminifers, Copepods

**Macroscopic Zooplankton**

-- **Krill** (resemble mini shrimp or large copepods, critical in Antarctic food chains)

-- **Floating Macroscopic Zooplankton**

---- Portuguese man-of-war (gas-filled float)

---- **Jellyfish** (soft, low-density bodies)

**Swimming Organisms** (fish, squids, sea turtles and sea snakes, marine mammals)

-- Swim by trapping water and expelling it

-- Swim by curving body from front to back

**Adaptations for Finding Prey**

-- **Lungers** wait for prey and pounce (grouper).

-- **Cruisers** actively seek prey (tuna).

**Adaptations to Avoid Predation**

-- Speed

-- Poison (to touch or eat: examples: sea snakes, blowfish, lion fish)

-- Hiding: Transparency, Camouflage and Countershading

-- **Schooling** (safety in numbers, appear as a larger unit, maneuvers confuse predator)

**Marine Mammals**

-- Land-dwelling ancestors

-- Warm-blooded

-- Breathe air

-- Hair/fur

-- Bear live young

-- Mammary glands for milk

**Order Carnivora** (have prominent canine teeth)

-- Sea otters

-- Polar bears

-- **Pinnipeds**

---- Walruses

---- Seals

---- Sea lions

---- Fur seals

**Order Sirenia** (Herbivores living in coastal areas)

-- Manatees (tropical Atlantic Ocean)

-- Dugongs (Indian and western Pacific Oceans)

**Order Cetacea**

-- dolphins, porpoises, killer whales, toothed whales, baleen whales

  (have elongated skull with blowholes on top, use **echolocation**)

  (emit clicks and get return, used to detect fish, can be used to stun fish)

---- Sperm whales use echolocation to hunt giant squid

---- Intelligence in Toothed Whales

  (Large brains relative to body size; can communicate with each other, “trainable”)

**Suborder Mysticeti:** **Baleen whales**

  *baleen* - fibrous plates in whale mouths used to sieve prey items

-- Blue, Finback, Humpback, Gray, Right whales