

MARINEreview: Nekton Part One – The Fishes

Your most important resources are www.sciencrush.net and PowerSchools. Use them! I am available every day before school, after school, and during lunch for extra help. Let me know if there is anything I can add to this review to help you.

Marine Organisms of the Day

- 1. Manta Ray (*Manta birostris* and *Manta alfredi*):** There are two species of Manta Ray, the reef manta and the giant manta ray. Mantas, along with the nine species of devil ray, are the only rays that evolved to be filter feeders.
<http://www.bbc.com/earth/story/20150512-watch-these-giant-rays-fly> (3:12)
- 2. Sailfish (*Istiophorus platypterus*):** Sailfish can swim up to 68 miles per hour, which is one of the highest speeds recorded for an aquatic organism. They can change their color in order to confuse prey and signal other sailfish.
https://www.youtube.com/watch?v=spkjQ3c_AjU (2:35)
- 3. Leafy Seadragon aka Glauert's Seadragon (*Phycodurus eques*):** The Leafy Seadragon is a rare species found in the southwestern coastline of Australia. To buy one (*don't*) costs around \$10,000 to \$15,000. Unlike other seahorses, they cannot curl their tails and hold on to sea grasses to stay safe so they wash up on shore after big storms.
<https://www.youtube.com/watch?v=DuI4ncViU4Y> (5:25)
- 4. Flying Fish (Family Exocoetidae):** There are 64 species of flying fish in seven genera. They are notable due to their powerful leaps out of the water followed by long gliding flights, which means that they do not technically fly.
<https://www.youtube.com/watch?v=bk7McNUjWgw> (3:20)
- 5. Giant Oarfish aka Ribbonfish aka Streamer Fish (*Regalecus glesne*):** The Giant Oarfish is the longest teleost fish at up to 36 feet. This fish has no swim bladder, no anal fin, no teeth, and no scales. It's internal organs are located towards the head, so it can survive losing large sections of its tail.
<https://www.youtube.com/watch?v=y5E9QkyB27k> (4:45)
- 6. (Anchor) Hammerhead Shark (Family Sphyrnidae):** The ten species of hammerhead shark are bottom-dwellers and their heads have lateral projections which gives them their signature flattened head shape. As of 2013, there have only been 33 attacks by hammerheads ever recorded, and never any casualties have occurred.
<https://www.youtube.com/watch?v=YCZwTJ-AFeA> (2:15)
- 7. Tiger Shark (*Galeocerdo cuvier*):** Tiger Sharks eat pretty much anything, and aren't likely to swim away after biting a human. They are known to eat sea turtles by cracking their shells open, as well as stingrays, sea snakes, and among other things, even license plates and tires.
<https://www.youtube.com/watch?v=OTKzqSIVizA> (1:45)
- 8. (Destiny, *Finding Dory*) Whale Shark (*Rhincodon typus*):** Whale sharks are not whales (mammals), they're fish. The average male whale shark is about 31 feet long and weighs about 20,000 pounds, with a mouth that can be about 5 feet wide. Whale sharks are filter feeders and they mainly eat plankton. They are live and migrate in tropical oceans and not usually found in water with a temperature lower than 72°F.
https://www.youtube.com/watch?v=a2uN0Z_U2Qg (3:53)
- 9. (Chum) Shortfin Mako Shark (*Isurus oxyrinchus*):** The Shortfin Mako is the fastest shark, reaching speeds of 43 mph. They achieve this with a fusiform body, hydrodynamic snout and powerful, crescent-shaped caudal tail.
<https://www.youtube.com/watch?v=v5fo19s4aAc> (2:17)
- 10. Hairy Frogfish (*Antennarius striatus*):** Frogfish are a type of anglerfish, using a modified dorsal fin as a lure to attract prey. They are ambush predators with an attack speed as fast as 6 milliseconds. They can't swim much and walk around on the seafloor.
<https://www.youtube.com/watch?v=bJ3FC3ISQvk> (2:48)

Top 10 Terms for This Exam

Nekton	Holoepipelagic
Archimedes Principle	Meroepipelagic
(5) Fins	Countershading
Actinopterygii	Elasmobranchii
Ampulae of Lorenzini	Swim Bladder

The Gimme Questions for This Exam

1. Environmental conditions significant to oceanic nekton include all of these except the
 - a. transparency of the medium
 - b. three dimensionality of the medium
 - c. range between high and low tides
 - d. lack of shelter from predators

2. Which of these nektonic sense organs is responsive to changes in pressure?
 - a. middle ear
 - b. melon
 - c. lateral lines
 - d. ampullae of lorentzini

3. One of the most consistent features of feeding in nektonic fishes is
 - a. the size of prey
 - b. the nutrient value of prey
 - c. the position in the food web of prey
 - d. the good manners exhibited

4. The rete mirabile is
 - a. an organ of echolocation
 - b. a network of small blood vessels
 - c. involved in temperature control
 - d. Mr. Rush's adaptation "Les Miserables" the musical

Finding Nemo Clips for This Exam

8 – Sharks

9 – Tank Gang

Mr. Rays Encyclopedia