

Ocean Zones Scavenger Hunt

Age: 5+

Education Blurb: Scroll deep into the ocean abyss [through Neal.fun's page on the Deep Sea](#), where the sunlight can no longer penetrate this world of eerie, cold darkness. Miles beneath the surface lies an unexplored world, filled with sights we have never imagined!

The deepest region is the Marianas Trench near Guam that is measured at a staggering 11,034 m deep. To compare the Eiffel tower is 324 m tall, the Burj Khalifa (tallest building in the world) is 830 m tall and Mt. Everest is 8,848 m tall. This depth is called the [Hadal zone](#) which is named after Hades – god of the underworld. On March 26th 2012, acclaimed film director and adventurer James Cameron [set the world record](#) for journeying to the bottom of this allusive region.

The deep sea begins at about 200 m down under and there several factors that shift when going deep down. For instance the deeper you go, the less sunlight present. As you venture down deeper and deeper to the bottom you will go through 3 main light zones: the sunlight zone, the twilight zone and the midnight zone.

The **sunlight zone** is the top layer of the ocean and here about 90% of marine animals live due to the ability of [photosynthesis](#).

The **twilight zone** is where only a tiny bit of light is able to penetrate the water this far deep. Moreover, the pressure is also increase thus making difficult for plants to thrive. You'd only see those animals specifically adapted to little sunlight dependence. This could be animals like the hatchet fish or [viperfish](#).

The **midnight zone** is in deep sea territory. It's complete darkness. This zone accounts for about 90% of the ocean. Marine animals here are typically found living by hydrothermal vents for its mineral-rich nutrients it expels. You'd see animals like angler fish or vampire squids.

Complete the scavenger hunt below using the clues to find out which ocean zone these animals are found in! Watch the complementary video to learn a bit more about each animal. Scroll through the deep sea here: <https://neal.fun/deep-sea/>

Scavenger Hunt Activity

1 - Hint: I have cousins that live in the pacific, and I start out my life in freshwater.

Answer: Atlantic Salmon, 5 meters

Atlantic Salmon Facts

- Atlantic salmon are very special members of the salmon family, unlike their pacific counterparts, these amazing fish are capable of returning spawn multiple times.
- Atlantic salmon smolts (teenage stage of salmon) are usually 2-3 years old when they begin their migration to the ocean.
- When they are in the ocean they eat krill and other smaller fish but they eat so much krill that their flesh is the iconic red/orange colour.
- Salmon undergo a dramatic change when they return to their home streams to spawn. They change colors and also undergo physical changes to their bodies. Males grow hooked jaws and sometimes humped backs while females change their color.



Facts from <https://www.fisheries.noaa.gov/national/outreach-and-education/fun-facts-about-amazing-atlantic-salmon>

Here's a cool video of the life cycle of an Atlantic salmon:

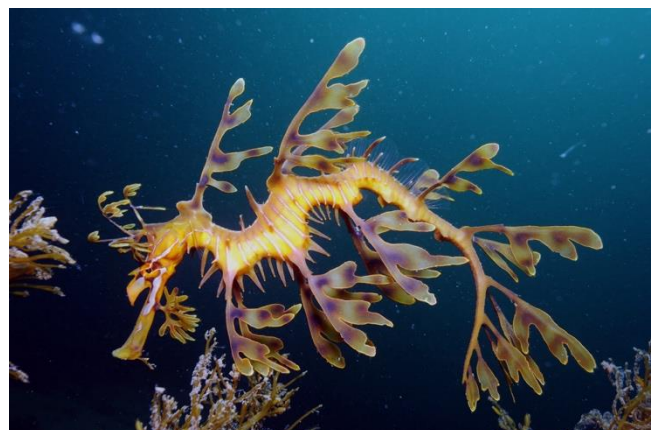
<https://www.youtube.com/watch?v=2fGLzEvWuYA>

2 - Hint: I am a type of sea horse that loves to camouflage, I look like a clump of seaweed

Answer: Leafy Sea Dragon, 60 meters

Leafy Sea Dragon Facts

- Although they are called sea dragons, these animals are not destructive and terrifying creatures of lore, they are very graceful and beautiful animals.



- The ruby sea dragon is the newest discovery! Found only in 2015 in Australia.
- Sea dragons eat very small crustaceans (crabs and shrimps), baby fish, and zooplankton.
- Sea dragons can be found in shallow coastal waters, where they seem to prefer sea grasses, rocky kelp forests, and seaweed beds that help them use their super sneaky camouflage.

Facts from <https://animals.net/sea-dragon/>

Here's a video of a leafy sea dragon in the wild:

<https://www.youtube.com/watch?v=aVPzcQDN-C4>

3 - Hint: I look like a panda, I am the largest dolphin in the dolphin family

Answer: Killer Whale or Orca, 100 meters

Killer Whale Facts

- Killer whales are the oceans most successful predators, they have evolved to hunt many different types of prey and live in all the world's oceans. Each ecotype (distinct type) of killer whale is unique in what they eat, sound and look like.
- In BC killer whales are the top predator, we have 3 types of killer whales and all are picky eaters, the resident killer whales eat only salmon and some other fish species, Biggs killer whales eat other marine mammals like seals and other whales, and the offshore killer whales are very seldomly seen and eat sharks.
- The resident killer whales are led by a matriarch (oldest female) and her children stay with her for their entire lives. These group of whales are called pods and have their own special and unique calls.



- The killer whales brain is what allows it to hunt almost anything in the ocean, their intelligence allows them to coordinate with other killer whales to bring down bigger prey.

Facts from <https://www.vanaqua.org/education/aquafacts/killer-whales>

Here's a video of a small pod of killer whales hunting a tiger shark

<https://www.youtube.com/watch?v=uqimOYOQjJ8>

4 - Hint: I can swim up rivers and have a nasty bite, I have 5 gills and sharp teeth

Answer: Bull Shark, 155 meters

Bull Shark Facts

- Bull sharks get their name from the short bullish appearance and their aggressive nature.
- They have countershading camouflage, they display a light colored belly and a dark colored back. This type of camouflage has been displayed on many marine animals.
- Bull sharks are often considered to be the most dangerous sharks because of their ability to migrate up rivers as well as their aggressiveness.
- Bull sharks eat almost anything they can get their jaws on, they also have specialized glands and kidneys to help them retain salt when they swim up rivers.



Facts from <https://www.nwf.org/Educational-Resources/Wildlife-Guide/Fish/Bull-Shark>

Here's a snippet of Jeremy Wade of River Monsters catching a bull shark in a river

https://www.youtube.com/watch?v=8DmO_ciRM2s

5 - Hint: I'm named after a four-legged canine, but I have a long slithery body.
Answer: Wolf Eel, 225 meters

Wolf Eel Facts

- Wolf eels believe it or not are not actually eels, they're just a long skinny fish.
- These ferocious looking animals often compete with Giant Pacific Octopus for dens (homes).
- Males and females are different in appearance, males are more greyish while females have more shades of brown and reddish.
- Although they are very shy, sometimes they befriend divers and love to swim with them.
- They are great parents, both mom and dad will defend the 10000 eggs the female has laid and split important parenting duties like guarding and hunting for food.



Facts from <https://www.seattleaquarium.org/blog/winter-fishtival-wolf-eel-fun-facts>

A diver meets a wolf eel: <https://www.youtube.com/watch?v=ks3O8d3CofA>

6 – Hint: I have 8 arms and 2 tentacles, I look almost translucent and I'm also named after a bird.

Answer: Cockatoo Squid, 310 meters

Cockatoo Squid Facts

- The cockatoo squid is also called the glass squid because of its translucency.



- It lives in a section of the ocean where little to no light can reach so this squid has bioluminescence (organically made light).
- The balloon like appearance is due to a chemical in the squid called ammonia which helps it float.
- The dots on the squid are special pigment cells called chromatophores which control color changing.

Facts from <https://ocean.si.edu/ocean-life/invertebrates/cockatoo-squid>

Here's a cool video of a number of deep sea squids, the cockatoo squid is at 1:22 of the video <https://www.youtube.com/watch?v=fq2E2D-y11g>

7 - Hint: I am named after a color that is very famous with the ocean, I have a streamlined body with 5 gills

Answer: Blue Shark, 360 meters

Blue Shark Facts

- Just like the bull shark, the blue shark has countershading camouflage, the blue shark has a different body shape though in that it possesses slim streamlined body with a cone shaped snout.
- They love to eat squid and will travel with the squid during their routine vertical migration to get easy meals, but the sharks also scavenge on other dead animals and occasionally garbage.
- They prefer open water and are a species that has the widest range of habitable depth.
- Blue sharks have been known to eat and eat until they physically cannot eat anymore.
- Blue sharks themselves are prey to bigger sharks like Great Whites and Mako sharks but are also prey to marine mammals like California Sea Lions as well as Killer Whales. Humans also fish them for sport fishing.



Facts from https://kids.kiddle.co/Blue_shark

Here's a video of the elusive giant squid (dead) being scavenged by a Blue shark
https://www.youtube.com/watch?v=c_V9v1EA1qY

8 - Hint: I was thought to be extinct, I have fins that I can use to "walk" along the sea floor.

Answer: Coelacanth, 700 meters

Coelacanth Facts:

- The coelacanth is the definition of a living fossil, they were thought to have perished when the dinosaurs died out but were rediscovered in 1938 in South Africa.
- They are part of the lobed finned fish, they exhibit some tetrapod (4 legged animals) features. They can use their fins to walk on the sea floor. Because of this feature, the coelacanth is considered to be the missing link between amphibians and fish.
- There are only 2 known species of coelacanth both are genetically distinct from one another.
- Coelacanths swim slowly but are capable of short bursts of speed, they feed on squid, octopus and other fishes.



Facts from <https://ocean.si.edu/ocean-life/fish/coelacanth>

Here's a video of a live coelacanth (Parent warning: there is a swear word (the s word) in the beginning, so skip to 20sec in to skip it 😊)

https://www.youtube.com/watch?v=4jl_txxYQEA

9 - Hint: I many arms but I am neither an octopus or squid, I am more closely related to an earthworm.

Answer: Squidworm, 2660 feet

Squidworm Facts

- This animal is not the product of gene splicing and mutation, this is actually a species of marine worm that lives in the deep sea.
- The body of the squidworm has bristles that oscillate to help it swim, although it is not a very good swimmer.
- The tentacles of the squidworm are very specialized for certain jobs, two of them are used for feeding while the other 8 are used for breathing. The worm also possesses two feather like organs to pick up chemical smells in the water.
- They feed on marine snow, which is dead or decaying organic matter that falls from above. They filter feed.
- The squidworm lives in a section of the ocean that is a environment booming with life some not even discovered yet!



Facts from

<https://www.nationalgeographic.com/science/phenomena/2010/11/23/meet-the-squidworm-half-worm-half-squid-er-actually-all-worm/>

Here's a video of a squidworm, highlighting its oscillating rows of bristles and tentacles <https://www.youtube.com/watch?v=D3OgjYOF3oo>

10 - Hint: I look like a chicken but I am neither a fish or a bird, I have a semi-translucent body.

Answer: Headless Chicken Fish, 2950 meters

Headless Chicken Fish Facts

- The Headless Chicken Fish also called the Headless Chicken Monster is actually a specialized sea cucumber, it gets its name because it resembles a raw chicken that you'd roast in your oven.
- It has a reddish transparent body that displays its internal organs.
- All sea cucumbers, are close relatives to the sea stars and sea urchins, they have an organ called a feeding tree/respiratory tree that helps them eat and breath.
- It is bioluminescent and its body is less dense than water which enables it to float along the water column.
- It feeds on marine snow but also sifts sediment on the ocean floor and eats any organic matter.



Facts from <https://panique.com.au/trishansoz/animals/headless-chicken-monster.html>

Here's a video of a Headless Chicken Fish on the sea floor
<https://www.youtube.com/watch?v=4TyudH4U1s4>

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