



Brevard County Libraries

We are shaking things up a bit with our
Summer Reading Program 2021!

In this week's STEAM Packet, our theme is the Ocean! We're exploring the vast Ocean that covers 71% percent of the Earth's surface. In this amazing biosphere we will be finding out about one of the Ocean's most unique creatures, the Shark. Find out in our experiment one of the unique characteristics of this creature!

STEAM Packets can be picked-up at any branch within Brevard County and are available for curbside service.

All STEAM Packets are developed to be take-home based projects. Most supplies will not be provided by the library and will be listed only as 'Supplies Needed.'



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[Brevard Public Libraries](http://www.brev.org)

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Storytime, STEAM, Craft, and Teen Packets developed by the Youth Services Department

The Ocean Region



The Ocean Region

Explore the depths of the Ocean Regions and discover the aquatic life teeming in these waters. It is a seemingly vast expanse of blue from shades of cerulean to indigo. Till you plunge the depths and discover the colorful aquatic life in this Big Blue.

With the Ocean Region covering most of the Earth's surface, it has been divided up into 5 different sections; the Pacific, Atlantic, Indian, Antarctic (also called Southern), and Arctic Ocean. The largest Ocean, the Pacific, contains the Mariana Trench. This trench is the deepest part of the Oceans at about 7 miles deep and over 1,500 miles long. If Mount Everest was in this trench, the peak would still be a mile below sea level.

The Ocean Region is considered to be the largest biome on this Earth, hence the nickname the "Blue Planet." About one million different species of animals live in two main habitats, coastal and open ocean, based on temperature, ocean depth, and distance from the shore. While most animal species stay within their habitat, there are some that roam outside of their known habitat. Sharks are one such animal, with the ability to adapt and migrate up to hundreds of miles to find new sources of food. Our experiment will focus on this amazing marine animal.

How does a Shark float?

Sharks like the Great White can grow to over 20 feet long and weigh over 2.5 tons. That is half as long as a school bus. How does an animal this size float in water? In this experiment, we will explore this! Check out the books below to find more interesting facts about Sharks and the Ocean Region.

Suggested Reads: [Books available through your library!](#)

"Commotion in the Ocean" by Giles Andreae

"Ocean!" by Derek Harvey

"What if you could sniff like a shark? : explore the superpowers of ocean animals" by Sandra Markle

"Everything awesome about sharks and other underwater creatures! by Mike Lowery

"Ocean! : waves for all" by Stacy McAnulty

"Ocean Monsters" by Nicola Davies

"The Ocean World: A Finding Dory Discovery Book" by Paul Dichter

"Sharks can't smile! : and other amazing facts" by Elizabeth Dennis

How does a Shark float?



Supplies Needed:

Plastic Sheet (plastic file folder), 2 plastic bags (sandwich size), Vegetable Oil, tape, (2) containers of water, and ice.

Optional Supplies:

Duct Tape.

Predictions:

What part of the shark's body do you think helps it float?

What do you think will happen?

Which bag do you think will sink?

What do we do as humans in order to help us float like sharks?

Directions:

This activity is intended for you to do at home with your family.

1. Cut out 2 sharks from your plastic sheet/s with the provided template.
2. Fill one bag 2/3 with water and the other bag with an equal amount of oil. Put a plastic shark in each of the bags. Seal bags with as little air in it as possible and so no liquid leaks out. If would like a stronger seal, can cover it with duct tape. Imagine these bags are sharks. One has a layer of water inside of it and the other a layer of oil.
3. Fill your large container with enough water to cover bags if they were standing upright.
4. Now it's time to test to see which shark sinks or floats. Used the time record below to record your results

Time Record: write down how long it takes a bag to sink!

Bags standing upright:

- Oil _____
- Water _____

Bags on side:

- Oil _____
- Water _____

Reflection:

Circle your answer to the first two questions. Write your response down for the rest.

With bag of oil: **Sink** **Float**

With bag of water: **Sink** **Float**

Can you list any other types of shark other than the Great White?

What other adaptations do Ocean animals use to stay floating?

Can you think of characteristics that Ocean animals share to stay afloat?

What are the similarities and differences in which humans and other animals stay buoyant in the Ocean?

Why is it necessary for plants and animals to adapt to an environment?

Online Resources:

Check out these websites for more information about our oceans!

NOAA <https://www.noaa.gov/oceans-coasts>

Ocean Experiments <https://www.noaa.gov/education/resource-collections/special-topics/hands-on-science-activities>

Shark Week <https://www.discovery.com/shark-week>

Habitats from National Geographic Kids
<https://kids.nationalgeographic.com/explore/nature/habitats/ocean/>

Marine Life <https://oceana.org/marine-life>

