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Science Lesson: Ocean Zones

Objective: TLW explore a variety marine life IOT to analyze, identify and document the ocean depth zones each species inhabits. TLW place each animal within ocean depth zones and explain their choices to demonstrate understanding.

“Look Fors”: TL is using vocabulary presented in videos and discussion to adequately compare each species pair as well as identify and label the ocean zones each species inhabits.

Key

TTW: The Teacher (Will)

TLW: The Learner (Will)

WG: Whole Group work

SG: Small Group work

IOT: In Order To

Student Work

Sunlight Zone

Twilight Zone

Midnight Zone

Abyss

Using the [Ocean Zone Study Slides](#) TT and TLW discuss the ocean zones. This week-long lesson culminates with students being able to place ten animals into their habitats on **Ocean Zone Documentation Sheet** after exploring these animal groups, their life histories, and their ocean homes. Using information, images, and videos provided in the slides, TL and TLW discuss and compare two animals. At the end of each lesson, TLW document each animal in the appropriate level of the **Ocean Zone Documentation Sheet** and be able to explain their choices to demonstrate understanding.

Overview

Use Ocean Zone Slides presentation to discuss and compare *sea turtles* and *crabs* using the provided *double bubble map* (in the slides). TLW document each animal on the **Ocean Zone Documentation Sheet**. TT should reference **Additional Resources and Links** for the proper execution of this culminating activity.

Extension: For more on crabs, view this Nautilus Live spidercrab clip (at 1:30): <https://nautiluslive.org/video/2013/07/01/spider-crab>

Day #1

Use the Ocean Zone Slides presentation to discuss and compare *angler fish* and the *octopus* using the provided *infinity map* (in the slides). At the end of this lesson, TLW document each animal on the **Ocean Zone Documentation Sheet**.

Extension: More on octopus: this Nautilus Live photobomb from a dumbo octopus <https://nautiluslive.org/video/2019/07/08/dumbo-octopus-photobombs-seafloor-survey> or *this clip of an octopus camouflaging:* <https://nautiluslive.org/video/2017/07/17/prowling-octopus-camouflages-quickly>

Day #2

Use the Ocean Zone Slides to discuss and compare the *giant squid* and the *jellyfish* using the provided Venn Diagram (in the slides). At the end of this lesson, TLW document each animal on the Ocean Zone Documentation Sheet.

Extension: More on jellyfish: Nautilus Live video compilation of jellyfish and ctenophores in the Gulf of Mexico: <https://nautiluslive.org/video/2015/06/01/floating-creatures-leave-scientists-awestruck>. *How the giant squid was filmed alive for the first time: TEDTalk by Edith Widder* <https://www.youtube.com/watch?v=rXkOPv3wVZw>

Day #3

Use the Ocean Zone Slides to discuss and compare *whales* and *sharks* using the provided column chart (in the slides). At the end of this lesson, TLW document each animal on the Ocean Zone Documentation Sheet.

Extension: More on sharks- Check out this Nautilus Live photo album of a variety of sharks found near the Channel Islands in California: <https://nautiluslive.org/album/2017/07/25/sharks-skates-and-ghost-sharks-channel-islands>. *Also, check out this clip of a catshark being attacked by a crab:* <https://nautiluslive.org/video/2015/08/11/strange-behavior-crabs-fend-cat-shark>

Day #4

Use the Ocean Zone Slides to discuss and compare *seahorses* and *sea stars/starfish* using the provided infinity map (in the slides). At the end of this lesson, TLW document each animal on the Ocean Zone Documentation Sheet.

Extension: Check out this series of images and 'Find the sea stars/ starfish' in the album. <https://nautiluslive.org/album/2013/07/04/coral-dive-highlights-july-1-2013>

Day #5

Additional Resources and Links

- Use this [Ocean Zone Documentation Sheet](#) to collect student work throughout this lesson series. For reference, here's a piece of [example student work](#) from a classroom in Lake Charles, LA. If students are drawing animals, encourage them to not color the entire page until the end of the week when all animals are added.
- This [teacher answer key](#) shares possible answers for this lesson. Note, some animals travel between zones or have species that specialize at a variety of depths (i.e. reef octopus in water 1 foot deep and deep sea dumbo octopus seen recently at 22,825 feet deep). Encourage students to explain their answers if they vary from other students.
- Take this lesson further by allowing students to research an animal of their choice. Make sure part of the research includes learning what zone of the ocean their chosen animal lives in.
- Explore more with the wide variety of video from Nautilus Live. Develop students' observations skills of the many types of found throughout ocean zones. Nautilus Live video gallery <https://nautiluslive.org/photos-videos>