

# MISSION CONSERVATION ACTIVITY GUIDE

August 2023 – Ocean Discovery

## Outdoor Activity: Sea Creature Measurement

Sea creatures come in many different shapes and sizes. Sometimes, they can be so small that people can't even see them without special tools! Other times, they are way larger than they might appear in your mind. Things like deep sea gigantism, adapting to the scarcity of food, and simply being a mammal are factors that lead to sea creatures growing much larger than their closest terrestrial counterpart. This outdoor activity will challenge you to compare the size of things you see daily to that of giants living in the ocean.

### Materials:

- Tape Measure
- Note paper
- Large sheet to display all the information
- Pencil
- Crayons
- Sea Animal Data

### Procedure:

- Use your tape measure to measure the following things:
  - Your height
  - A family member's height
  - Your family car
  - Your driveway
  - The squares on your sidewalk
  - Your shoes
  - The front door of your house
    - On the bigger sheet of paper that you have, note down all the measurements you've taken and compare them to those of large sea creatures. Do your best to include drawings or pictures.
    - Now see how many times you must line up the things you see daily to equal the size of one of these giant sea creatures.
- Your height to a Manta Ray's wingspan
- Your family member's height to a Mako Shark
- Your family car to a Colossal Squid
- Your driveway length to a Sperm Whale
- The squares on your sidewalk to a Leatherback Sea Turtle
- Your shoes to a Giant Marine Isopod
- The front door of your house to a Megalodon



### Sea Animal Data:

1. Manta Rays have a wingspan of up to 29 feet.
2. Mako sharks grow up to 13 feet long.
3. Colossal squids grow to 45 feet long.
4. Male Sperm Whales grow up to 60 feet.
5. The largest Leatherback Sea Turtle on record was almost 10 feet long from beak to tail!
6. Giant Marine Isopods can grow to nearly 2 feet long.
7. Some scientists will argue that the largest forms of ancient Megalodon grew to around 82 feet!

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## **Indoor Activity:** Ocean Layer Jars

The depths of the ocean are separated into different zones based on the amount of sunlight that penetrates through each zone. Here's a fun activity you can do at home to explore these ocean zones.

### **Materials:**

- Food coloring
- A clear jar
- Corn syrup
- Oil
- Dish soap
- Water
- Rubbing alcohol
- Funnels

### **Procedure:**

1. Gather all your materials.
2. Layer your materials in this order: You only need  $\frac{3}{4}$  cup of each liquid.
  - a. Trench Zone (Hadalpelagic Zone): Corn Syrup (tinted black)
  - b. Abyss (Abyssopelagic Zone): Dish Soap (tinted purple)
  - c. Midnight Zone (Bathypelagic Zone): Water (tinted dark green)
  - d. Twilight Zone (Mesopelagic Zone): Oil (tinted dark blue)
  - e. Sunlight Zone (Epipelagic Zone): Rubbing Alcohol (tinted light blue)
3. When you are layering, be gentle when pouring to make sure the layers will stay separated and not mix.
4. Once your jar is finished, you can watch this video to learn more about the ocean layers!
  - a. With a parent's permission, you can also do more research on the layers of the ocean and pick your favorite!

Video to Watch:

<https://youtu.be/PaErPyEnDvk>

