

## Mission Theme: Ocean Appreciation

### Indoor Activity:

### Ocean Layer Jar

Did you know the lowest point on Earth is located in the Pacific Ocean? The Mariana Trench is just off the coast of the Mariana Islands and has a maximum known depth of over 36,000 feet! All that water on top of the trench makes getting to the bottom difficult for humans. But, did you know that the further down in the ocean you go, the less sunlight reaches those areas? This allows for different creatures and plants to inhabit different layers. The ocean is split up into layers depending on how much sunlight there is. These layers are called the sunlight zone, twilight zone, midnight zone, the abyss, and the trenches. In this hands-on craft, we are going to make a representation of the ocean's layers in a jar!

### Education

- This activity gives us a visual representation of the layers of the ocean.
- Think about what adaptations animals developed to live in areas with little to no sunlight.

### Supplies

- A large glass style jar 30 Oz or bigger (mason jars work well)
- Vegetable Oil
- Dish soap
- Light corn syrup
- Water
- Rubbing Alcohol
- Black, blue, and dark blue food coloring



### Instructions:

- Trench layer: Measure 3/4 cup of corn syrup, mix with black food coloring and pour into the bottom of your mason jar.
- Abyss Layer: Measure 3/4 cup of dish soap and slowly pour into the bottom of your mason jar on top of the corn syrup.
- Midnight Layer: Measure 3/4 cup of water, mix with dark blue food coloring and carefully pour into the bottom of your mason jar on top of the dish soap.
- Twilight Layer: Measure 3/4 cup of oil and pour into the bottom of your mason jar on top of the water.
- Sunlight Layer: Measure 3/4 cup of rubbing alcohol, mix with light blue food coloring and pour into your mason jar on top of the oil layer.



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### Outdoor Activity: Exploring our Oceans

Now that you have a representation of the ocean's layers, let's go explore the sunlight zone, which is the only zone humans can reach without professional equipment. French explorer and conservationist Jacques-Yves Cousteau said "People protect what they love." A great way to build an appreciation for the ocean is to experience it. So let's get outside and explore the oceans around you! If you do not live near the ocean, visit your local lake or river to learn how your watershed connects to the ocean, or visit your local aquarium to see the interesting creatures that call the ocean home. There are plenty of online opportunities to explore the oceans, too.

#### Ocean Safety:

- If you are visiting our oceans, make sure to always wear sunscreen.
- Never swim alone.
- Be cautious at all times, especially when swimming at unguarded beaches. If in doubt, don't go out!
- Obey all instructions and orders from lifeguards.
- If caught in a rip tide: Don't fight the current. Swim out of the current in a direction following the shoreline. When out of the current, swim towards shore.

