



BOTTLED OCEAN WAVES



The ocean is the largest ecosystem on the planet and covers 70 percent of the Earth's surface. Humans can't live without the ocean: it helps regulate climate by distributing heat. And it produces more than half the world's oxygen. (All thanks to phytoplankton, tiny plants that live on the ocean's surface!)

In this activity, we'll recreate waves in a bottle with oil and water. Water is more dense than oil, so the water and oil remain separate and create an ocean wave effect when tilted from side to side. Real ocean waves are caused mostly by winds as well as tides, which are formed by the gravitational pull of the sun and moon.

Regardless of how they are made, ocean waves are always mesmerizing. Whenever you need to relax, pick up this sensory bottle and watch the waves flow.



Allison Fundis is a deep sea explorer who's studied shipwrecks and underwater volcanoes, and has even searched for Amelia Earhart's airplane.

FUN FACT:
Fun Fact: More than 80% of the ocean is unexplored.

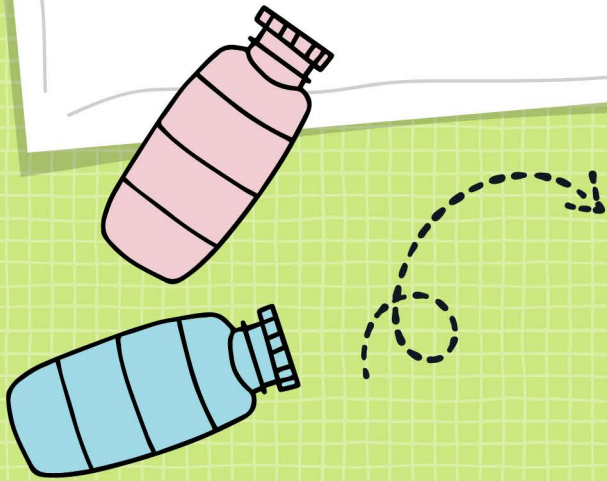


SAFETY FIRST!

Always ask
an adult
for
permission
and
help.

YOU WILL NEED:

- Lidded glass bottle or recycled plastic bottle
- Blue food coloring
- Baby oil or vegetable oil



STEP 1:

Fill a bottle
one-third of the
way with water.





STEP 2:

Add one to three drops of food coloring. Screw on top then shake to mix.



STEP 3:

Fill the rest of the bottle with oil. Fill as close to the top as possible in order to avoid air bubbles.



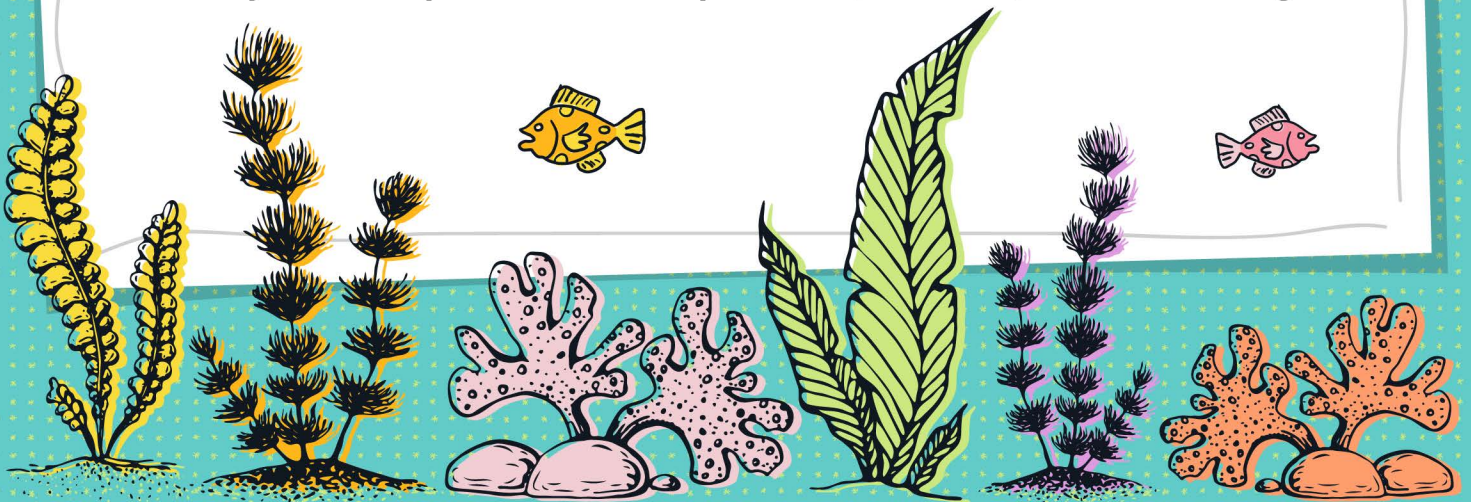
STEP 4:

Return lid. Tilt the bottle side to side and enjoy your ocean waves!



THINK ABOUT IT!

National and state parks are protected lands. That means no one can build in those areas, and that the wildlife (both plants and animals) can live there safely and unharmed. About 30 percent of land in the United States is protected. But only 5.3 percent of the world's oceans are protected. Marine protected areas are focused on preserving marine habitats and protecting ocean life for future generations. Why do you think this is this important? How can you help keep the ocean, lakes, or rivers in your area protected from pollution, tourism, or over-fishing?



LEARN MORE:

<https://nautiluslive.org/education>

Science Comics: Coral Reefs
by Maris Wicks
First Second, 2016

Atlas of Ocean Adventures
by Emily Hawkins
Wide Eyed Editions, 2019

