



Biology

Ocean In A Bottle

Create your own ocean biome with this sensory bottle made with objects you may have around the house. The ocean has five main layers that are known as zones: the sunlight zone, twilight zone, midnight zone, abyss, and the trenches. Closer to the surface, the water is warm and sunny, but the farther down you go, the colder and darker it gets. Animals that live in these zones have different adaptations that help them to survive. These adaptations could be larger eyes to see in the dark or chlorophyll to use sunlight as energy.



Supplies

- Two (2) Cups of Water
- One (1) Recycled Water Bottle
- One (1) Funnel
- Blue Food Coloring
- Glitter
- Optional: shells, stickers, vegetable glycerine, super glue



Challenge

What zone of the ocean will you create?

1. Make sure your recycled water bottle is clean and dry
2. If you choose to add shells, add them to the inside of the bottle
3. If you choose to add stickers, place them on the outside of the bottle
4. Place funnel into the bottle and add the glitter
5. If you choose to add vegetable glycerine, add a teaspoon now (this will help prevent the glitter from sticking to each other)
6. Add blue food coloring, 1 drop for blue-tinged sunlight zone, 2 drops for a twilight zone, 3 drops for midnight zone, 4 drops for the abyss, and 5 drops for the darkest trenches (note: if you want to make the abyss or twilight zones, be sure to add a silver or gold glitter and definitely use stickers because the water will be very dark)
7. Once your bottle is assembled, it's time to screw the lid back on. If you love the way it came out, use the super glue to secure the lid in place.



Questions

1. For your zone, what kind of organisms live there?
2. For your zone, what kind of adaptations might the organisms living there need?
3. What is your favorite sea creature? Which zone do you think it lives in?