

Countershading Conundrum

Sharks come in all different shapes, sizes, colors, and patterns. Some sharks live in reefs and have colors that help them camouflage, or blend in, like the wobbegong who lives on the rocky sea floor and the tiger shark who has a ripple pattern matching the light coming through the water. So, how can a great white shark camouflage in open water?

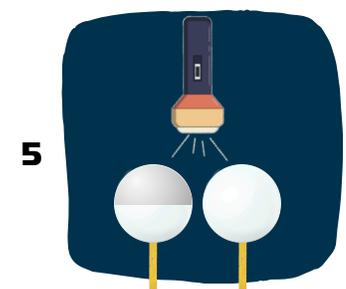
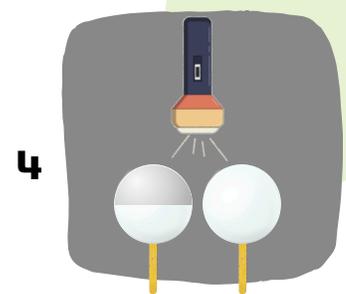
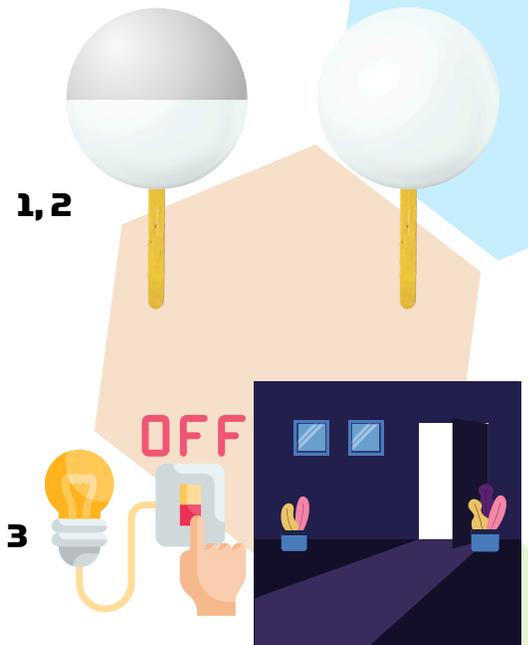


Materials:

- 2 Small Styrofoam Balls
- 2 Small Sticks
- Blue Background
- Grey Marker or Paint
- Flashlight

Procedure:

1. Using your grey marker or paint, color half of one styrofoam ball. Then place it on a stick with the white side down.
2. Place the other styrofoam ball on the other stick.
3. Turn off the lights in the room you are working in. A little residual light from other places like windows is okay.
4. Have a partner hold the flashlight up high and compare what the two styrofoam balls look like from above and below in this lighting.
5. Now, in the same lighting, hold your two styrofoam balls in front of a blue background and look at them from the side. Is one easier to see than the other?



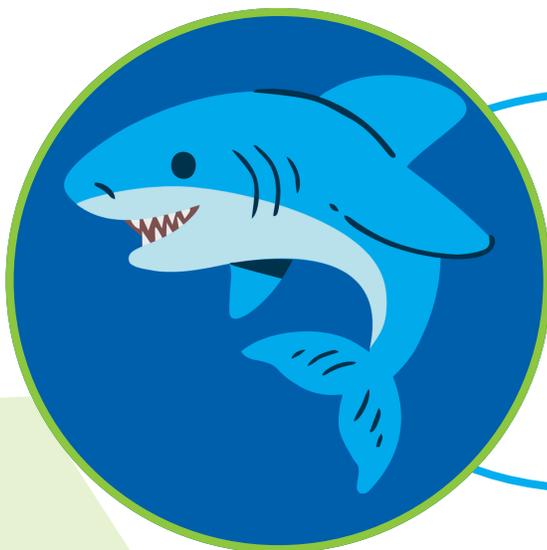
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WHAT'S HAPPENING?

So, how does an animal blend in when it's surrounded by open water? By a type of camouflage called countershading, which means they are darker on top and lighter on the bottom. When the light is coming from above, countershading helps them blend into the darker water below and lighter water above.



Countershading also helps from the side. When light is coming from above, it will cast a shadow underneath the animal causing the lighter section to look darker. This makes it seem like the animal is one color. We see countershading in penguins, sea turtles, and whales too!



DID YOU KNOW?

A **shark biologist** is someone who studies sharks. If you liked this activity, maybe shark biology is for you!