

DAY FIVE: Birds and Fish

Fish Floaties

For every four children, gather

- Bowl of water
- 6 to 12 condiment (ketchup, mustard, soy sauce) packets
- Four 2-liter soda bottles with caps, each nearly filled with water

introduce

Why do you think a fish can swim up and down under water, yet not float to the top? Let's do an experiment to find out.

Do

1. Drop condiment packets into a bowl of water. Select a packet that floats.
2. Place inside your bottle of water the packet you chose. Screw on the cap tightly.
3. Grab the bottle with both hands. Squeeze the bottle. Which way does the packet move?
4. Release the bottle. Which direction does the packet move?
5. Remove the first packet. Put a different packet into your bottle. Squeeze. Does the second packet sink and rise more easily? Why or why not?



why it works

A bubble of air is sealed inside each packet. It is like a fish's swim bladder (an air-filled sac at the dorsal side, or top, of its body). When you are not squeezing the bottle, the packet floats higher because the bubble of air is larger. When you squeeze the bottle, you increase pressure inside the bottle. This pressure compresses the air bubble, making the packet denser so it sinks. This is the way many kinds of fish control their buoyancy (ability to float underwater). So do submarines!

Prayer and Praise

Where do you think people got the idea for how to make a submarine dive? (From fish.) What are some other inventions people have made that might have come from watching birds or fish? (Airplanes. Rudders. Suction cups.) Let's each thank God for a creature that lives under water. Students take turns to pray sentence prayers. (Optional: Students draw inventions and then tape illustrations together to make a "row of inventions.")