

Flinker

Scuba divers exploring the ocean floor know about the importance of “flinking”. They want to be suspended in the ocean water without sinking down onto the coral and damaging bottom-dwelling sea life. The trick is not to float to the top or sink to the bottom, but to “flink”! (In Physics, we call this neutral buoyancy.) Can you experiment with the forces of gravity and buoyancy to create a diver who remains suspended in the middle of the water container?



Supplies

Several Styrofoam Packing Peanuts
Variety of Paperclips
Clear Container that will hold water (ex: 2L soda bottle with top cut off)
Optional: Tongs (to retrieve flinkers)
Optional: Other items to test (like a sponge or penny)



Challenge

Can you make the styrofoam packing peanut “flink”?

1. Start by filling the container with water.
2. Place a foam packing peanut in the water. What happened?
3. Place a paperclip in the water. What happened?
4. How can you combine these objects to make the peanut flink (so it doesn't float or sink)?
5. Try attaching paperclips to your peanut and/or changing the shape of the peanut.
6. Now test until your peanut stays in the middle of the water container for at least 10 seconds.
7. Try making a different object (like a small sponge or penny) flink.
8. Predict what will happen and then test it!



Questions

1. Why do you think the styrofoam floats?
2. How many paperclips did you have to add before it started to sink?
3. What happens when you add too much weight?
4. How do you think divers stay neutrally buoyant (or “flink”)?