Will It Float?

This exhibit is dedicated to generous Little Free Museum supporters Jay Edgar and Josh Feyen.

Try It Out

Before you pick up anything, take a guess. On the left is a piece of wood. On the right is a rock. Will these items float or sink? Now pick them up and place them in the water. (Please take the objects out of the water when you are done for the next person.)
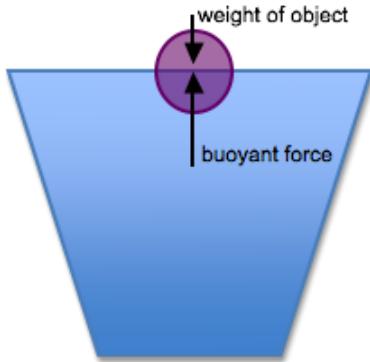

If the weight of an object is LESS than the buoyant force, the object will FLOAT.

positive buoyancy

Image: exploration21.com

What's Going On?

We often make general statements, like "wood floats," or "rocks sink." These are usually true, *but not always*. Whether something floats or sinks (and how high it sits on the surface of the water) is due to a property called **buoyancy**. **Buoyancy** is an upward force exerted by a fluid that opposes the weight of an object.

Think of it this way: if you are trying to figure out whether *you* float, imagine yourself made completely of water. Does that water person weigh more or less than you? If the water person weighs more, that means the *real* you will float. (This is known as Archimedes' principle.)

Why Does It Matter?

Humans have used this property to travel across the globe! Boats are cleverly shaped to increase the quantity of water displaced while maintaining a low average density (the material the boat is made from, plus the air inside the boat). Hot air balloons and blimps are also cleverly-designed buoyant vessels. That's right, the air around us is a fluid, too!

Image: pixabay

While You Walk...

Imagine you are in a car and holding a helium balloon on a string. Buoyancy allows the balloon to float. How does the balloon move when the car accelerates?

Tweet your answer using #LFMballoon.

Little Free Museum

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