

The scenario

Subject	Physicochemical properties of fluids/How does fluid density affect buoyancy
Length	2:58
Main objectives	To study the effect of density on buoyancy
Detailed objectives	
Structure and description of experiments:	
1. Introduction	Description: The motivation for the experiment will be the investigation of phenomena from nature - bodies swimming on the surface of liquid, bodies diving.
2. Main subject	Description: Why sometimes a body floats on the surface and other times it sinks. What does the magnitude of the buoyant force depend on? Investigating the possibility of floating bodies with a greater density than water on the surface of the liquid.
Part 1	
(0:40), Experiment 1 (0:44)	<p>Tools: 3 glasses, eggs, sugar, and salt</p> <p>Description: Place an egg in water, another one in water with sugar and the third one in water with salt. Then mix the glasses that have sugar and salt. Notice how the eggs float differently in each of the glasses. The egg will sink in the freshwater because it has greater density than the water. The egg will float in the saltwater because when salt is added to water its density becomes greater than that of the egg. That makes the egg float. However, an egg will float in the water with sugar added to it because the sugar-water combination has a higher density than the egg. The sugar-water also has a higher density than plain water. It will float, but not as much as the egg in salty water.</p> <p>Questions: What property affects whether an object floats in a fluid such as water? – the density of the liquid Is salt denser than sugar? – yes, that's why the egg buoyed much more in salt water than sugar-water.</p> <p>Conclusions: Generally, substances float if their density is less than the density of the medium, they are placed in. Adding a substance to water or liquid will change its density. Remember that it also depends on the temperature.</p>
3. Summary, evaluation and notes	Application: Density affects everyday life in many ways, such as how clouds float at different altitudes, why an object floats or sinks in water, and how gases move in Earth's atmosphere



	<p>Another application of density is determining whether or not an object will float on water.</p> <p>Level: secondary school</p>
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