

The scenario

Subject	Mechanics of Liquid / Floating Objects
Length	2:08
Main objectives	Analyse the properties of liquids and understand Archimedes' principle.
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), Experiment 2 (1:03)	<p>Tools: Water, aquarium, plasticine, scales</p> <p>Description: Model a ball from plasticine and weigh it. In a aquarium filled with water, place a ball of plasticine on the surface of the water surface and release it. We observe that the ball sinks and falls to the bottom.</p> <p>Subsequently, we model a boat from the ball, weigh it and place it on the surface of the water surface. We observe that the boat floats on the surface of the water. The weights of the boat and the ball are the same.</p> <p>The boat remains floating on the surface of the water, because the size of the displaced liquid is larger than in the case of the ball.</p> <p>Questions: Does the magnitude of the buoyant force of a liquid depend on the weight of the body? What does it depend on?</p> <p>Conclusions: The magnitude of the buoyant force depends on the amount of liquid displaced.</p>
3. Summary, evaluation and notes	<p>Application: Archimedes' principle is used when sailing ships, submarines.</p> <p>When modelling a boat, it is necessary to model a boat with the largest possible displacement.</p> <p>Level: primary school (ISCED 2 / 6th, 8th grade)</p>



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