

The scenario

Subject (field/title)	Air pressure / Suction pad
Length of movie	1:37
Main Goals	Fluid statics. The use of reduced pressure in daily life
Detailed Goals	Explanation of the pressure difference issue. Comparison of atmospheric pressure and pressure under the suction pad.
Structure and description of the experiments	
1. Introduction	The video shows how to move objects with a suction pad.
2. Main topic	How does a change pressure to human body? How can it be used to make easier human's work?
Part 1.	
Experiment (0:37)	<p>Materials :</p> <ul style="list-style-type: none"> • Suction pad with a handle for carrying e.g. glass. • A piece of rubber to which the handle from the lid to the pots. <p>Description : A piece of rubber with a handle is placed on a flat surface of different objects. We try to move them with a suction pad to another place. The suction pad applied to a flat surface does not "detach", but remains on the object all the time. We can lift it up using one of the corners. The suction pad placed on the table, despite applying quite a lot of force, does not "detach".</p> <p>Questions : Why don't objects fall off the suction pad? What is the pressure below the surface of the rubber? Where are similar items used?</p> <p>Conclusions: When we lifting a piece of rubber by the handle, a small bulge forms in its vicinity. In this space pressure is lower than the atmospheric pressure outside. The object is thus pressed against to the rubber (suction pad). To lift up the rubber, you should hold it by one of the corners. Then we don't change in pressure under its surface.</p>
Summary, evaluation and comments	<p>Application: Use in the classroom as introductory material to motivate students to think. After the lesson, you can ask for explanations why objects do not fall down the suction pad.</p> <p>Comments: It is important to point out to students that the common suction pad does not suck or stick objects to it. The objects are pressed against the rubber surface (suction pad) by atmospheric pressure.</p>



	Level of education: primary school and high school
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