

World Year of  
PHYSICS  
2005

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## WHY

does liquid stay in a straw when you put your finger on top?

### What is Needed

A straw  
A glass of water

### What to Do

Hold a straw about 1/2 submerged in a glass of water.  
Close the upper end of the straw by placing your thumb over it.  
Pick up the straw.  
Observe what you see.  
Pay attention to all details.

### What is Happening

A simple piece of laboratory apparatus that illustrates both air pressure and surface tension is the pipette. The word itself comes from the French and it means a small pipe or tube. In the lab, it is a narrow glass tube.

The liquid is kept in the straw by air pressure. The pressure below your thumb pushes up at a higher pressure than the air can above your thumb because your thumb prevents the air from exerting pressure on the liquid from above.

The water at the bottom of the straw is shaped like a half-circle because of water tension.  
Purdue University Physics Dept. Physics on the Road Hands - On Lida Wu Illustrate

