

## Spring Break Bubbles

Learn how to make a variety of bubbles using a variety of available objects (some listed below). Be careful: the more foam you create in your bubble solution container, the more difficult it will be to blow nice, lasting bubbles. Also, realize that “dryness” is the enemy of bubbles, therefore dry objects that touch the bubbles will cause the bubbles to pop, whereas wet objects that touch the bubbles will keep the bubbles intact.

Observe some free-floating bubbles (bubbles blown out of or released from a bubble-making object). Notice that they will always take the shape of a sphere due to Pascal’s Law.

Pascal’s Law refers to the fact that fluids (gases or liquids) in a closed container will exert pressure equally in all directions. In a free-floating bubble, the air and water vapor inside the bubble are pushing out equally in all directions and therefore form a sphere!

### Materials

Drinking straws  
Cookie sheets  
String  
Bubble solution

### Procedure

Use a drinking straw and a cookie sheet covered with a thin film of bubble solution to learn some of the tricks that Fan Yang, who performs at Discovery Science Center’s Annual BubbleFest, showcases. Place the tip of the straw into the bubble solution and blow gently to create a dome-shaped bubble. Make sure the end of the straw is wet, otherwise the bubble will burst. Try making bubble domes inside of bubble domes by inserting the wet straw into the first bubble dome and blowing a second dome inside. Fan Yang’s record is 12 dome bubbles inside one another!

Next, make a bubble frame by looping two straws through about one meter of string and dipping that bubble frame into a cookie sheet of bubble solution. Carefully lift up the bubble frame to create large bubbles or to have your friend poke his/her finger through the bubble without popping it, just like Fan Yang does. Remind your friend that they must wet their fingers with bubble solution in order to put their fingers through the bubble to keep it from popping. Also, you must also keep your bubble-making frame wet and free of extra foam to keep the bubbles from popping.