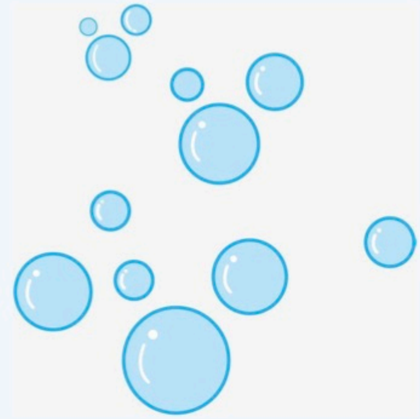


Fun With Bubbles

Michigan Department of Health and Human Services

Supplies

- Water, preferably distilled but tap works as well
- Dish soap
- Glycerin
- Hula hoop
- Kiddie pool
- Pipe cleaners
- Gloves

How Bubbles Form

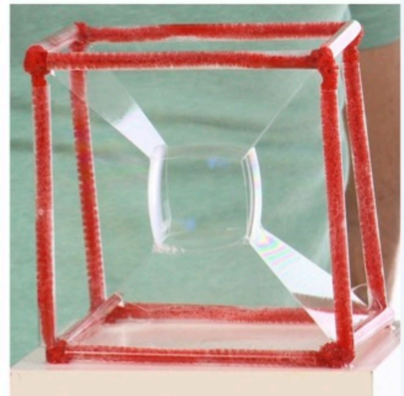
Bubbles form because of something called surface tension. This means that the water will cling to itself. When bubbles are blown they help the water molecules to stick together creating a sheet. The soap molecules will surround the water molecules on the inside and outside of the bubble to hold it together.

Things to try

1. To hold bubbles in your hand, put gloves on and try gently catching them in your hands. You should notice that the bubbles do not pop nearly as quickly as they do on your skin. This happens because the oils in your skin will typically pop the bubble and the gloves create a barrier between your skin.
2. To create giant bubbles fill a kiddie pool with about 2 inches of bubble mix and place a hula hoop at the bottom. Have a volunteer step in the middle of the hula hoop and pull it up over their head. Watch as a bubble like the one shown to the left forms. This may be hard to do in windy areas because the bubble may get blown away.

For Square Bubbles

1. Cut six pipe cleaners in half
2. Connect the pipe cleaners by twisting the ends together
3. Create two squares and connect them to form a cube
4. Dip the cube into the bubble solution and shake the excess solution
5. Blow a bubble into the center of the cube and watch it form a square
6. Pipe cleaners can also be used to create circular bubble wands with loops at the ends



Why are bubbles iridescent or shiny?

Light waves that hit the bubbles are refracted off the thin soap layer that surrounds the bubble giving off an illusion of a rainbow on the surface.

Why are bubbles circular?

Bubbles are spheres because it minimizes their surface area allowing them to hold the most air using the least amount of solution possible.

Why do bubbles pop in my hand?

Bubbles pop when they touch a dry or dirty surface because the surface tension is broken. Bubbles will often remain intact when they touch wet, smooth surfaces instead. To test this try putting your hand in your bubble solution and gently catching the bubbles while your hand is still wet.

References:

https://www.stevespanglerscience.com
https://www.thoughtco.com