

BUBBLE FOAM!

Let's stretch some molecular chains to make bubble foam!

Experiment: Bubble Foam Maker

In this experiment we will make soap bubble foam.

Materials

- Water bottle
- Sock
- Rubber band
- Sharp knife (box cutter or craft knife), or scissors
- Water
- Dish soap

Procedure

- Cut the bottom off of a water bottle (get help from an adult for this).
- Pull the sock over the bottom of the bottle.
- Fold the top of the sock down so that the bottle top is exposed.
- Make the sock tight across the bottom and fasten in place with a rubber band.
- Add some water to a pan or bowl.
- Add a few squirts of dish soap to the water and mix gently.
- Dip the bottom of your water bottle/sock into the soapy water.
- Blow through the bottle top, and watch a bubbly foam form!

Explanation

Just like an index card in our previous experiment, many molecules can unfold to many, many times their original size. This is how we can blow bubbles, make foam, or even how diapers can absorb so much water. These molecules unfold to make room for lots of air or water to fit inside of them.

Soap bubbles are actually made of two thin layers of soap with a layer of water sandwiched in between. You may remember from the Soap Power experiment, that soap has one end that is polarized, sort of like a little magnet. This allows it to stick to water molecules, which are also polarized. Together, the soap and water forms a stable film, until the water evaporates, drying out the bubble. Eventually it doesn't have enough water and it pops!

Win Prizes!

Send us pictures or videos of your experiment! Submissions will be entered into a raffle for prizes!