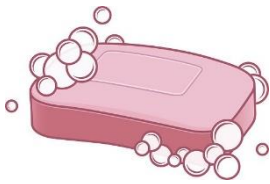


The Science of Bubbles (6-8)

KEY CONCEPTS:

- **Surface Tension** is when the surface of a liquid is strong. Water has a strong surface tension, enough to float a paperclip or for insects to rest on the surface.

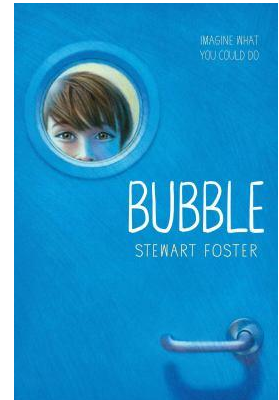


- Soap makes the surface tension of water more **flexible**, so the bubbles don't pop right away. It helps the water molecules separate without breaking the bond completely.
- The 'rainbow' that appears when looking at a bubble is the soap. When the bubble turns clear it is about to pop!

LITERACY CONNECTION:

[Bubble](#) by Stewart Foster is an interesting story about a boy who has to live in a 'bubble' to keep him safe.

Use your knowledge of science to [blow the best bubbles!](#)



ACTIVITY: EXPERIMENTING with SURFACE TENSION

Materials: Dish soap (Dawn or Joy work best), water, bowl and/or plate, straw, fork, paper clip, Pipe cleaner (optional)

1. Pour water in the bowl/plate. When the water is still, challenge yourself to “float” the paperclip on the surface!
2. Using a straw, blow bubbles in the water.
3. To make longer-lasting bubbles, add 1-2 drops of dish soap. Stir the water with a fork and try blowing bubbles again.
4. To make more bubbles, add more soap!

GET OUTSIDE! Try making your own bubble wand using items like pipe cleaners, wire coat-hangers, or a flyswatter.

- What do you notice about the *shape* of the bubbles no matter the shape of your wand?

What is happening? Soap makes the surface tension of the water more flexible. The air you add by blowing through the straw puts air pressure inside the water.

EXPLORE: Try using different liquids than soap, such as corn syrup or detergent and compare the results!

For step-by-step instructions, watch the video at: [Bubbles STEM](#)

This at-home educational activity is from the Literacy Coalition of Palm Beach County's literacy-based Stories & STEM program. Stories & STEM is made possible with support from Prime Time Palm Beach County, Inc., which receives significant funding from the Children's Services Council of Palm Beach County, Inc.

Having fun? Send pictures or video links of you and your Stories & STEM projects to csharkey@literacypbc.org