



Why are Bubbles Round?

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Twins Manu and Maya were on their way home from school.
At the traffic signal, they saw a man selling bubble-making kits.
He dipped a plastic wand into a bottle, took it out and blew into it.

A stream of bubbles floated into the air.
Some reflected rainbow colours.





“Ten rupees!” he cried out. The light turned green and the bus drove off.



“Ma, can we buy a bubble kit?” said Manu as they had dinner that evening.

Ma said, “You can make one at home. Why don’t you try it tomorrow?”



That night Manu and
Maya dreamt of bubbles.





Next morning, Maya mixed shampoo with water in a small red bucket. She carried it to the garden.

Manu found some pieces of wire in Baba's tool box. He twisted the end of one piece so there was a small circle at one end.

He dipped the wand into the soap water
and blew into the circle.

He blew hard. No bubbles came out.





“Blow it like this,” said Maya, and she blew gently. No bubbles came out. Manu tried again.

“Ooh!” they shouted as a stream of round bubbles floated into the air. Kulfi chased them and barked.




"I am going to make a different bubble blower," said Maya. She twisted the end of her piece of wire into a square.

"I bet my bubbles will look like little boxes!" she said.



“Let’s make other shapes too,” Manu said.

Manu made star-shaped and triangle-shaped wands. He was eager to see bubbles of different shapes too.



The twins watched Kulfi chasing the bubbles.
All of them were... round. How strange!



“Ma, we tried to make bubbles of different shapes, but they are all round!” complained Maya.

“Round is a special shape,” said Sukhwinder Aunt, their neighbour, who was chatting with their mother. She worked at the science museum in the city.



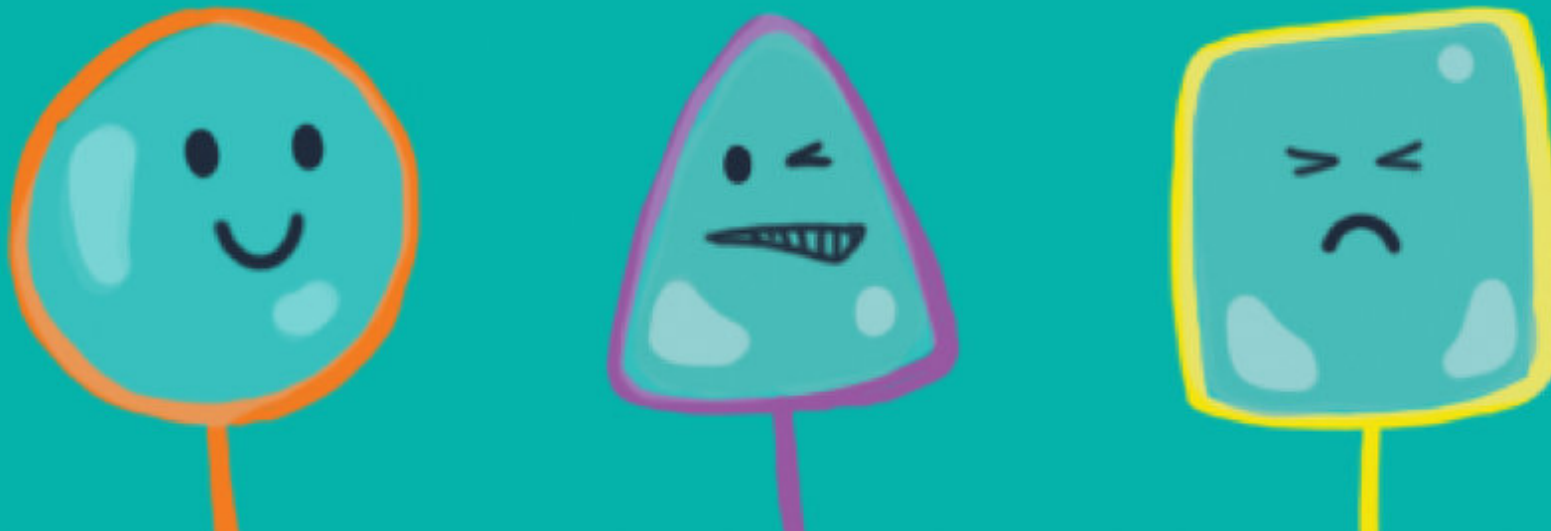
“When we make bubbles, we blow air into bubble skin. The bubble skin stretches least when it is round. If it is any other shape, the skin will have to stretch more to hold that much air. Bubbles do not like that,” added Sukhwinder Aunty.

“Bubbles are lazy! They don’t like stretching!” Manu shouted. And he ran off to blow more bubbles with Maya.

Classroom Activities

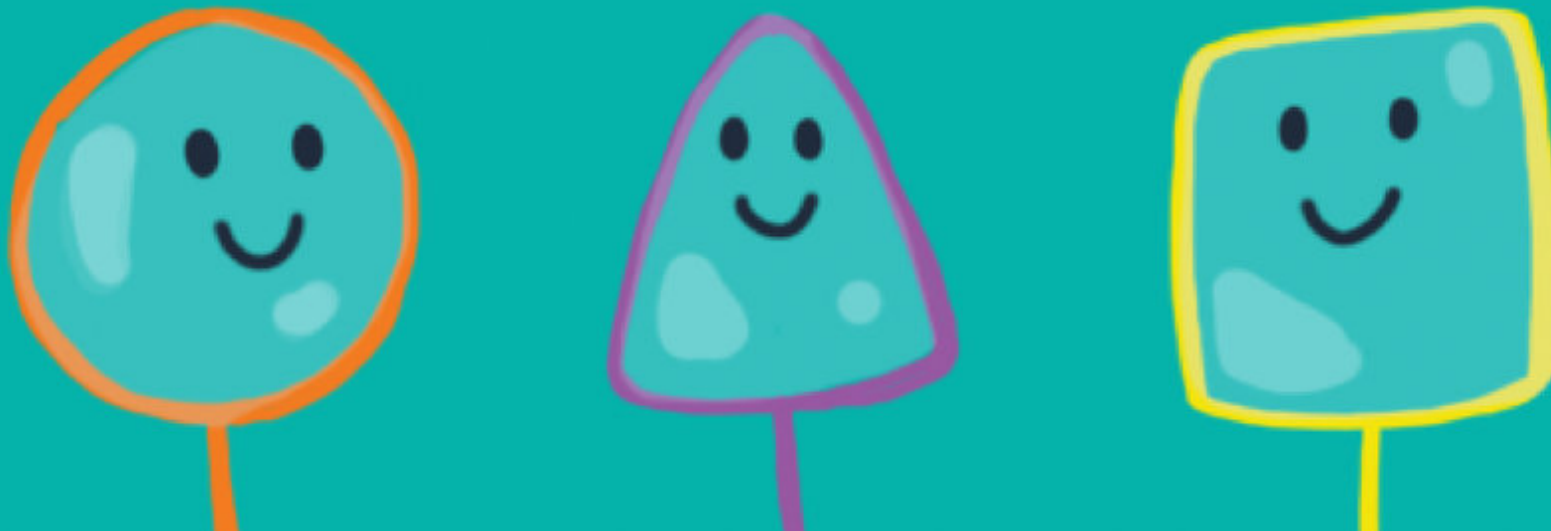
How do you make soap bubbles?

Squeeze some liquid soap or shampoo into a cup. Add some water to make a soapy solution. To make sure it does not become too watery, add the water in small quantities.



Get pieces of wire. Twist them into different shapes. Dip the frame into the soap solution. Then hold it up. Observe how the soap film clings to the frame forming a square, circle or triangle according to the frame.

Blow gently on the soap film to make bubbles. When the bubbles leave the frame, what do you see? They may start as different shapes, but they always form round (spherical) bubbles!



**Take a dab of paint from your paint-box. Mix it with the bubble solution. Now blow bubbles!
What colour are they?**

If you are on Earth, the chances are that your bubbles will not come out in a different colour. As the paint is heavier, it is pulled down by gravity and collects in a little blob at the bottom of the bubble.

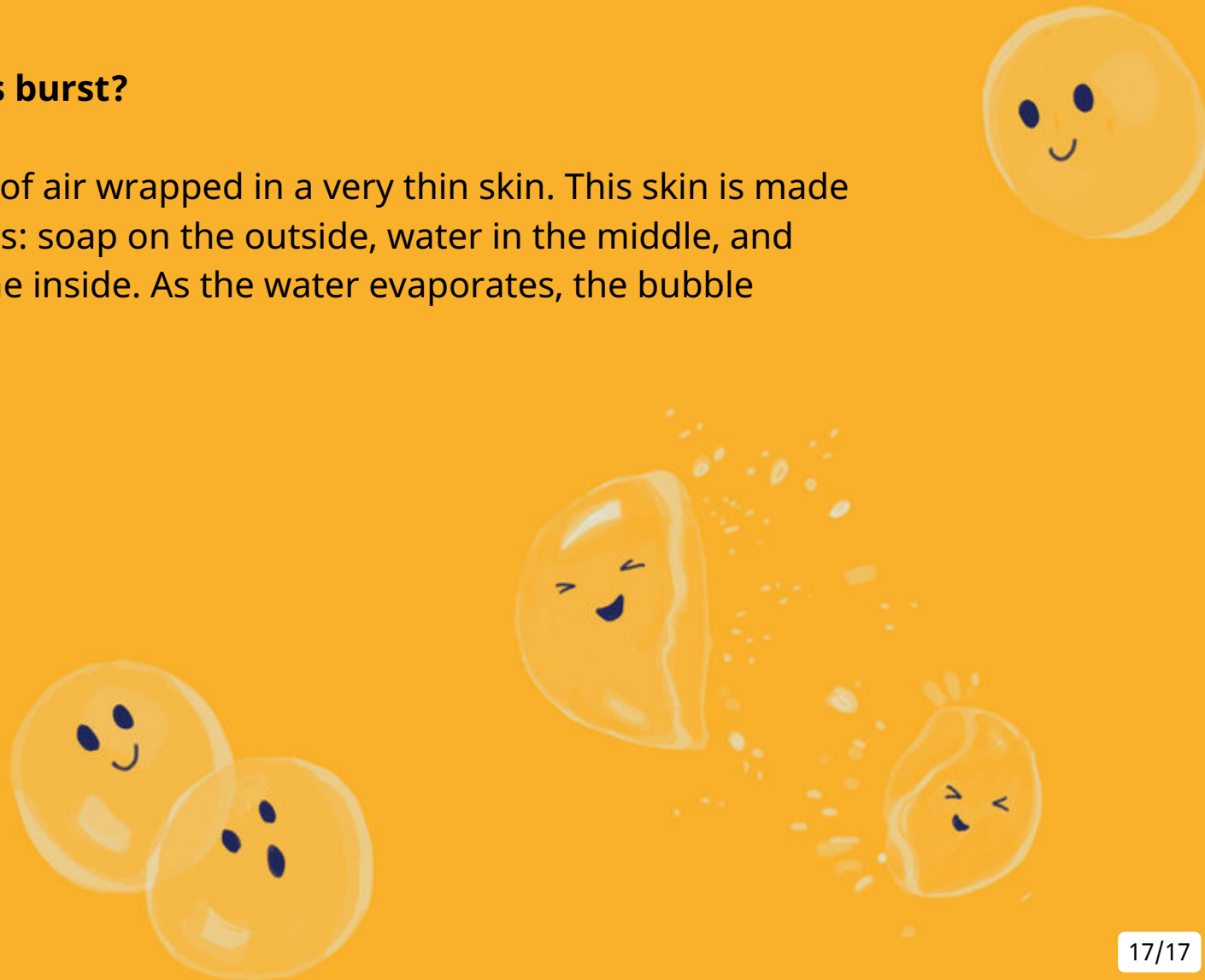
Do you think adding natural colours like beetroot juice to the soap solution will make your bubbles pink?
Try it out!

The seven year old daughter of a Japanese astronaut asked her mother to find out whether she could make coloured bubbles in space. The mother mixed some red fruit juice with the bubble solution. And guess what, she got red bubbles!

Why? Because there is no gravity in space, the colour pigment did not collect at the bottom of the bubble.

Why do bubbles burst?

A bubble is a bit of air wrapped in a very thin skin. This skin is made up of three layers: soap on the outside, water in the middle, and soap again on the inside. As the water evaporates, the bubble bursts.



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Why are Bubbles Round?

(English)

Maya and Manu want to see if they can make bubbles of different shapes. Like them, you too can learn about bubbles and their shapes.

This is a Level 3 book for children who are ready to read on their own.



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