

Bubbles made simple

What shape bubbles can you make?

Bert Nagel explores how, using just drinking straws and staples, you can make wands that produce beautiful soap bubbles



You may think making bubbles is easy – it is, but it can also be exciting and challenging. Box 1 shows a simple way children can investigate them.

Take a look at *YouTube* and the bubbleshow of 'Tom Noddy the Bubbleman' (someone has to do

the job!). See how Tom makes square bubbles, caterpillars, volcanoes and more, with just the small bubble pots you can buy in toyshops and no special structures as bubble wands/blowers. Challenge children to do the same show as Tom and demonstrate to

each other in the classroom.

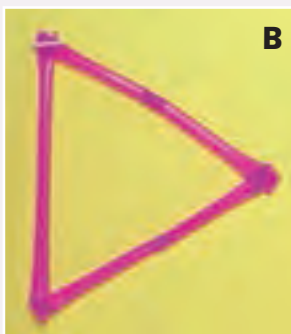
Soap bubble activities are best done outdoors if the weather is fine. The bubbles reflect the sunlight and all the slippery mess of the soap solution will be kept outside. Ideally you need just a gentle breeze; strong winds demolish bubbles.

Box 1 Home-made bubble wands

1 Cut a straw in half and staple the halves together at one end (A). As the straws are slippery, this is easier with two children, one to staple and the other to hold the straws. (When we



used a stapler, the children used as much pressure as they could. You could let them practise how much pressure is needed by squeezing a stapler in their hands until they only just 'seal' the staple. Put the stapler on a table and let children push with



two hands.) Staple a third half straw in place to make a triangle (B). Continue until you have stapled enough straws to make a tetrahedron, a structure made of four triangular faces (C–F). (It is better to staple only two straws at a time, not three.)



Key words: ■ Types of activity ■ Creativity

You can still carry out this activity in the classroom with towels on the floor, and setting rules for moving around with soapy bubble wands. Bright lights will allow you to see the beauty of the bubbles, and there is no wind interference when the children are gently blowing and manipulating their bubbles.

Advantages of keeping it simple

By using simple everyday materials you can encourage children to take their activities beyond the classroom and share them at home. You can set challenges and homework tasks, allowing the children more time, space and freedom to be creative. Challenges can include creating the biggest bubble or a trail or caterpillar of bubbles. Why not link to artwork and careful observation of how the bubble grows or takes shape and what happens when it bursts, as well as the colours produced

(an interesting research/secondary sources activity)?

This activity can stimulate children's curiosity and develop their thinking-doing-improving skills of being scientific. It is the last step that is the most important because, by its very nature, an activity like this challenges children's intrinsic motivation. Besides, who doesn't like blowing bubbles?

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A caterpillar of bubbles blown by 'Tom Noddy the Bubbleman'



2 Make a soap solution with washing-up liquid and water.

3 Slowly dip the homemade bubble wand structure into the soap solution, taking two counts to dip and two counts to lift it out. Fascinating soap films will appear attached to the bubble wand.

4 Blow very slowly and carefully at the centre of the soap film; just the smallest puff will do. You

may be rewarded with a fascinating four-sided bubble in the centre of the tetrahedron structure (G).

5 Experiment with different-shaped wands. A bubble wand with six square sides could produce that elusive square bubble (H).



6 To avoid sticky fingers, make a 'hanger' for each wand by stapling a complete straw to the side of the wand with a hook at the top so it can be hung over the edge of

a small bucket or other container holding the bubble solution (I). You can also use this row of hangers to display results and improvements. Put a towel under the container to catch any escaping soap solution



and avoid a slippery floor. Restrict dipping to this one place. The children should allow excess soap solution to leak out of their wands back into the container before they move away to work on their bubble blowing.