

INDOOR BUBBLES

Use things you can find in your kitchen to blow huge bubbles on your table!

Overview

We all love bubbles. This activity allows children to make their own bubble solution by following a few simple instructions. You need a couple of spoons, a cup, a straw (a tube from a pen or a Calpol syringe work too), warm water and a little sugar, along with some washing up liquid. The great thing about these bubbles is that they stay in one place so you can play indoors without making a mess!



What you'll need

- Two cups
- A tablespoon and a teaspoon
- Sugar (half a teaspoon)
- Washing up liquid (about 1 teaspoon)
- Warm water
- A straw (a tube from a pen, Calpol syringe or rolled up paper will work too!)

- Bin bag (this is to protect the table you are using)
- A table

Duration

30 minutes or so.

Suitable for...

Age 4 and up.

Safety notes

You know your children better than anyone, and you should judge whether they're ready for this activity. You might want to think in particular about:

- Check the temperature of the water. It only needs to be warm enough to touch, no hotter.
- Make sure all objects to be used as straws are very clean before they are put into mouths.
- Don't let children taste or drink the bubble mixture.
- If any washing-up liquid gets into a child's eye, rinse with water. Get the child to lie on their back near a sink or bath and gently pour cool water from a jug, or similar, over the open eye continuously for 10 minutes.
- Children who are allergic or sensitive to soap or detergent products should not do these activities.
- Ensure children wash their hands after the activity.

What to do

Step 1 – Making the bubble solution

Put 40mls of warm water in a cup – that's about 2 tablespoons plus 2 teaspoons.

Add 1 teaspoon of washing-up liquid, and stir gently.

Find a clean, flat surface to use – this could be a table, plastic mat or plate. If you're using a table, lay out a plastic bin bag to protect it from the bubble mixture. If you're outside, you might want to tape or weigh it down to make sure it doesn't blow away.

Wet an area about 10 cm across by dipping your fingers into the bubble mixture and spreading it on to your surface. Then try blowing bubbles – see Step 2.

If your mixture doesn't work, try adding half a teaspoon more washing up liquid to the mixture. You could also try dissolving $\frac{1}{2}$ a teaspoon of sugar into your mixture.

The type of washing-up liquid also affects your bubbles: Fairy liquid is good, as are many supermarket own-brand products. But some brands just don't work too well. If you're out of luck with your washing-up liquid, try bubble bath if you have some.



Step 2 – Blowing bubbles

Dip one end of your straw or tube into the bubble solution so it's completely coated.

Place the coated end of the straw or tube onto the bubble mixture on your surface. Blow gently into the other end of the straw to create a bubble.

Dip the straw back into the solution every time you want to blow another bubble.



Step 3 – Challenge step! Blow a double bubble

Dip the straw back into the bubble solution. You need to make sure that the bubble end is completely coated for this to work.

Aim for the centre of the first bubble and carefully push your straw inside. Gently blow a second bubble on the table surface, *inside* the first bubble.

Can you blow a third bubble inside the second bubble? How about a fourth bubble inside the third bubble?



How does it work? _____

Mixing washing-up liquid with water forms a solution. When you blow a bubble, air is trapped by a thin film

of your bubble mixture. This film is made of a layer of water sandwiched between two layers of soap.

A bubble pops if the soapy outer skin is broken. This can happen as the water in the bubble evaporates, or if the bubble touches something dry or oily. It can also happen when the bubble becomes too big and there isn't any more soap to create the sandwich layer. If your bubbles last a really long time, you might see the colours shift as the water drains around the sides of the bubble back onto the flat surface. Eventually, the bubble gets so thin you can barely see it – right before it pops by drying out!

Wetting the straw by dipping it in the bubble solution allows it to slide it into the bubble without popping. You can try doing the same with your fingers: can you poke your finger into your bubble without bursting it?

Things to talk about

- What happens when you blow more than one bubble onto your table?
- What happens if you blow more and more bubbles?
- Why do you think bubbles join together?
- Sometimes, a bubble that pops turns into a smaller bubble. What do you think might be happening?

Other things to try



Who can blow the biggest bubble?

Coat a small plastic ruler with bubble solution and slide it into the middle of your bubble to measure its height.

Do larger bubbles take longer to pop?

Use the timer on your phone, a clock with a second hand or count elephants (one elephant, two elephants, three elephants...) to measure the time it takes for each bubble to burst.

Which ingredients make the bubbles last longer?

Try using more soap, sugar or water in your mixture. Can you make a better bubble solution than us?

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Make your own bubble wands

If you want to use up your bubble mixture, you could blow some bubbles outside or even out of your window. [Visit this website](#) to find out how to use household materials to make bubble wands.



Blowing bubbles with no apparatus at all – make a loop with your fingers and blow through that!

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