

Brilliant Bubbles

Session plan/ideas

<https://primarylibrary.crestawards.org/all-star-challenges/61746949/12>

In this activity, children will design their own bubble wand and investigate if they can make bubbles of different shapes and sizes.

Plan

1. Introduce the activity by reading out the story on the activity card and using the bubble machine (pour bubble mixture into the trough so that it covers the bottom bubble wands, plug in, and turn on using the switch at the back).
2. Ask the children what they think they'll be investigating based on the story.
3. Ask the children if they have blown bubbles before, were they all the same? What would they need to make bubbles? Do they think they could make different shapes? How? Discuss 3D shapes.
4. Explain that their main task is to make a bubble wand out of a pipe cleaner and use it to see if they can make bubbles of different shapes/sizes.
5. Give out the worksheets, ask children to draw their chosen shape for their bubble wand and then give out one pipe cleaner per pupil.
6. Outside, spread out several trays with bubble mixture to a depth of ~1 inch. Allocate a certain number of children to each tray and investigate bubbles!
7. Using the big bubble wand, demonstrate one way of making really big bubbles of a different shape.
8. To model surface tension/why a bubble is almost always spherical (this needs some space and not too many children otherwise it can be chaotic!):
 - a. Ask ~6 children to stand close together and hold hands
 - b. Ask them to step back and see how far they can go while still holding hands
 - c. What shape have they formed? (Hopefully a circle!)
9. Suggest/discuss occupations and other situations that might require the skills/knowledge they've developed e.g.
 - a. Chocolate maker! E.g. for the bubbles in Wispa bars.
 - b. Biomedical engineer - nano-bubbles for drug delivery (<https://www.bbc.co.uk/programmes/p019glwd>)
10. Discuss related activities they could do (at home). Give out take-home sheets.
11. Give out stickers/stamps for their passport.

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Tips and safety

- This activity is messy and is best done outside! Take plenty of cloths/tissues and warn children to avoid running around as it might be slippery.
- Warn children to be careful with the pipe cleaners as the ends can be quite sharp.
- Remind children they need a handle and to secure the end so they have a complete shape (or let them figure this out).
- Children will get better bubbles if they blow slowly and gently.
- Remind children not to blow bubbles into others' faces.
- We try to re-use the trays and pipe cleaners - if possible please give them a rinse with water, let them dry and send them back to us.

Additional ideas/extension/home activities

- Find out how long you can keep a bubble before it bursts. Find out whether bubbles float or fall to the ground. Find out how long you can keep a bubble in the air.
- Using straws and a tray of bubble mixture, can you blow a bubble (or several bubbles) within a bubble?
- Try making bubbles of different colours by using the bubble mixture recipe in the take-home sheet and add food colouring to it.
- Watch this video to see how you can paint with bubbles:
https://youtu.be/z4i3Pp_ciwA
- Watch this video to learn how to make unpopable bubbles!
<https://youtu.be/x0CiPVt0umA>
- With an adult learn about how bubbles can be used in medicine: nano-bubbles for drug delivery (<https://www.bbc.co.uk/programmes/p019glwd>)

Brilliant Bubbles

Today we are thinking about **LIQUIDS** and **GASES**

Draw the shape of the bubble **wand** you made:

Draw the shape of the **bubbles** you made:

Did you make bubbles in special shapes?

Why did this happen?