



Activity information

Activity title	Bath Bombs
Description	In this activity, participants will make their own fizzy bath bombs to take home or give as a gift.

Kit List

You will need:

- Bicarbonate of soda
- Citric acid
- Small pinch of decoration (optional)
- Essential oil e.g. lavender
- Vegetable oil
- Food colouring
- Rubber gloves
- Moulds
- Tissue paper
- Water
- Mixing bowl
- Teaspoon
- Tablespoon





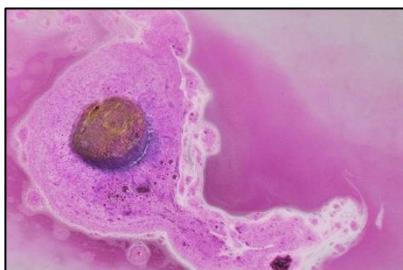
The Science:

Sodium bicarbonate (chemical formula NaHCO_3) is commonly known as “baking soda”. Sodium bicarbonate is an example of an **alkali**.

It is used for cooking and baking– it reacts with **acidic** ingredients in the batter to produce bubbles of **carbon dioxide gas**, which causes the batter to rise.



It was also used in early fire extinguishers along with sulphuric acid. The two react to produce carbon dioxide gas, which puts out fire!



When the bath bomb dissolves in water, a chemical reaction occurs between the **citric acid** and the **sodium bicarbonate**, producing **sodium citrate** and **carbon dioxide**. The sodium citrate stays in solution (in the water) and you don't really notice it. The carbon dioxide bubbles out as a gas that helps break the bath bomb up. This causes the “**fizzing**” that you see and hear, similar to that in fizzy water. The same reaction happens with aspirin or vitamin C tablets.



How to:

1. Put on rubber gloves (you will be mixing all the ingredients with your hands).
2. In a bowl, place 3 tablespoons of bicarbonate of soda and 1 tablespoon of citric acid and mix together.
3. Make a well in the middle of the bowl and add:
 - 8 drops of essential oil (e.g. lavender oil)
 - A few drops of food colouring
4. Mix all the ingredients thoroughly.
5. Next, add the following to the bowl:
 - 1 teaspoon of vegetable oil
 - Pinch of decoration (optional)
6. Wet your gloves and start to squeeze the mixture together. The mix should feel like damp sand and hold together well. If the mixture is too crumbly add a few more drops of water. **Be careful not to add too much!**
7. Press firmly into a mould and leave to dry for 1 hour in a warm, dry place.
8. Remove dried bath bomb from the mould and wrap in tissue paper to take home for you, or to give as a gift!
9. Place into a warm bath of water and watch the fizzing bomb and enjoy the nice smell.

Things to note:

- Bath bombs lose their fizzing power over time, so enjoy the fizzy bath sooner rather than later...



Glasgow Science Festival Risk Assessment Form

Activity Title	Bath Bombs	Date of Activity	
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Potential Hazard:	Who's at risk?	Risk: High, Medium, Low	Measures to prevent hazard	Person to action measure	Date completed
Allergic reaction to ingredients	Everybody	Low	Nitrile gloves will be worn.		
Ingredients (Sodium bicarbonate and citric acid) are ingested or get in eye.	Everybody	Low	Participants supervised and warned to take care before participating. Ingredients are commonly used in food preparation and so are not toxic. Affected eye flushed with water.		
Slippage risk from water or oil spillage	Everybody	Low	Any spillages shall be cleaned immediately		