



BRONZE AWARD PROJECT IDEAS



typically 10 hours of project work



Bath bomb challenge

Before you start your investigation, you should carry out a risk assessment and have it checked by your teacher. For help with this, read through our health and safety information and look out for health and safety warnings in the text.

In this project, you will make your own homemade bath bomb. You will find out what makes bath bombs fizz and then vary your recipe to try to change how much yours fizzes.

Getting started

Here is more resource text You'll need two things for this project:

- First, you'll need a recipe for homemade bath bombs. You can often find recipes on the internet, try searching for "homemade bath bomb". You may also be able to find recipes in books in the library.



Make sure your information comes from a reliable source. Always complete a risk assessment and have it checked by your teacher before you start your experiment.

- Second, you'll need a mould to make your bath bomb the right shape. You could buy one, recycle something, or make your own.

Making the bath bomb

When you've got your recipe, you're ready to make and test your bath bomb. Most of the recipes tell you to leave the bath bomb for one or two days so it sets - you should set it in your mould so it's the right shape.



Never use anything on your skin that has been made in the laboratory or using laboratory chemicals.

Testing the bath bomb

Put the bath bomb in some water and write down the following observations:

- Describe what happens.
- How much 'fizz' is there?
- How long does it take for the bath bomb to disperse?
- How does the water change? Does it change colour? Does it go 'greasy'?
- Does it give off a strong smell? Is it a nice smell?

Fiddling with the fizz

Now you've tested your first bath bomb - your prototype - you should make some more. But this time, you should try changing the fizz ...

Bath bombs fizz because the citric acid reacts with the baking soda. So when you make more bath bombs, change the amounts of baking soda to see what happens. Make sure you conduct a fair test.

You will need to keep lots of things the same. For example:

- All the other ingredients should be the same – only change the amount of baking soda. Make sure you make a note of how much you put into each bath bomb.
- They should be made in the same size and shape mould.
- They should be left to set for the same amount of time.
- You should put the bath bombs in the same amount of water.
- The water should be at the same temperature.
- You should make the same sort of observations for each one.

The results

Write down all your observations in some sort of table. That way it will be easy to compare them.

- How much baking soda gave the most fizz?
- How much baking soda gave the least fizz?
- Put the different recipes in order of fizziness.

Decide which type of bath bomb was your favourite. Re-write the recipe as a step-by-step illustrated guide.

