Bath Bombs

Sections

Joey Scouts | Cub Scouts | Scouts | Venturer Scouts | Rover Scouts

Scouts VICTORIA

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Challenge Areas

COMMUNITY | CREATIVE | OUTDOOR | PERSONAL GROWTH

Scout Method Elements

COMMUNITY INVOLVEMENT | LEARNING BY DOING | NATURE AND THE OUTDOORS | PROMISE AND LAW | PERSONAL PROGRESSION | PATROL SYSTEM

SYMBOLIC FRAMEWORK | YOUTH LEADING, ADULTS SUPPORTING

SPICES Growth Areas

CHARACTER | EMOTIONAL | INTELLECTUAL | PHYSICAL | SOCIAL | SPIRITUAL

The Adventure

Unlike their name suggest, bath bombs don't blow up. They just fizz when they come into contact with water. But why is this and can you make your own bath bomb at home or with your patrol or unit? With this Challenge Card, you can investigate the chemistry behind bath bombs and learn to make your own.

Plan

1. Investigate the key ingredients of bath bombs – including citric acid and bicarbonate of soda -, some of their properties, and how they react with water and each other.
   a. While doing this, you may also like to investigate different bath bomb recipes. How do they differ? Hypothesis what effect you think these differences might have on the product.
2. Investigate different types/styles of bath bombs available and decide what colour and scent (if available) bath bomb you want to make. Be mindful of any allergies your patrol members may have.
3. Determine how much time you have to make your bath bomb/s to determine what size and shape bath bomb you want to make. If you have greater than 24 hours, you may like to make smaller bath bombs in a plastic ice cube container and let them air dry whereas if you have less than 24 hours, you should consider making your bath bomb in an oven-proof container so that you can oven-dry your bath bombs. You should also consider aspects such as, how easy it will be to get your bath bombs out of the moulds.
4. Read the safety information and discuss with your leaders or another appropriate adult what safety equipment, precautions, and supervision may be required. Ensure that you have these safety measures in place before starting the 'Do' section.
5. Gather all the equipment that you need for this activity. You will need: a small bowl, measuring spoons (tablespoon, half tablespoon, quarter of a tablespoon, and teaspoon), bicarbonate of soda, citric acid, cornflour, Epsom salts (optional), baby oil, food colouring, oven-proof container or ice cube tray, and vegetable oil.

Do

1. Make sure that everyone is wearing appropriate safety equipment and understands the safety requirements of this activity.
2. In a bowl, mix 1 tablespoon of bicarbonate of soda with ¾ of a tablespoon of cornflour. You can also add ½ a tablespoon of Epsom salts at this step if you want.
3. Add about 2 teaspoons of baby oil and about 5 drops of food colouring, and mix into the dry ingredients. If you are adding scent to your bath bombs, you should add a few drops to your mixture at this point. You want your mixture to be able to form a ball but not too wet. If your mixture cannot be pressed into a ball, slowly add more baby oil until a ball can be formed.
4. Add ½ a teaspoon of citric acid and mix together.
5. Roll your bath bomb into a ball and squeeze tightly or press your bath bomb into your desired mold.
6. Add one drop of vegetable oil to each hole in the tray/molds you are using and spread the oil around.
7. Dry the bath bombs. This can be done by placing them into an oven at about 80^{o}C for about half an hour or by leaving them at room temperature overnight.
8. Take your bath bombs out of the mold.
9. If you want, try changing the recipe a bit to see how it differs. Record any changes and observations.

Review

1. Did your bath bomb work as you expected? Did it fizz? Did it hold together? Why or why not? What could you change in the recipe to fix it if it doesn't hold together or seems too wet?
2. What did you enjoy the most from this experiment? What did you learn?
3. If you were to do this activity again, what would you do the same? What would you do differently?
4. How do your bath bombs compare to store-bought bath bombs? Why do you think this might be?

Safety

- Allergen risk: Some bath bomb recipes use different types of oil, such as peanut oil or almond oil, that are common allergens. Make sure you are aware of any allergies in your patrol or unit and avoid these.
- Temperature risk: If you are using the oven-drying method, be careful to avoid burning. Adult assistance or supervision may be required.

Variations

- As a patrol, try making the biggest bath bomb you can make. See what patterns of colours you can make.
- Make a patrol or unit competition of who can make the fizziest bath bomb or the bath bomb that fizzes for the longest.
- You can change up the colour and scent of the bath bombs. You can also try adding dried flowers or biodegradable glitter. Make sure anything that you add to your bath bombs are safe for the environment.

- Experiment with different ingredients such as cream of tartar or lemon juice instead of citric acid or using the bath bombs in cold vs warm water.
- This challenge card can be paired with other challenge cards, such as ‘fizzy lemonade’, ‘rockets’, or ‘sherbet’ to build a program around bicarbonate of soda and citric acid. It can also be paired with indicator based challenge cards to learn more about acids and bases.