

The Chemistry of Cosmetics: Summary

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This workshop is divided into four stations- a chemistry game, making lip balm, making bath fizzies and testing pH. Girl Guides will be in four groups with approximately 10 in each group. The groups will rotate through each of the four stations.

As the girls rotate through the stations they will have a booklet with games, instructions and info about each topic. They can be completing these booklets as they move through the stations.

Activity 1: Learning Station- Crazy CHEMunication Game (25 min total)

At this station participants will play a game about cosmetic chemistry vocabulary. The game is variable in length so it can be played for as long/ short as the station leader would like. (See guide for game instructions)

Activity 2: Lip Balm (25 minutes total)

Participants will be making lip balm using the following ingredients: beeswax, coconut oil, jojoba oil, Shea butter (colour from lipstick optional; flavour and essential oils optional).

1 Intro Teaching points (2-5 minutes)

- What ingredients go into lip balm
- Melting points of lip balm ingredients

2 Making the Lip Balm (15-20 minutes)

- Instructions given to students
- Students choose scents/ colors/ flavours
- Make lip balm
- Clean-up

3 Wrap up and Discussion (2-5 minutes)

- Origin of some of the ingredients used
- Ingredients used in the past in cosmetics- unscrambling words in booklet (if there is time)

Activity 3: Fabulous Fizzies (25 minutes total)

Participants will learn about chemical reactions while making bath fizzies. They will time a reaction, test pH and learn about why bubbles form when the fizzle is dropped in water.

1 Intro Teaching Points (2-3 minutes)

- Introduction to bath fizzle ingredients. Discussion about what bath fizzle ingredients are used for at home.

2 Activity: Drop Fizzies (5 minutes)

- Drop fizzies into water
- Time the reaction
- Test the pH of the water

3 Activity: Make a Fizzie (12-15 minutes)

- Guide participants through recipe in notebook
- Clean-up

4 Wrap-up and Discussion (2-3 minutes)

- Discuss the reaction that is happening when a bath fizzle is dropped in water
- Guide participants through the fill in the blanks exercise in notebook on effervescence

Activity 4: pH Testing (25 minutes total)

At this station students will learn all about pH and why it is important for skin. They will have a chance to test the pH of common cosmetic products and plot their results on a graph.

1 Intro Teaching Points (5-7 minutes)

- pH, acids and bases
- The pH scale

2 Activity: Test pH (10-12 minutes)

- Students will test the pH of water, a baking soda solution, vinegar, baby soap, face soap, hand soap and astringent using pH indicator strips.
- Students will be recording their findings in their notebook

3 Wrap-up and Discussion (5-7 minutes)

- Plot results from pH testing on white board
- Identify acids and bases
- Discuss why pH is important for skin