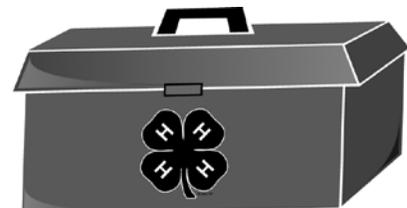


2c

"Foam Test"

Lesson Plan





Learning Objectives

1. Identify the primary ingredients in shampoo and toothpaste.
2. Test the differences and similarities of different grooming products.
3. Decide which grooming products give you the most for your money.

Intended Audience

4-H Club members



Supplies & Resources Needed

- Lesson plan outline
- Two different kinds of shampoo or toothpaste
- The prices of the different grooming products to be tested
- Two small jars with lids
- Water
- Watch with a second hand
- Paper and pen to record results



References

Purdue University Extension. (1991). *Consumer Clothing - Intermediate* (4-H 731). West Lafayette, IN.

Projected Length

20-30 minutes

Introduction



Many grooming products are on the market. Advertisers spend millions of dollars to convince you that a product will enhance your looks. Teenagers make many of these purchases. Now is a good time for you to learn about the products and to become a wise consumer. This activity from the 4-H Consumer Clothing project will help you shop wisely for shampoo and toothpaste.



Objective 1

Identify the primary ingredients in shampoo and toothpaste.



Shampoo and toothpaste are two of the primary grooming products that we use (hopefully on a daily basis!). What ingredients do these products contain that make them work for us? Let's find out!

Shampoos

Personal preference accounts for most of the differences among personal care products, including shampoos. It is important to remember that all shampoos have three basic ingredients.

Principle surfactants are the detergents that create foam and clean hair. Manufacturers alter surfactants to make shampoos for dry, normal, or oily hair.

Modifying additives are secondary surfactants that increase the effectiveness of the principle surfactants. They improve the condition of washed hair and affect how the shampoo looks.

Additional additives include perfume, colors, water softeners, thickeners, and preservatives. Consumers often base their choices on these subjective factors. These additional additives usually help to sell a simple detergent.

Toothpaste

Toothpaste is the most widely used cosmetic product. More people use soap, but soap is considered a body necessity and not a cosmetic. Toothpaste is actually soap with grit and flavoring. Some of the abrasives (grit) used in toothpaste are calcium carbonate, tricalcium phosphate, and silica. These ingredients are cleaners. A typical detergent used is sodium lauryl sulfate. The remaining ingredients include sweeteners (sorbitol, glycerol, saccharin), flavors (peppermint oil and mint), thickeners (cellulose gum, polyethylene glycols - PEGS), and preservatives (sodium benzoate). Many types of toothpaste also contain stannous fluoride to reduce tooth decay.

Objectives 2 &3

Test the differences and similarities of different grooming products.

Decide which grooming products give you the most for your money.



Have you ever been to the store to purchase some shampoo or toothpaste? Have you noticed how many different varieties there are? How do you know which one is the best buy? Is it the one that is the cheapest? Maybe it's the toothpaste that tastes the best or the shampoo that makes your hair smell the best. Are there other factors to consider? We're going to do a little product testing now to help you learn to make wise decisions when purchasing these products.



Foam Test (for either shampoo or toothpaste):

1. To test shampoo, put 10 to 20 drops of Shampoo A into a smaller jar. Then put 10 to 20 drops of Shampoo B in another jar. Or, if testing toothpaste, squeeze a small amount of Toothpaste A into a small jar and squeeze a similar amount of Toothpaste B in another jar.
2. Fill each jar $\frac{1}{4}$ full of water. Be sure to have equal amounts in both jars.
3. Cover the jars tightly. At the same time, shake both jars 10 times.
4. Which product made the most foam? Foam is needed for ease in cleaning. Which jar had the smallest bubbles? Small bubbles increase cleaning action.
5. Using the second hand of the clock or a watch, note how long it takes for each sample to lose a fourth, half, and all of its foam. The longer the foam lasts, the more time you have to distribute the shampoo easily over your head and do a good job of cleaning.
6. Record the results in your notebook. You may choose to make graphs comparing the foam retention of the samples over a period of time.

Group Discussion

Ask the group some of the following discussion questions.

- Which product had the smallest bubbles? Which product had the longest lasting foam?
- Which grooming product would you choose? Why?
- What types of tests could you conduct with other products that you purchase to ensure you are getting the best value?

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