

SENIOR SCIENCE OF STYLE BADGE

Badge Purpose: When you've earned this badge, you'll know the science behind makeup, perfume, fashion fabrics, and skin care products.

Activity	Materials Needed
Testing, Testing, 123 • Compare homemade vs. store-bought eyeliner.	<input type="checkbox"/> Coconut oil <input type="checkbox"/> Aloe vera gel <input type="checkbox"/> Activated charcoal capsules or cocoa powder <input type="checkbox"/> Store-bought eyeliner <input type="checkbox"/> Evaluation sheet
Then and Now • Make a timeline of trends in women's sportswear.	None
Sportswear Showdown • Discover how different types of fabric perform.	<input type="checkbox"/> Variety of workout clothes made of natural and synthetic fibers
Wet vs. Dry • See how shampoo works and experiment with dry and regular shampoo.	<input type="checkbox"/> Regular shampoo <input type="checkbox"/> Dry shampoo
Fashion of the Future • Create a sketch of future trends in sportswear.	<input type="checkbox"/> Timeline from Activity #2 <input type="checkbox"/> Paper <input type="checkbox"/> Writing and coloring utensils

Activity #1: Testing, Testing, 123

Badge Connection: Step 1 – Test skin care and makeup

Materials Needed: Coconut oil; aloe vera gel; activated charcoal capsules or cocoa powder; store-bought eyeliner; evaluation sheet

1. Makeup has been around for ages (the Aztecs used to use beetles to make red lipstick!), but the ingredients have changed over time. For instance, we don't use white lead paint as foundation anymore because scientists figured out that the paint had arsenic, which is toxic to our bodies.
2. For this activity, you'll be making your own makeup and testing it against store-bought makeup.
3. Make homemade eyeliner:

Ingredients: 2 teaspoons coconut oil, softened 4 teaspoons aloe vera gel 1-2 capsules of activated charcoal (for black) OR ½ teaspoon cocoa powder (for brown)	Directions: In a small bowl, thoroughly mix all the ingredients. Transfer to a clean, airtight container. Be sure to store it in a cool, dark place and use a clean brush every time so you don't introduce bacteria to the mixture.
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4. Next, gather a few friends to do a comparison.
5. On one eye, use your homemade eyeliner (make sure everyone uses a clean brush). On the other eye, use the store-bought eyeliner.
6. Compare how each product worked. Use the evaluation at the end of the activity plan to record your observations.
7. Take a vote and see which product was more popular and why they liked that product.

Activity #2: Then and Now

Badge Connection: Step 4 – Investigate the sociology of style

1. Can you imagine wearing a corset and petticoat to play tennis? Or swimming in a swimsuit made of wool? Women's sportswear has changed a lot over the years. Research the kinds of clothes women used to wear while playing sports.
2. Make a timeline of the trends in women's sportswear. What trends do you notice in earlier time periods that don't appear now? Were clothes more fashionable rather than functional? How do you think the time period influenced what women were allowed and not allowed to wear?

Activity #3: Sportswear Showdown

Badge Connection: Step 2 – Examine the science behind fabrics and accessories

Materials Needed: Variety of clothing, made of natural and synthetic fibers

1. Now that you've researched how sportswear has changed over the years, it's time to put your own clothes to the test.
2. Put together two workout outfits: one outfit with natural fabric (think wool, cotton, or silk) and one outfit with synthetic fibers (think spandex, lycra)
3. Then, run a couple of laps outside or in your meeting space and then stretch to cool down. Compare the performance of your two outfits:
 - Which outfit was more comfortable to exercise in?
 - When you sweat, which outfit kept you dryer or cooler?
 - Which outfit was easier to stretch in?

Activity #4: Wet vs. Dry

Badge Connection: Step 3 – Explore the science behind hair products and perfume

Materials Needed: Regular shampoo; dry shampoo

1. What's the difference between regular shampoo and dry shampoo? Get a bottle of regular shampoo and a container of dry shampoo. Look at the ingredients in each—what's different, what's the same?
2. Find out how regular shampoo cleans your hair and how dry shampoo cleans your hair.
3. Then, do an experiment! Go a few days (or a week!) without washing your hair—just use the dry shampoo. Make notes about how your hair feels throughout your week of dry shampooing. Does it feel oilier than usual? Does your hair have less volume?
4. Then, for the next week, just use regular shampoo. Take notes about how your hair feels this week, too.
5. At the end of your experiment, compare notes about your week of dry shampoo and week of regular shampoo. Which one did you prefer?



Activity #5: Fashion of the Future

Badge Connection: Step 5 – Formulate future style

Materials Needed: Timeline from Activity #2; paper; writing and coloring utensils

1. Look at the sportswear timeline you created in Activity #2 and think about the performance of the outfits you put together in Activity #3. Where do you think the future of athletic clothing is headed? Is it wearable technology, new fabrics?
2. Create a sketch of the kind of workout clothes you think will be trending in the next five years.



EYELINER EVALUATION			
	Homemade	Store-bought	Comments
Easy to apply?			
Pigmentation (how dark and rich is the color?)			
How long does the product last?			

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