



## LIP BALM LAB

Sparkly science! Channel your inner cosmetic chemist as you create an ultra-moisturizing lip balm.

### MATERIALS:

- 3-5 drops essential oil (optional)
- 1 tbsp 100% beeswax pellets
- 2 tbsps coconut oil
- Funnel (optional)
- Lip balm container
- Mica powder pigment (optional)
- Microwave
- Microwave-safe bowl
- Spoon

### TEKS:

**SCI 4/5.4 A:** The student is expected to explain how scientific discoveries and innovative solutions to problems impact science and society.

**SCI 4.6 B:** The student is expected to investigate and compare a variety of mixtures, including solutions that are composed of liquids in liquids and solids in liquids.

### HOW TO:

1. Place 1 tablespoon of coconut oil and  $\frac{1}{2}$  tablespoon of beeswax pellets in a microwave-safe bowl.
2. Microwave for 30 seconds and stir. Continue microwaving in 10-second intervals until the coconut oil and beeswax pellets are completely melted. *Note: the beeswax pellets will take longer to melt than the coconut oil!*





3. Once the beeswax has completely melted, slowly stir in tiny amounts of the mica powder pigment until you reach the desired shade. Optional: stir in 3-5 drops of essential oil.
4. Carefully pour or spoon the liquid lip balm into the lip balm container. A funnel helps with this step.
5. Wait for the lip balm to cool and set, then test it out on your lips!

## STEM EXPLANATION:

Cosmetic chemists are scientists who develop safe and effective skin, haircare, and makeup products... such as lip balm!

Most lip balms are made from three basic ingredients: oil, wax, and pigment, and these ingredients work together to moisturize and protect our lips. **Oils**, like coconut oil, provide moisture by locking in hydration. This helps keep lips soft! **Waxes**, such as beeswax, give lip balm shape and a spreadable texture. **Pigments** are added mostly for looks, and these natural dyes add a safe color and shine to the lip balm.

Cosmetic chemists have hundreds—or even thousands!--of ingredients to choose from when testing different lip balm formulas. What properties do you think high-quality lip balm should have? What other types of ingredients would you add to your ideal lip balm? Great news: many lip balm ingredients can be found at your local grocery store. So do some research and get ready to create your own unique lip balm formulas!

## CAREER: COSMETIC CHEMIST

Cosmetic chemists combine and test safe ingredients to make products like lipstick, lotion, and shampoo that we use every day.



### MEET ROSELIN ROSARIO MELÉNDEZ

Roselin Rosario-Meléndez is a Polymer Chemist, Inventor, and Women in STEM Advocate with a background in multiple STEM fields. Originally from Puerto Rico, she discovered her passion for chemistry during college and invents extreme wear makeup—such as Maybelline’s SuperStay Matte Ink—as a cosmetic chemist. Roselin hopes to inspire girls to stay curious, embrace new opportunities, and explore diverse paths in science.



Learn more about Roselin!

### RESOURCES

[www.naturaldeets.com/natural-lip-balm-recipe-in-the-microwave/](http://www.naturaldeets.com/natural-lip-balm-recipe-in-the-microwave/), [www.sciencebuddies.org](http://www.sciencebuddies.org)  
[www.ifthencollection.org/](http://www.ifthencollection.org/)