

Objective

By the end of this lesson, the student will understand the differences between semi-permanent and permanent hair colors, including their chemical compositions, how they interact with hair, and the implications of choosing one over the other. The student will also apply basic math skills to calculate the cost-effectiveness of each option.

Materials and Prep

- Paper and pencil for calculations
- Access to the internet for research (optional)
- Color wheel (can be drawn on paper)
- Basic knowledge of hair structure (cuticle, cortex, medulla)

Activities

1. Research Project:

The student will research the chemical components of both semi-permanent and permanent hair dyes. They will create a comparison chart that outlines the key differences in ingredients, longevity, and effects on hair health.

2. Cost Analysis:

The student will calculate the cost-effectiveness of using semi-permanent vs. permanent hair colors. They will gather prices from local stores or online and determine how many applications each type provides, leading to a conclusion on which is more economical.

3. Color Wheel Activity:

The student will create a color wheel to understand how different hair colors mix and the results of using semi-permanent and permanent dyes on various base colors. They will illustrate the expected outcomes of mixing colors.

4. Discussion and Reflection:

The student will write a short reflection on which type of hair dye they would choose for themselves and why, considering factors like maintenance, health of hair, and personal style.

Talking Points

- "Semi-permanent hair color typically lasts about 4-6 weeks, while permanent hair color can last much longer. What do you think would be more convenient for you?"
- "The main difference lies in the chemical structure. Semi-permanent colors do not penetrate the hair shaft as deeply as permanent ones. Why do you think that matters?"
- "Permanent hair dye usually contains ammonia or other harsh chemicals to open the hair cuticle. How do you think that affects the health of your hair?"
- "Semi-permanent dyes are often less damaging because they don't require a developer. Would you prefer something gentler on your hair?"
- "Color mixing can create beautiful effects, but it can also lead to unexpected results. What colors do you think would blend well together?"
- "Cost is a big factor in choosing hair dye. How can we calculate which option gives us more bang for our buck?"
- "Understanding the color wheel helps us predict outcomes. Why is it important to know how

colors interact?"

- "Maintenance is key with hair color. How often do you think you would want to touch up your color?"
- "Each person's hair reacts differently to dyes. Why do you think that is?"
- "What are some reasons someone might choose a semi-permanent dye over a permanent one?"
- "Permanent hair color can be a big commitment. What factors would influence your decision to go permanent?"
- "Let's think about the environmental impact of hair dyes. Are there more eco-friendly options available?"
- "Have you ever seen someone with a hair color that seemed to change in different lighting? What do you think causes that?"
- "Hair health is important. What steps can we take to ensure our hair stays healthy after dyeing?"
- "Finally, how do trends in hair color affect our choices? Are you influenced by what celebrities are doing?"