

Consumer Chemist: Creating Products

NGSS Standard: 5-PS1-2



Adventure Description:

In this adventure, you will think like a consumer chemist and create slime for kids to play with.



Activity

Teacher prep:

- Ingredients will need to be pre-portioned before students arrive. Each student/group will need plastic gloves, 1 tablespoon of white glue in a plastic bag, 1/8 tablespoon of Borax in a small plastic cup, 2 tablespoons of water in a small plastic cup, scale to measure grams, goggles (optional).
- Measurements should be close but do not need to be exact. If you want students to be able to add glitter or food coloring, have them add small amounts to the glue bag BEFORE they measure the mass the first time.

Step 1: Background on Consumer Chemists (5 minutes)

- Show [Video: Creating Products](#).
- Explain to students that consumer chemists develop products that involved mixtures of chemicals or other substances. As a class, brainstorm products that students have used that consumer chemists might have created (ex: shampoo, cleaning products, chemicals used to preserve foods, fertilizers).

Step 2: Set Up (5 minutes)

- Explain to students that will pretend they are working for a company that makes products for kids. They will be making their own slime!
- Display [Handout: Lab Rules](#). Quickly remind students of important safety rules while working in a lab.
- Next, provide students with [Handout: Steps to Create Slime](#) and [Handout: Ingredients' Mass Table](#). As a class, read through the steps that students will take to make their slime.

Please contact Allison Bischoff, Director of Customer Service, at allison@rozzylearningcompany.com or 314-272-2560 with questions.

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- Divide students into pairs.
- Provide each pair with the following materials: plastic gloves for both students, 1 tablespoon white glue in baggie, 1/8 tablespoon borax in a small cup, 2 tablespoons water in a small cup, small scale to measure mass of materials in grams, and goggles (optional).

Step 3: Making Slime (20 minutes)

- Explain to students that they will complete all the steps on the handout. Remind students to log the masses of the ingredients after each step.
- Refer to [Handout: Slime Scale Set Up](#) to view how scale should look during experiment.
- Teacher note: tell students they are allowed to take the slime out of the bag and play with it after they finish all of the steps. If students take it out of the bag, they should wear gloves and not touch their eyes!

Step 4: Reflection (5 minutes)

- As a class, discuss how the mass of the Borax, glue, and water stayed virtually the same before and after mixing occurred even though the ingredients changed how they look.
- If students did not have the same weight before and after ingredients were combined (ex: off by 3-5 grams), discuss what might have happened (examples: an ingredient spilled out of the cup).
- Scales can be off by about 1 gram, so if mass changes by 1 gram, it doesn't count as a change.

Materials List

Provided online:

- Video: Creating Products
- Handout: Lab Rules
- Handout: Steps to Create Slime
- Handout: Ingredients' Mass Table
- Handout: Slime Scale Set Up

Not provided:

- Plastic gloves
- 1 tablespoon of white glue in a plastic bag
- 1/8 tablespoon of Borax in a small plastic cup
- 2 tablespoons of water in a small plastic cup
- Scale

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