

SLIME FACTORY

Roll up your sleeves, join in the mess, and explore the effects of temperature on slime!

Big Idea

Explore thermochromism – the phenomenon of reversible change of color of a substance with change of temperature by making and playing with slime.

Standards

NGSS 2-PS1-4 Matter and Its Interactions: Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	Students will be able to verbalize the color changes they see when the slime is heated or cooled.
IELDS Goal 11 Demonstrate curiosity about the world and begin to use the practices of science and engineering to answer questions and solve problems.	Students will be able to investigate slime through touch and sight and compare the effects of heat vs. cold on the slime.
IELDS Goal 13 Understand rules to follow when investigating and exploring.	Students will follow step by step directions to make and explore the slime.

Materials

- Large bowl
- Measuring and Mixing utensils
- ¼ cup white school glue
- 1 tablespoon hot water
- Food coloring (optional)
- 1 teaspoon Thermochromic pigment
- ¼ cup liquid laundry starch
- Something cold – ice pack/refrigerated can or use fan to cool slime
- Something warm – hot water bath/hand warmer pack/hair dryer
- Other tools for manipulating slime – stamps/rollers/etc.

Setup

Have ingredients, bowl, and measuring tools out on one table. Exploration tools off to the side or on another table.

Directions

1. Pour the glue into the large bowl. Add 1 tablespoon hot water and stir until combined.
2. Add 1 teaspoon of thermochromic pigment to the bowl and mix until uniformly distributed. *(Optional: add 5 drops of food coloring and mix well. If you are adding food color – the color of the thermochromic pigment will be the color of the slime when it is cold, it will be the color of the food coloring when warm.)*
3. Add a little of the liquid starch and knead the slime with your hands. If slime is still sticky, keep adding starch, a little bit at a time, and knead until it is no longer sticky. *(You may not use all of the ¼ cup of liquid starch.)*

4. Explore! Encourage students to try different tools and items of different temperatures.
5. Store slime in a glass or plastic container with a lid. Once made the slime lasts for only a week or two.

Investigation Questions: What do you think will happen when we mix these ingredients? What happens when the slime is hot? What happens when the slime is cold? What other things change when they are hot versus cold? How does the slime feel? Is it a liquid or solid?