## How to Make Slime, Classic Recipe

## What You Need to Make Slime

- → Borax powder
- → Water
- → 4 ounce (120 milliliters) Glue
- → Spoon
- → Bowl
- → Beaker
- → Measuring cup

## How to Make Slime

- 1. Pour the glue into the jar. If you have a big bottle of glue, you want 4 ounces, or 1/2 cup, of glue.
- 2. Fill the empty glue bottle with water and stir it into the glue (or add 1/2 cup of water).
- 3. In a separate bowl, mix 1 cup (240 milliliters) of water and 1 teaspoon (5 milliliters) of borax powder. Get from Mr. Gonzalez
- 4. Slowly stir the glue mixture into the bowl of borax solution.
- 5. Place the slime that forms into your hands and knead until it feels dry. Don't worry about the excess water remaining in the bowl.
- 6. The more the slime is played with, the firmer and less sticky it will become.

## How Slime Works

Slime is a type of non-Newtonian fluid. In a Newtonian fluid, viscosity (the ability to flow) is only affected by temperature. Typically, if you cool a fluid down, it flows more slowly. In a non-Newtonian fluid, other factors besides temperature affect viscosity. Slime viscosity changes according to pressure and shear stress. So, if you squeeze or stir slime, it will flow differently than if you let it slide through your fingers.

Slime is an example of a polymer. The white glue used in the classic slime recipe is also a polymer. The long polyvinyl acetate molecules in glue allow it to flow from the bottle. When polyvinyl acetate reacts with the sodium tetraborate decahydrate in borax, protein molecules in the glue and borate ions form cross-links. The ployvinyl acetate molecules can't slip past each other so readily, forming the goo we know as slime.

Figure 1. Polyvinyl acetate

$$\xi$$
—O—C=O····H—O—B—

Figure 2.