SILLY GOO

Materials

- Elmer's Glue® (8 oz. bottle of Elmer's Glue-All)
- Borax (a powdered soap found in the grocery store)
- Large mixing bowl
- Plastic cup (8 oz size works well)
- Spoon
- Measuring cup
- Food coloring
- Water
- Zipper-lock bag (don't you want to keep it when you're done?)
- Empty plastic soda bottle with cap
- Water

Here's the easiest way to make a big batch Elmer's Slime. The measurements do not have to be exact but it's a good idea to start with the proportions below for the first batch. Just vary the quantities of each ingredient to get a new and interesting batch of goo.

This recipe is based on using a brand new 8 ounce bottle of Elmer's Glue. Empty the entire bottle of glue into a mixing bowl. Fill the empty bottle with warm water and shake (okay, put the lid on first and then shake). Pour the glue-water mixture into the mixing bowl and use the spoon to mix well. Add the glue-water mixture to the glue in the mixing bowl. Go ahead… add a drop or two of food coloring.

Measure 1/2 cup of warm water into the plastic cup and add a teaspoon of Borax powder to the water. Stir the solution – don't worry if all of the powder dissolves. This Borax solution is the secret linking agent that causes the Elmer's Glue molecules to turn into slime.

While stirring the glue in the mixing bowl, slowly add a little of the Borax solution. Immediately you'll feel the long strands of molecules starting to connect. It's time to abandoned the spoon and use your hands to do the serious mixing. Keep adding the Borax solution to the glue mixture (don't stop mixing) until you get a perfect batch of Elmer's slime. You might like your slime more stringy while others like firm slime. Hey, you're the head slime mixologist – do it your way!

When you're finished playing with your Elmer's slime, seal it up in a zipper-lock bag for safe keeping.

How does it work?

The mixture of Elmer's Glue with Borax and water produces a putty-like material called a polymer. In simplest terms, a polymer is a long chain of molecules. You can use the example of cooking spaghetti to better understand why this polymer behaves in the way it does. When a pile of freshly cooked spaghetti comes out of the hot water and into the bowl, the strands flow like a liquid from the pan to the bowl. This is because the spaghetti strands are slippery and slide over one another. After awhile, the water drains off of the pasta, the strands start to stick together. The spaghetti takes on a rubbery texture. Wait a little while longer for all of the water to evaporate, and the pile of spaghetti turns into a solid mass -- drop it on the floor and watch it bounce. Many natural and synthetic polymers behave in a similar manner. Polymers are made out of long strands of molecules like spaghetti. If the long molecules slide past each other easily, then the substance acts like a liquid because the molecules flow. If the molecules stick together at a few places along the strand, then the substance behaves like a rubbery solid called an elastomer. Borax is the compound that is responsible for hooking the glue's molecules together to form the putty-like material. There are several different methods for making this putty-like material. Some recipes call for liquid starch instead of Borax soap. Either way, when you make this homemade Silly Putt you are learning about some of the properties of polymers.