

# Slime

1. **Mix** 1 cup Elmer's glue and  $\frac{1}{4}$  cup water.
2. **Add** 1 tsp borax to  $\frac{1}{2}$  cup hot water, in another container, and **stir** to dissolve.
3. **Mix** some of each solution together, and stir well.
4. **Try** different amounts of each solution, and test the properties of your slime!

## Polymer Chemistry

Polymers are **long chains** of molecules. They can be manmade or found in nature. Elmer's glue contains **polyvinyl alcohol** (PVA), a manmade polymer.

**Borax** is made of a natural mineral, sodium tetraborate. When mixed, borate chemically **crosslinks** the PVA to form a gel polymer.



## Go with the flow

Slime is a **non-Newtonian fluid**, it can behave as a liquid and a solid. **Viscosity** is a measure of how a fluid flows. When you say something is "as **thick** as honey", you are describing its viscosity. The viscosity of slime changes when you apply a **force**. With little force, it flows like water. When you smack it, it becomes thick and viscous.

## NAVY NOTES



Airplane runway repair uses polymer concretes and mortars that bond to different surfaces and cure in minutes. Attributes include strength and flexibility.