

A STEM in the Park

Take Home Activity

STEM

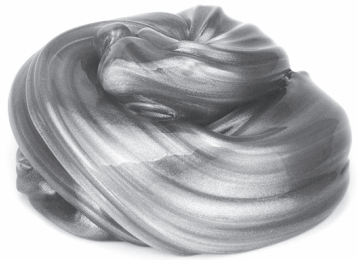
in the **PARK**™

Science, Technology, Engineering, and Mathematics

Galaxy Slime

What You Need

- 1 ½ TBSP –Baking Soda
- 3 TBSP-Contact Lens Solution
- 12 fl. oz. Glue
- Food Coloring
- Glitter



What To Do

1. Find a bowl, cup or plate to mix your slime in.
2. Pour out the entire contents of the glue into the bowl.
3. Add all of the baking soda and mix.
4. Mix in food coloring and glitter until you reach desired color (skip this step by getting pre-colored glitter glue).
5. Add in 3 TBSP of contact solution.
6. Mix until slime forms and it begins to get harder to mix.
7. Take the slime out and knead with both your hands
8. If needed add ½ TBSP contacts solution to make the slime less sticky.
9. Repeat with at least two different colors mix all three slimes together to achieve the wondrous colors of the galaxy!

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The Science

We all know that slime is fun to make and to play with, but slime is also CHEMISTRY!

THE SCIENCE BEHIND SLIME:

- Slime is a Non-Newtonian fluid. A Non-Newtonian fluid is neither a liquid or a solid. It can be picked up like a solid, but it also will ooze like a liquid. Slime does not have its own shape. Slime can also change its shape to fill whatever container it's placed in. However, it can also be bounced like a ball because of its elasticity.
- Slime is all about polymers! A polymer is made up of very large chains of molecules. The glue used in slime is made up of long chains of polyvinyl acetate molecules. These chains slide past one another fairly easily which keeps the glue flowing. Chemical bonds are formed when you mix the glue and slime activator together.
- Slime activators (borax, saline solution, or liquid starch) change the position of these molecules in a process called cross linking! This is the reaction between the PVA glue and the borate ions in your slime activator. Instead of flowing freely, the molecules become tangled and create the slimy substance. Think wet, freshly cooked spaghetti versus leftover cooked spaghetti! Cross linking changes the viscosity.

***This activity is brought to you by the
Challenger Learning Center of Lake Erie West***

