

## **PUFFY SLIME**

**A note from Kate:** Puffy Slime is soooooo soft. I make this slime whenever I'm worried about something. The cloudlike texture is somehow very calming.

Messiness level: 3/3

### **Materials:**

- 1 cup high-quality craft glue
- 3 heaping cups shaving cream
- 1 teaspoon baking soda
- 2 tablespoons saline solution
- 1 teaspoon (or more) food coloring
- 1 teaspoon (or more) glitter
- 1 medium bowl
- 1 spatula

### **Protocol:**

1. Pour glue into a medium bowl.
2. Add 1 teaspoon (or more) of food coloring to the glue.
3. Add 1 – 3 teaspoons of glitter to the glue.
4. Stir the glue until it's all mixed together.
5. Add baking soda to the mixture in the medium bowl.
6. Add saline solution to the medium bowl.
7. Add shaving cream to the medium bowl.
8. Stir the glue mixture for at least 60 seconds.
9. Allow the slime to sit for at least 3 minutes.
10. Play with the Puffy Slime!

Pro Tip: Add a few drops of saline solution to your hands to minimize the stickiness.

### **How it works:**

Shaving cream contains a number of ingredients, but it is mostly water. When the button on the top of an aerosol can is pushed, air (which is gas) is squeezed into the liquid and a soft foam comes out of the bottle. A similar process happens when we blow bubbles in a glass of water. When the shaving cream is added to the glue, the trapped air bubbles give the slime its fluffy texture! The more shaving cream you add, the bigger and fluffier the slime will be.

We have to use saline solution for this experiment because we need boric acid and sodium borate to help us make a cross-linked polymer (a big molecule made of much smaller molecules). The boron reacts with the polyvinyl acetate in the glue mixture to make our slime flexible. How far can you stretch your polymer?

### **What do you think?**

- Did the slime absorb all of the saline solution? Why or why not?

- Can you make popping noises with your slime? If so, what does that sound represent?
- Why does coating your hands with the saline solution minimize the stickiness?
- What will happen if you double the amount of shaving cream added to the mixture?
- Will the experiment work without adding baking soda?