

Beyond solids and liquids: the science of slime

Activity 2 worksheet: Create your own slime



Image courtesy of the authors

Safety notes

Wash your hands at the end of the experiment. If you have sensitive skin or cuts on your hands, wear disposable gloves.

Materials

- School glue (composed of PVA dispersion in water)
- Sodium bicarbonate
- Contact lens solution (that contains boric acid, the essential ingredient)
- 100 ml beaker or glass
- Two syringes, falcon tubes, or measuring cylinders (one to measure glue and the other to measure the contact lens solution)
- Stirring rod or spatula
- Food colouring or a water-soluble dye, such as fluorescein (optional)
- Containers with caps to save the slime for several days

Procedure

You are assigned to group number _____. Consider the amount of each of the reactants suggested for your group in table 1.

Table 1. Amount of ingredients for each group

Group	Glue	Water	Contact lens solution
1	10 ml	0 ml	3 ml
2	10 ml	0 ml	5 ml
3	10 ml	5 ml	3 ml
4	10 ml	5 ml	5 ml

1. Using the syringe, measure 10 ml of glue and put it in the beaker.
2. Then add the amount of water indicated in table 1 in the same beaker.
3. Add a pinch of sodium bicarbonate and stir until dissolved.
4. Add the amount of contact lens solution indicated in table 1.
5. Stir vigorously for several minutes to ensure the components are thoroughly mixed.
6. Stop mixing and wait 5 min, then take the slime out of the container, and massage it for a few minutes to feel its properties. Finally, roll it into a ball.
7. Analyze its properties using the materials assessment table.
8. If you want to add one drop of colorant, properly record the properties before and after its addition.

At the end of the experiment, you can divide the final slime with your teammates and keep it in a sealed container to examine its properties after several days. If you want to further continue the examination, take notes of the differences in flexibility, hardness, stickiness, and rebound ability among samples.