

Slime Stretch Test

Does more activator make slime stretchier or stiffer? A fair-test experiment for grades 3 to 8, made with the contact solution slime recipe.

The question

How does the amount of contact solution change how far slime stretches before it snaps?

CHANGE

The amount of contact solution

MEASURE

Stretch length in cm, and stickiness from 1 to 5

KEEP THE SAME

Glue, baking soda, kneading time and pulling speed

Make three small batches

	School glue	Baking soda	Contact solution (an adult adds it)
A	5 tablespoons	3/4 teaspoon	1 teaspoon (less than the recipe)
B	5 tablespoons	3/4 teaspoon	1 1/2 teaspoons (the recipe amount)
C	5 tablespoons	3/4 teaspoon	3 teaspoons (double the recipe)

Each batch is half the base recipe. Use the same glue and baking soda for all three.

Steps

1. Label three cups A, B and C. Add the glue and baking soda to each cup and stir.
2. An adult adds the contact solution amount for each cup.
3. Stir, then knead each slime for exactly 2 minutes. Use a timer.
4. Roll a small ball of each slime. Hold one end at 0 cm on a ruler and slowly pull the other end along it. Your partner reads the length when it snaps.
5. Do 3 trials for each batch, then work out the average.
6. Rate stickiness from 1 (doesn't stick at all) to 5 (sticks to everything).

My prediction

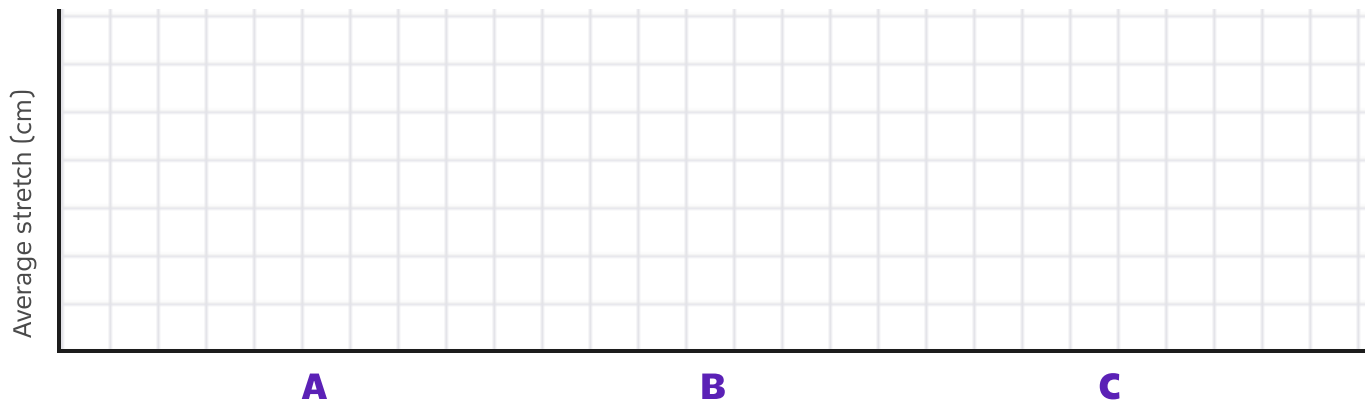
I think batch _____ will stretch the farthest, because

Safety: an adult measures and adds the contact solution. Wash hands before and after. Not for kids who still put things in their mouths. If a batch is too sticky to pull, write "too sticky" in the table. That's a result too.

Results

Batch	Trial 1 (cm)	Trial 2 (cm)	Trial 3 (cm)	Average (cm)	Stickiness 1 to 5
A					
B					
C					

Graph your averages



1. Which batch stretched the farthest? Was your prediction right?

2. What happened to stickiness as you added more contact solution?

3. Use the word "cross-link" to explain your results.

4. Why did every batch get the same kneading time and pulling speed?

For the adult: contact solution supplies borate, which links the glue's long polymer chains together. More borate means more cross-links, so slime usually gets less sticky and stiffer, and it snaps sooner when pulled. Too little and it stays sticky and droopy. Results shift with the glue brand and how fast kids pull, which is worth talking about. **polymer** **cross-link** **borate** **viscoelastic** **fair test**