



INFECTED SNOT SLIME

8-10 yrs | 10 min | Stage 3

Mission Question

Which ingredient has the biggest effect on slime?



? Wonder & Predict

I PREDICT THAT.....

- ☐ More borax
- ☐ Less borax
- ☐ More guar gum
- ☐ Less guar gum
- ☐ Mixing time
- ☐ Water temperature

There are no wrong predictions.

Before you begin

Build your standard slime by following the experiment instructions on The Crazy Scientist website.
Then use this sheet to investigate what happens when you change one variable.

What you will need

- Guar gum
- Borax solution (2 teaspoons in 1.5 L)
- Large bowl
- Water
- Water based craft paint
- Electronic scales

Investigation Record

Follow the steps carefully while observing.

- 1 Build your standard slime**
 - Follow the recipe on The Crazy Scientist website to make one normal batch of slime.
 - This is your control slime. Compare every new slime to this one.

- 2 Change the Formula**
 - Choose ONE variable to change. Keep everything else exactly the same.

☐ More borax.☐ Less borax.☐ More guar gum

☐ Less guar gum.☐ Warmer water.☐ Longer mixing time

- 3 Compare your slime**

Stretch both slimes side by side. Look closely. Compare your new slime with your control slime. Tick every difference you notice.

☐ Stretchier☐ Firmer☐ More runny

☐ More rubbery☐ More sticky☐ Holds together better

☐ Breaks apart easily.☐ Bouncier

- 4 Draw Your Conclusion**

Was your prediction correct?

☐ Yes☐ No☐ Partly

What evidence supports your answer?

- 5 Improve your investigation**

What would you test next?

☐ A different amount of borax.☐ A different amount of guar gum

☐ A different paint colour.☐ Hotter water

☐ Colder water☐ Longer mixing time

Observe & Record

What clues did you discover?

- ☐ Slime stretched a long way
- ☐ Slime snapped quickly
- ☐ Slime felt sticky
- ☐ Slime felt rubbery
- ☐ Slime became runny
- ☐ Something surprised me





What happened?

Fill in the sentences using words from the box.

borax | slime | cross-links | thick | stretchy | polymers | liquid

1. When the guar gum and water were mixed together, they formed a thick _____.
2. Adding the _____ solution changed the mixture.
3. The borax joined the long guar gum molecules together by making _____.
4. These links turned the runny mixture into _____.
5. Changing the amount of borax or guar gum changed how _____ or runny the slime became.
6. Scientists call the long guar gum molecules _____.



The science behind it

Why Did the Slime Change?

Guar gum is made from millions of long molecules mixed in water.

Imagine these molecules are like long strands of cooked spaghetti floating around in a bowl. They can easily slide past each other, so the mixture behaves like a thick liquid.

When you add the borax solution, it forms tiny cross-links between the spaghetti-like strands. Instead of sliding around freely, many of the strands become joined together to make one stretchy network.

That is why the mixture changes from a thick liquid into slime.

The number of cross-links changes how the slime feels.

- More cross-links usually make the slime firmer and less runny.
- Fewer cross-links make the slime softer and stretchier.



Take it further - Investigation Extension

Snot Scientist Challenge

Real scientists don't stop after one test. They change ONE variable and investigate again.

Your mission is to discover:

Which ingredient has the biggest effect on your slime?

Choose ONE variable to investigate.

- ☐ More borax or Less borax ☐ Warmer water
- ☐ More guar gum or Less guar gum

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