Glitter Slime

Our bodies defend themselves in many different ways to prevent us from getting sick. One way our noses keep allergens like pollen, spores, and dust out of our lungs is with a sticky, slimy substance called mucus. When you breathe air in through your nose, allergens like pollen and dust get stuck in the mucus and become trapped. In this activity, you will make a slimy substance very similar to mucus, and sprinkle it with glitter to imitate the way that allergens are trapped.

Materials

- Measuring spoons ($\frac{1}{2}$ teaspoon and teaspoon)
- Zip-closing bag (snack size)
- Water
- Clear gel glue
- Food coloring
- Measuring cup ($\frac{1}{4}$ cup)
- Marking pen
- Disposable plastic cup (3 oz.)
- Disposable plastic spoon
- Borax
- Glitter
- Metric ruler

NOTE: It is possible to eliminate the potential for a glitter spill by purchasing clear gel glue with glitter already in it. Using squeeze bottles of food coloring reduces the potential for a mess.

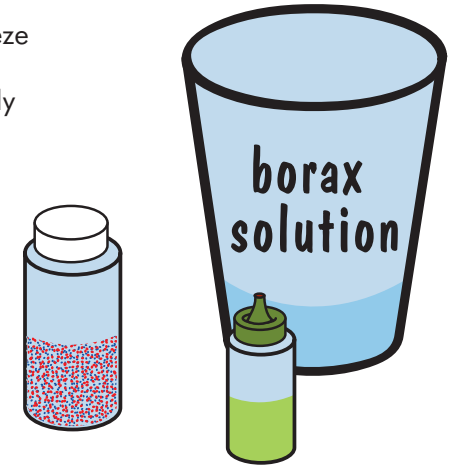
ADAPTATION *Substitute 1 tablespoon Styrofoam beads or craft beads for the glitter to create a greater tactile difference between the slime and what has been added.*

SAFETY! *Be sure to follow Milli's Safety Tips and do this activity with an adult! Do not eat or drink any of the materials in this activity.*

Procedure

Making Slime

1. Pour 2 teaspoons of water and 1 teaspoon of clear gel glue into a zip-closing bag.
2. Seal the bag completely. Squeeze the bag between your fingers until the contents are thoroughly mixed.
3. Open the bag and add two drops of food coloring.
4. Repeat step 2.
5. Use the marking pen to label the cup "borax solution".
6. Pour $\frac{1}{4}$ cup of water into the plastic cup.
7. Make a borax solution by adding $\frac{1}{2}$ teaspoon of borax to the water in the cup and stirring with the plastic spoon until most of the borax dissolves.
8. Open the zip-closing bag and add 1 teaspoon of the borax solution to the glue mixture.
9. Repeat step 2.
10. Open the bag and remove the slime. How does it feel? Roll the slime into a ball and measure the distance in centimeters (or inches) from one side of the ball to the other (width). Write your answers in the "What Did You Observe?" section.
11. Stretch your ball of slime as far as you can and measure its length in centimeters (or inches). Write your answer in the "What Did You Observe?" section.



Trapping "Allergens"

(NOTE: First two steps are not necessary if glitter glue was used.)

1. Put all of the slime back in the zip-closing bag and add $^1/_4$ teaspoon of glitter.

2. Repeat step 2 from the section above.

3. Open the bag. Remove and examine the contents. Does the glitter stick to the slime? Write your answer in the "What Did You Observe?" section.

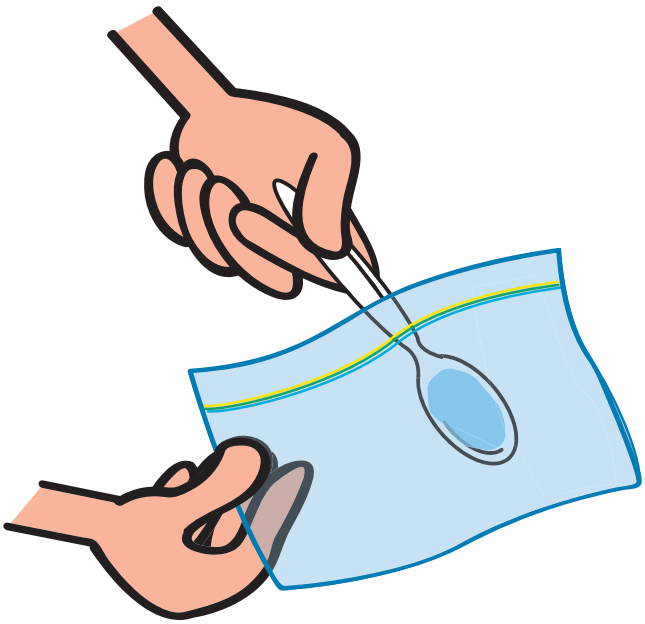
4. Pour any extra borax solution down the drain, and throw away the rest of the materials. Do not try to pour the slime down the drain. Throw it in the trash instead. Thoroughly clean the work area and wash your hands.

NOTE: Glitter slime should be stored in an airtight container to prevent it from hardening. Hardened glitter slime can be washed out of clothing or carpet with warm soapy water.

Where's the Chemistry?

The glue and water mixture contains long chains of a polymer called polyvinyl acetate. When you add the borax solution, it links the long polymer chains together, changing the liquid into a slimy glob. When you add the glitter to the slime, it stays there and does not easily come back out.

The slime is like mucus that we find in our bodies. Our natural mucus contains sugars and proteins, which are also polymers. Mucus protects many other parts of your body. The inside of your stomach is completely coated with it. If there were no mucus to protect your stomach, the powerful acids used to digest your food would digest your stomach too.



What Did You Observe?

Describe how the slime feels:

Width of ball of slime _____cm

Length of stretched slime _____cm

Does the glitter stick to the slime?

The American Chemical Society develops materials for elementary school age children to spark their interest in science and teach developmentally appropriate chemistry concepts. The *Activities for Children* collection includes hands-on activities, articles, puzzles, and games on topics related to children's everyday experiences.

The collection can be used to supplement the science curriculum, celebrate National Chemistry Week, develop Chemists Celebrate Earth Day events, invite children to give science a try at a large event, or to explore just for fun at home.

Find more activities, articles, puzzles and games at www.acs.org/kids.

Safety Tips

This activity is intended for elementary school children under the direct supervision of an adult. The American Chemical Society cannot be responsible for any accidents or injuries that may result from conducting the activities without proper supervision, from not specifically following directions, or from ignoring the cautions contained in the text.

Always:

- Work with an adult.
- Read and follow all directions for the activity.
- Read all warning labels on all materials being used.
- Wear eye protection.
- Follow safety warnings or precautions, such as wearing gloves or tying back long hair.
- Use all materials carefully, following the directions given.
- Be sure to clean up and dispose of materials properly when you are finished with an activity.
- Wash your hands well after every activity.

Never eat or drink while conducting an experiment, and be careful to keep all of the materials used away from your mouth, nose, and eyes!

Never experiment on your own!

For more detailed information on safety go to www.acs.org/education and click on "Safety Guidelines".