

OH WOW! Moment

Activity by Audra Carlson, Education Manager

Grade Level: All Ages. K-3 with adult supervision.

Homemade Glue

AT A GLANCE:

Kids can create a useful material using household chemistry.

STUDENTS WILL BE ABLE TO:

Demonstrate the process of science inquiry by posing questions and investigating phenomena through language, methods and instruments of science.

BACKGROUND INFORMATION:

Adhesives actually work by grabbing on to tiny nooks and crannies within the surface of objects. As the water evaporates (or the glue dries) it hardens, holding the glued surfaces together. *Natural adhesives* are made from organic sources such as vegetable matter, [starch \(dextrin\)](#), natural resins or from animals e.g. casein or [animal glue](#). They are often referred to as [bioadhesives](#). This activity is a simple paste made by cooking flour in water.

PRINCIPALS:

MATERIALS:

- 1 Cup flour
- 1 ½ cups water
- 1/3 cup sugar
- 1 teaspoon vinegar

PROCEDURE:

1. In a saucepan mix 1 cup of flour with 1/3 cup of sugar.
2. Add half of the water required and mix into a thick paste without clumps.
3. Pour in the rest of the water and combine till the paste is smooth.
4. Pour one teaspoon of vinegar and put on medium heat until the mixture starts to thicken.

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5. Cool and transfer to jar or an airtight plastic container.
6. Glue will keep for several days. But you can refrigerate to prolong life.

WHAT'S HAPPENING?

Vinegar in this glue recipe acts as a mild natural preservative. You might use grapefruit seed extract or tee tree oil (5-10 drops) instead of vinegar to naturally preserve the glue. Stick with vinegar though if you have small kids – not only is this glue nontoxic, but perfectly edible too!

This glue needs more time to dry, but when dried, the bond is really strong.

Try this:

- Add a pinch of spice to make scented glue for cards & special notes.
- Stir in some glitter or a small amount of food coloring or paint to create colored glue for projects.
- Try making a batch of glue without heating it.
 - What happens differently?
 - Why do you think this happens?

What do you notice or observe?

What conclusions can you make?

What can you do differently next time?

