

# Non-Newtonian Fluid

## with 60-Second Science

Check out our YouTube video: 60-Second Science: Non-Newtonian Fluid



### Materials:

Mixing bowl or pie tin  
Stirring Utensil

Corn Starch  
Water

Water-Based Markers

### Procedure:

Using a large, flat vessel or pie tin, mix approximately 1/2 cup of corn starch with water. Add the water in 10 mL increments.

Continue mixing until a thick, fluid-like substance is formed.

This is an example of a non-newtonian fluid, or a substance that has different properties from standard liquids (in this case, the fluid exhibits properties of both a solid and liquid due to its viscosity).

Observe the properties as you contact the fluid with your fingertips at different speeds and using varying amounts of force. How does this relate to surface tension?

Observe what happens as you stir the mixture at different rates. You may also pour the mixture from one container to another. What can you observe about its viscosity?

Quickly tap the tip of a marker onto the surface of the mixture. What happens to the ink? Discuss why this might happen and research how the properties of a non-newtonian fluid may cause this to happen.

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Prediction:

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Procedure: Describe the steps you will take to carry out your experiment:

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Conclusion: Write a detailed summary describing your observations. Using three outside sources, provide an explanation of the molecular interactions that occur in your non-newtonian fluid.

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