



Non-Newtonian Fluid!



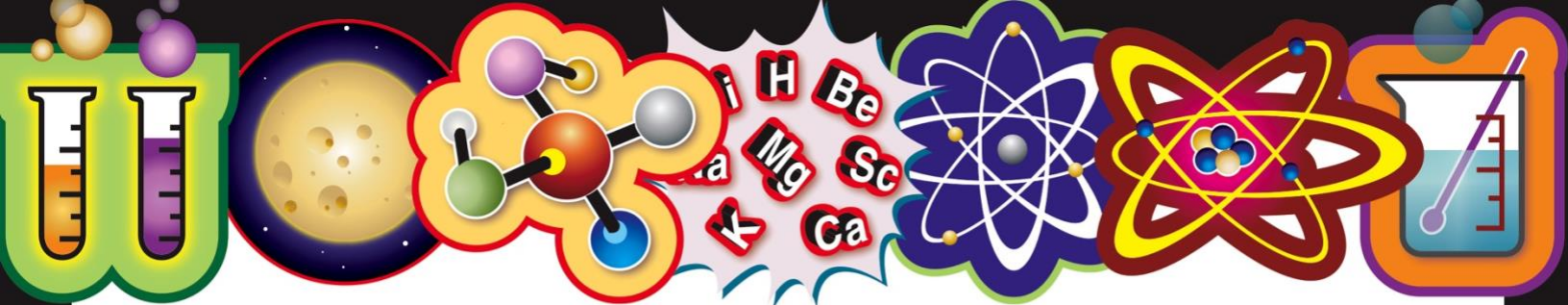
Post a picture of yourself with your Non-Newtonian Fluid on Facebook and tag Worlds UNBound to be entered into a draw for a FREE week of camp. Let us know how your experiment turned out!

Materials:

- Water
- Cornstarch
- Big bowl or aluminum lasagna tin (for easier clean-up)
- Garbage bag

Are you ready to get messy?! The theme for our activities this week is UNBelievable Science, and today we are going to be making Non-Newtonian Fluid. This cool science experiment creates a substance that moves between two states of matter (solid and liquid)! A solid cannot change its volume or its shape by itself. Liquids keep their volume, but not their shape if you change the container they are in. When the corn starch is added to the water, you end up with tiny particles of corn starch floating in the water. When you put a force on the mixture (like when you stir it or roll it into a ball), the particles of corn starch are forced close together, which makes them behave like a bigger solid. When you move the mixture slowly or leave it alone though, the cornstarch can spread out as much as they want. Alright, let's make our own Non-Newtonian fluid to play with!





Non-Newtonian Fluid!



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Instructions:

1. Pour $\frac{1}{2}$ - $\frac{3}{4}$ of a bag of cornstarch into the pan or bowl.
2. Next, keep adding water to the cornstarch until the Non-Newtonian Fluid is hardened when you manipulate it with your hands, but liquid when it is sitting still.
3. To get the right mixture, it is best to use 1 part cornstarch to 1 part water. However, you can test out other combinations too!
4. Make sure you do not add too much water, too quickly. If this happens, your Non-Newtonian Fluid will have too much water. DO NOT WORRY, you can always add more cornstarch if this happens.
5. Now your Non-Newtonian Fluid should be good to go!
6. Play with it and see how it can be manipulated into a solid and a liquid. Try picking up the fluid and rolling it into a ball. Did it work?
7. Take a picture and let us know how it went – tag us on Facebook @ Worlds UNBound!
8. To clean up, just rinse the fluid in the sink with warm water until it dissolves.

Thank you for participating, and we hope you enjoyed this activity. Check out our next activity on WEDNESDAY!

