

# Science Saturday: COLOR CHANGING SLIME

## Materials In Kit:

- Glue
- Liquid Starch
- Pigment Powder (1/2 tsp)
- Disposable Bowl
- Disposable Spoon

## Materials from Home:

- Measuring Cup
- Measuring Spoon
- Water
- Red or Yellow food coloring
- Bowl with ice (optional)
- Hairdryer (optional)

## Instructions

1. Pour glue into bowl and mix with 1 TBSP of water until fully combined.
2. Add 5 drops of either red or yellow food coloring and mix well
  - a. Yellow and blue pigment powder = teal slime that turns yellow when hot
  - b. Red and blue pigment powder = purple slime that turns pink when hot
3. Add pigment powder and stir until powder is fully incorporated into mixture (between 30-60 seconds).
4. Slowly add small amounts of liquid starch until mixture solidifies into a slime consistency.
5. When ready, scoop mixture out of bowl and work with your hands to make the slime less sticky.
6. Using a hairdryer, heat the slime and watch it change colors!
  - a. You can also experiment with putting the slime in a bowl of ice and timing how fast it returns to its regular color.
7. Keep the slime in a plastic container (not a bag!) and store in the fridge to play with any time. Slime should last for about a month.

# Science Saturday: THERMOCHROMISM

## What is thermochromism?

Thermochromism is the property of substance, in this case slime, to change color due to a change in temperature.

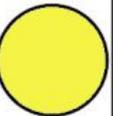
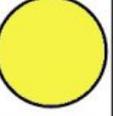
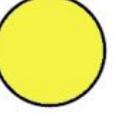
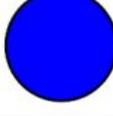
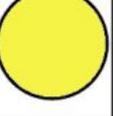
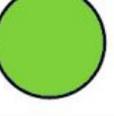
## How does it work?

This slime gets its color changing super powers from thermochromics pigment. As the temperature changes, Thermochromic materials change colors.

There are two main types of thermochromics materials:

- Liquid crystals – temperature changes cause the crystals to move, changing the spacing between them. This causes light to refract at different wavelengths, creating different visible colors.
- Leuco dyes – instead of changing the distance between crystals, temperature changes cause the dyes to change molecular structures. One form reflects colored light, the other colorless.

**Heat Activated Thermochromic (HAT) Mixtures**

Temperature	Thermochromic Dye	+ Paint Pigment	= HAT MIXTURE
Room Temperature		+ 	= 
Heated to Activation Temperature		+ 	= 
Cooled to Room Temperature		+ 	= 

**Now it is time to test this out for yourself! See what happens when you use thermochromic pigment in your slime!**