

Fake Blood Made Scientific



Included in this kit:

You will also need:

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| ◇ Food coloring | ◇ 3 cups or glasses |
| ◇ Corn syrup | ◇ Cutting board or plate |
| ◇ Coffee | ◇ Spoons |
| ◇ Flour | ◇ Water |

* Optional: Chocolate syrup, cornstarch, ketchup.

Instructions

- 1) Mix one tablespoon of flour, in two tablespoons of water in one cup and set aside.
- 2) Measure three tablespoons of corn syrup into a second cup; set aside.
- 3) Measure three tablespoons of water into a third cup.
- 4) Add two drops of red food coloring to each cup, and watch how the food coloring disperses over the fluids. *Does the red food coloring disperse in the same way in all three liquids?*
- 5) Use small spoons to mix the red food coloring with the other ingredients in all three cups.
- 6) Use the small spoons to take approximately one-quarter teaspoon of red liquid from each cup and place the liquids as separate blobs in a row near the edge of a cutting board or plate. Lift the side with the blobs so the board is tilted and watch how the liquids run down. *Do all three run down with the same speed? Do some leave a trace behind while others do not? Which liquid do you think would best mimic blood running down a leg or arm?*
- 7) You probably noticed that water runs way too fast to mimic blood well. Discard the contents of this cup. While you are at the sink, rinse off the cutting board and wipe it dry so it is ready to perform more tests.
- 8) Reuse this now-empty third cup and in it, pour half of the contents from each of your other two cups. If you'd rather start over for the third cup, here is the recipe: half a tablespoon of flour, one tablespoon of water, one and a half tablespoons of corn syrup, all mixed together with two drops of red food coloring.
- 9) Perform your test again, placing small amounts of the three liquids on top of the cutting board or plate, tilting the board and watching how the liquids run down. *Do any of these mimic how blood runs down a leg or arm? Which one would you say comes closest?*

10) If you found that one recipe mimicked blood better than the others, continue with that recipe. If you did not find a reasonable match yet, proceed with using the third cup with the flour, corn syrup, water and food coloring. You can still adjust how your fake blood flows later in the activity.

11) In addition to flowing like real blood, its color needs to mimic the color of real blood. *What color do you think real blood has? Vibrant red, dark red, maybe blue? Do you think blood from a fresh cut in your finger has the same color as blood drawn by the nurse?*

12) Human blood is always red. Oxygen-rich blood, like the blood from a finger cut or a bloody nose, is bright red. Blood turns dark red when it has delivered its oxygen to tissue and organs. Blood drawn by a nurse has this color. Note that the blood vessels you see through your skin appear blue; this is because the light reflecting off of them is filtered by your skin before it reaches your eye. If you opened up your skin, the blood vessels and the blood inside them would look red. *Which type of blood would you like to create?*

13) To get a realistic look, add a tiny bit of blue food coloring and/or a little chocolate syrup. Note that the blue food coloring is very strong. It is best to make a drop of blue food coloring on your cutting board or plate, dip the tip of your mixing spoon in it, and use this spoon to stir the tiny amount of liquid in your cup. It is better to add gradually, because once you have too much blue, it is hard to correct. A tiny bit of blue or brown will mimic the bright, oxygen-rich blood. Add a little more for the darker blood that is low in oxygen.

14) Place a blob on the top of your cutting board or plate, tilt the board, and watch it flow. *Does it look realistic? Are the flow and the color right?* Add corn syrup, flour, water, food coloring (red or blue) or chocolate syrup, one at a time, to improve your fake blood. Check the results after each addition, and do not forget to keep track of what you added. You will need your final recipe to recreate your fake blood at any time.

15) As a last test, try your blood on your skin, teeth, a surface, or wherever you'd like to use it. *Does it look like real blood?*

Enjoy the alarmed faces as friends see these scary blood splashes!



* **Extra:** To mimic dried blood, add chocolate syrup and make it thicker, as clotting blood has a darker red color with a brown hue, and is thicker, more gel-like. You can also add a spoon of coffee grounds to mimic the scaly appearance of the crust on healing wounds.

* **Extra:** Test other ingredients you find around the kitchen for their ability to mimic blood. See how they flow, how they can add to the color. Some ideas are red beet juice, maple syrup and peanut butter.