



What is green slime?

Some substances can behave like both liquids and solids without any change in temperature. This is what happens with green slime.

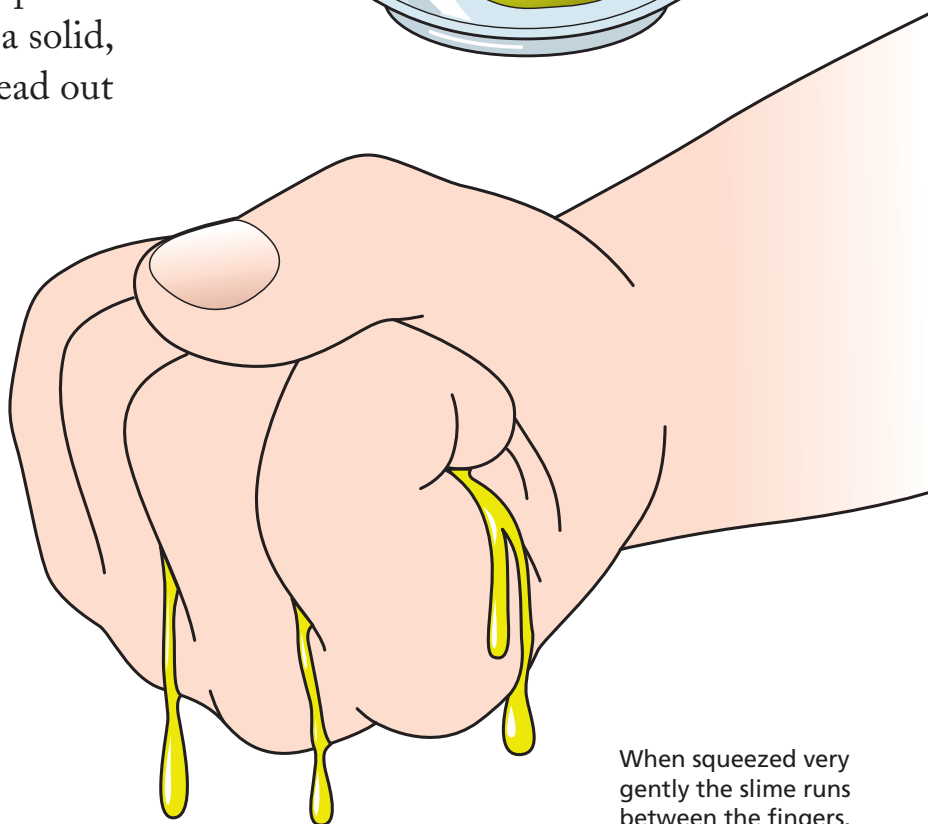
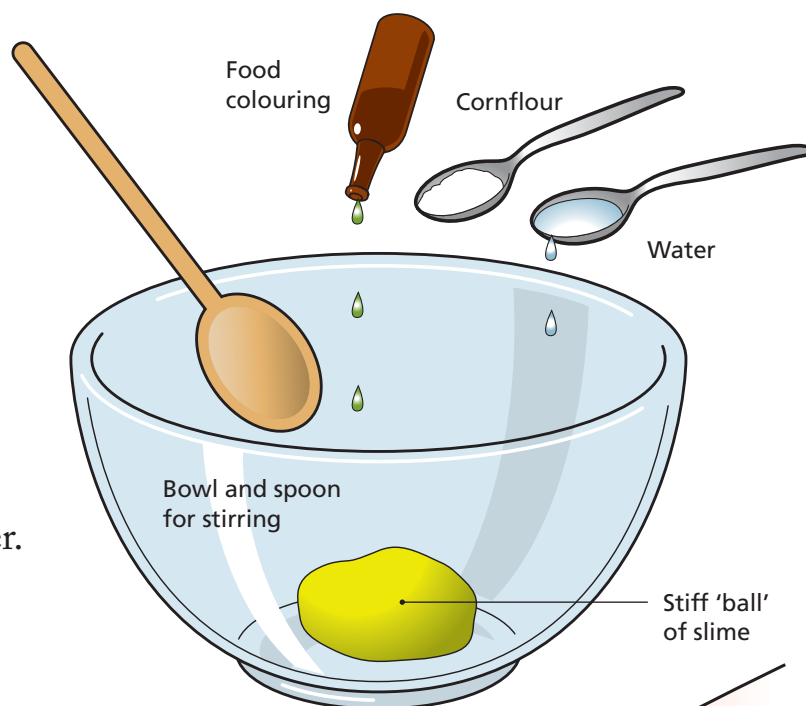
On the previous pages you will have seen how the same substance can have solid, liquid and gas forms. In all of these cases, the solid turned into a liquid, and then a gas, when it was heated. But science is full of surprises, and on this page you will find some substances that behave very strangely indeed, changing between solid and liquid simply when they are touched.

Green cornflour slime

Cornflour does not really mix with water. It seems to, but it stays as tiny pieces in the water. This is called a suspension. So it is not actually a liquid or a solid, but lots of tiny solid pieces spread out in a liquid.

If you make a very thick suspension of, say, five heaped teaspoons of cornflour in three tablespoons of water, and then mix in enough green food colouring to give a bright colour, you will have made a very strange substance, which you can call green slime (Picture 1).

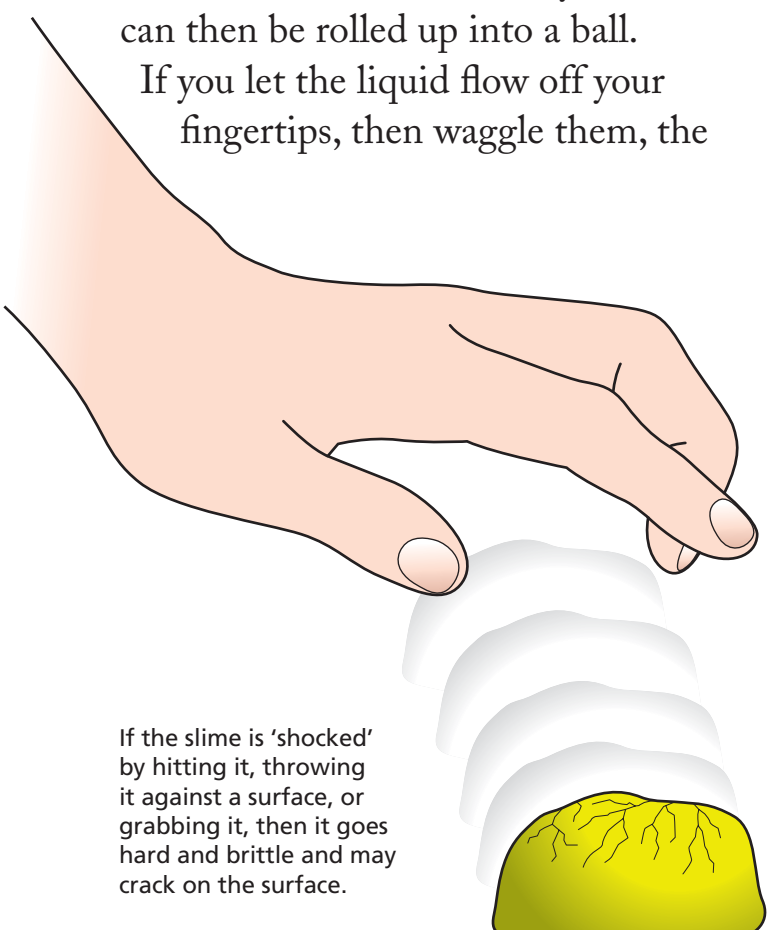
▼ (Picture 1) Preparing the cornflour slime.



What happens?

A very thick suspension of some substances behaves like a liquid if it isn't touched. So it will very slowly creep down to the bottom of a mixing bowl just like a slimy liquid. If you put some in your hand and squeeze very slowly and gently, it will start to run between your fingers. But if you touch it with a jabbing motion, or squeeze it quickly, it will become 'shocked' and turn into a dry solid and can then be rolled up into a ball.

If you let the liquid flow off your fingertips, then waggle them, the



If the slime is 'shocked' by hitting it, throwing it against a surface, or grabbing it, then it goes hard and brittle and may crack on the surface.

NOTE When you have finished with the slime do not wash it down the sink as it may clog the drains. Dispose of it in a waste bin.



liquid will turn to a solid for a moment and you will have made a 'slime icicle'. (This can make a messy experiment even messier.)

Green glue slime

A different kind of slime can be made with white (PVA) glue and a substance called borax.



NOTE Some people are allergic to borax, so wear rubber gloves during this experiment.

Start by stirring one heaped teaspoon of borax crystals into a small amount of water in a cup. Now put two heaped teaspoons of PVA glue in a bowl, add a teaspoon of the borax solution and some green food colouring and stir. You may need to add more borax, half a spoonful at a time, until the mixture becomes smooth and rubbery. Stir for a while longer, then make a ball from the mixture.

What happens?

You should be able to bounce the ball just as if the mixture were a solid. But if you put the ball onto your hand, it will slowly slime over the edges.

Summary

- Some mixtures are thick suspensions of solids in liquids.
- These mixtures will turn from liquids to solids if they are shocked.