

Make quicksand

Quicksand is a fascinating substance, but it could be very dangerous to Lyka if she were to stumble across it without knowing what it is. Make some quicksand in a bowl so you can demonstrate to Lyka how it works.

What you'll need

1 cup of cornflour

Half a cup of water

A large plastic container

A spoon

Instructions:

This experiment is super-simple. Just mix the cornflour and water thoroughly in the container to make your own instant quicksand.

To show Lyka how quicksand works, slowly stir the quicksand and let it drip from the spoon, to show that it is a liquid.

Then stir the liquid quickly and see what happens. It will make the quicksand stiffen. You'll be able to punch or poke the quicksand without getting your hand wet (this works best if you do it fast, rather than hard).

You might like to experiment by putting objects of different weights and size in the quicksand, to see how fast they sink. Make predictions and compare notes with your classmates about which objects will sink quickly and which will sink slowly.

Always stir instant quicksand just before you use it!

What's happening?

This effect is possible when you combine just the right amount of water and cornflour.

When you stir the mixture slowly, it allows water to pass between the cornflour grains, so they slide over each other much more easily. When you stir quickly, the mixture becomes thick because less water is able to move between the cornflour grains, so the grains can't slide over each other as easily.

Poking the quicksand quickly has the same effect, making the mixture hard. If you poke it slowly, the mixture stays runny.

This is very similar to how real quicksand works.