

Skittle Science!

You will need:

Three different coloured Skittles

One sugar cube, or a teaspoon of sugar

Clear water (*straight out of the tap. It works well with hot water (see below) but always have an adult present*)

One flat, shallow white plate.

Cleaning materials for after



Now you're prepared, get ready to start the experiment!

Step 1 Fill the shallow plate with water.



Step 2 Arrange the Skittles in a triangle in the centre of the plate.



Step 3 Allow the colours of the Skittles to spread through the water. The colours should form a cross in the centre of the plate.



Step 4 Once a coloured cross is formed, place the sugar directly in the middle of the cross. Watch and wait!



Step 5 Observe the results and explain it to a member of your family.



Why does this happen?

When you first add the skittles, they start to dissolve in the water - sending the food colours outwards as this happens. The reason that the food colours meet in the middle of the plate (as a cross and not mix) is because each food colour has the same amount of sugar dissolved from each skittle. Once you add the pure sugar into the centre of the food colour cross, the sugar cube begins to dissolve as well. This creates a situation where the most amount of sugar is found in the centre of the plate whereas the least amount of sugar is found at the edge of the plate (this area is basically pure water). As the sugar dissolved it pushed outwards into the rest of the solution, sending the coloured water outwards as well.

As a parent, there are a number of opportunities to ask kids for their predictions and answers. They could try changing the variables to see if there is any different effect (eg, hot water vs cold water

or different coloured skittles or different sugar types). They could try using M & Ms as well but the chocolate colour does get in way of the experiment.

Also, try adding hot water to a ring of skittles around the edge of the plate (*please take care - if you're a child reading this ALWAYS have an adult with you during this experiment*). 😊



To have a further look at this experiment (and access to lots of other cool Science experiments and worksheets) visit

<https://www.science-sparks.com/skittles-experiment/>