



# GROW YOUR OWN CRYSTAL CHRISTMAS DECORATIONS!

A fun way to add some frosty Christmas decorations to your tree or around the house!

## YOU WILL NEED

- 1 cup of water
- 3 cups of caster sugar
- A glass jar
- A lollipop stick, some wire or some string
- Some sticky tape



## WHAT YOU DO

### Step 1

Dissolve the three cups of caster sugar in the one cup of water by heating gently in a saucepan - the more sugar you can get to dissolve the better, because we need a really saturated solution to make crystals.

### Step 2

Once all the sugar has dissolved, pour the solution into a glass jar and suspend a lollipop stick, or a piece of wire or string, in the solution using sticky tape - make sure it doesn't touch the bottom or the sides of the jar. Alternatively, you can get a pencil or pen, wrap the string or wire around it and lay the pencil across the top of the jar, with the string or wire dangling into the sugar water.



This experiment must be done under the **supervision of an adult** to ensure safety when using hot water.



### Step 3

Leave at room temperature for a few days, and as the water gradually evaporates, the sugar will precipitate out of the solution onto the lollipop stick, wire or string to form your Christmas crystals! If you want to make coloured Christmas crystals then just add a food colouring of your choice to the solution, making sure the solution is deeply coloured before leaving to rest.

### THE SCIENCE BEHIND IT

Everything is made from atoms. Atoms are like tiny little building blocks that are so small you cannot even see them with a microscope! Atoms join together to make molecules; water is made up of lots of water molecules, and sugar is made up of sugar molecules. When the sugar dissolves in water, it is breaking down into individual molecules that float around in the water between the water molecules. So when you take the water away by evaporation, which happens slowly over a few days, the sugar molecules start to add together again and make a crystal. Some crystals take a very long time to make, like diamonds, but others can be made much faster, like your frosty Christmas crystals!



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