



Crystal Construction - Teacher Notes

Minerals are naturally occurring crystalline substances and these crystals have many interesting shapes. Students can easily make their own crystals using some common household chemicals.

One method for making crystals is to use a saturated solution of sugar or salt. Saturated solutions are made by adding solid substances (in this case sugar or salt) to hot water until no more of the solid will dissolve. As the solution cools and the water evaporates, crystals will start to form. You can get the crystals to form on lengths of string or wool (the rougher the texture, the better the crystals can 'grip' on) by dangling them in the saturated solution. You could also use pipe cleaners, pop sticks or satay sticks. To help the crystals start forming, you may need to use a seed crystal



which is simply prepared by moistening your string or stick and dipping it in some dry sugar or salt crystals. Food colouring can be added to the solution to create different coloured crystals also.

Salt and sugar crystals can take several days to form, however, you can grow crystals in a few hours using Epsom salts. You would again start with a saturated solution. These crystals can be grown on string, wool or sticks also or will also start growing in a jar of the saturated solution as it cools. You could also try pouring some of the saturated solution onto a piece of kitchen sponge as the larger surface area of the sponge helps the crystals to form more quickly and they are a little easier to handle. Epsom salts are safe for students to touch, however, it is not recommended students consume





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them. They don't taste particularly nice and, if they are eaten, they may have a laxative effect.

The best tip for crystal growing is the longer the solution takes to cool and evaporate, the larger your crystals will grow. Your patience in leaving crystals undisturbed in a warm spot such as a sunny windowsill will pay off!

