**Fun Crystal Activities**

Crystals are special structures that can be used in a number of great science experiments. Try the fun crystal activities in this lesson plan and let kids make crystals, learn about their physical properties and have fun at the same time.

**Introduction:**

* Ask what your students already know about crystals. Maybe they know they can find some in their kitchen cupboard at home in the form of jelly crystals, sugar, salt etc.
* A crystal is a regularly shaped solid with flat surfaces. The tiny particles inside the crystals are arranged side by side, and on top of each other in symmetrical patterns. This is what makes a crystal special.
* No two crystals are the same and there are lots of different shapes that crystals can make, the flat surfaces of these crystals are called ‘faces’.
* Not all crystals you see will actually look like crystals to you, this is because they aren't perfectly formed. Sometimes there is not enough space or it’s too hot or cold for the crystals to grow perfectly. When this happens you often end up with different and unusual looking crystals.
* Crystals that are perfectly formed are often worn as jewellery because of their beautiful aesthetic quality.
* Now that we know a little bit more about crystals, let’s try some fun activities!

**Crystal Activities:**

**Crystal Snow Picture**

Make a crystal solution and try creating your own 3D snow picture.

* Create a crystal solution by mixing 2 cups of sugar (or 3 tablespoons of borax) into a cup of hot water until it is fully dissolved.
* Find a piece of black card.
* Dip your paintbrush into the crystal solution.
* Paint your snow picture.  (It will be invisible at first so you will have to imagine what you are drawing).
* Hold the picture in front of the heater and your picture will appear like magic.
* So what’s happening? The liquid in the solution evaporates, leaving behind a film of delicate crystals in the shape of what you drew earlier.

**Copper Sulphate Crystals**

* Take a clean film canister.
* Put one teaspoon of copper sulphate (blue powder) into your film canister.
* Half fill the canister with warm water (adult supervision is a good idea for this part).
* Put the lid on firmly, and shake gently for around 30 seconds.
* When you get home, take the lid off the canister and put it in the sun and watch as your crystals grow.
* Remember to wash your hands and clean up any mess when you’re finished.

**Panning For Crystals**

* Take a number of different coloured sands and pour them into a pan.
* Add one cup of water so you can separate the minerals.
* Gently tilt the pan around in a circular motion, so that a little wave of water washes over the sand.
* The heavier grains don’t move very much but the lighter grains do. This is how the crystals separate.
* Sort the minerals into different colours before choosing your favourite to put into a vial to keep for yourself. You can also try layering the different coloured minerals on top of each other.

**Other Crystal Activities:**

* [Make bath crystals](https://www.sciencekids.co.nz/experiments/bathsalts.html) using epsom salts, perfume and food colouring.
* [Make sherbet](https://www.sciencekids.co.nz/lessonplans/chemistry/acidbase.html) out of jelly crystals, citric acid, baking soda and icing sugar.
* [Make a crystal snowflake](https://www.sciencekids.co.nz/experiments/snowflake.html) using borax.
* Drawing and colouring different 3D crystal shapes.
* Examining crystals under a microscope.