

Topic: Geology: rocks and minerals
Stalactite experiment

<http://www.kidspot.com.au/kids-activities-and-games/Science-experiments+10/Stalactite-experiment+10982.htm?>

This experiment will keep the students intrigued over the 2-3 weeks as they watch the change taking place.

What you need:

two glass jars
baking soda
spoon
string
paperclips
water
saucer

What to do:

Fill the two jars with hot water.

Add as much baking soda as will dissolve to each jar.

Mix well.

Cut a piece of string and tie a paper clip as a weight to each end.

Dip each end into each jar.

Place a saucer between the jar to catch the drops.

Leave the jars for 2-3 weeks and a stalactite will grow!

Why?

The baking soda mix is carried through the string and drips into the saucer.

Over time the dripping water evaporates forming a tiny stalactite and stalagmite.

Topic: Geology 1

Make a Crystal Snowflake!

<http://www.sciencekids.co.nz/experiments/snowflake.html>

Learn how to make a snowflake using borax and a few other easy to find household items. Find out how crystals are formed in this fun crystal activity, experiment with food coloring to enhance the look and keep your finished crystal snowflake as a great looking decoration!

What you'll need:

- String
- Wide mouth jar
- White pipe cleaners
- Blue food coloring (optional)
- Boiling water (be careful! or better still get an adult to help)
- Borax
- Small wooden rod or pencil

Instructions:

1. Take a white pipe cleaner and cut it into three sections of the same size. Twist these sections together in the center so that you now have a shape that looks something like a six-sided star. Make sure the points of your shape are even by trimming them to the same length.
2. Take the top of one of the pipe cleaners and attach another piece of string to it. Tie the opposite end to your small wooden rod or pencil. You will use this to hang your completed snowflake.
3. Carefully fill the jar with boiling water (you might want to get an adult to help with this part).
4. For each cup of water add three tablespoons of borax, adding one tablespoon at a time. Stir until the mixture is dissolved but don't worry if some of the borax settles at the base of the jar.
5. Add some of the optional blue food coloring if you'd like to give your snowflake a nice bluish tinge.
6. Put the pipe cleaner snowflake into the jar so that the small wooden rod or pencil is resting on the edge of the jar and the snowflake is sitting freely in the borax solution.
7. Leave the snowflake overnight and when you return in the morning you will find the snowflake covered in crystals! It makes a great decoration that you can show your friends or hang somewhere in your house.

What's happening?

Crystals are made up of molecules arranged in a repeating pattern that extends in all three dimensions. Borax is also known as sodium borate, it is usually found in the form of a white powder made up of colorless crystals that are easily dissolved in water.

When you add the borax to the boiling water you can dissolve more than you could if you were adding it to cold water, this is because warmer water molecules move around faster and are more spread apart, allowing more room for the borax crystals to dissolve.

When the solution cools, the water molecules move closer together and it can't hold as much of the borax solution. Crystals begin to form on top of each other and before you know it you have your completed crystal snow flake!