

Crystal Hearts



February is here, and Valentine's Day is just around the corner! Making Crystal Hearts is a great way to craft unique Valentine's while learning about chemistry, physics, and earth science. These gems form right before your eyes!

What are Crystals?

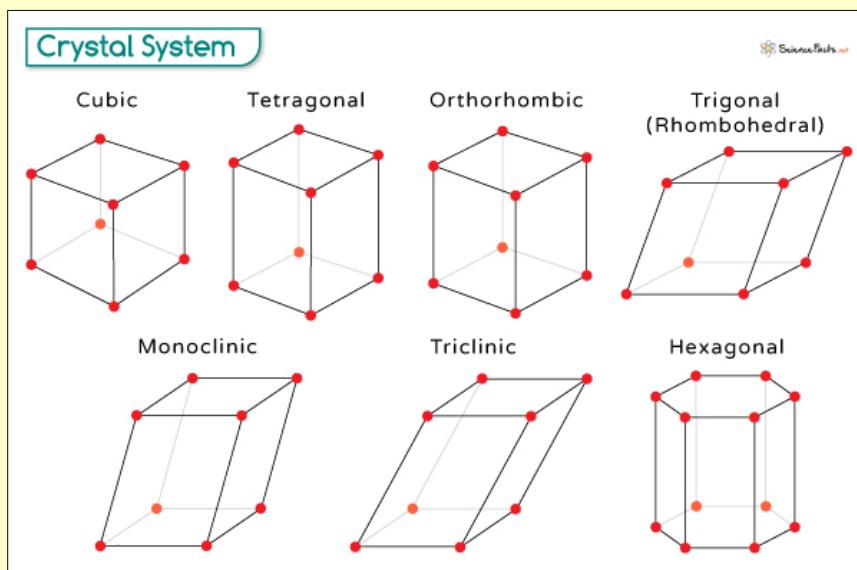
Crystals are a special kind of solid material where molecules fit together in a repeating pattern. This pattern causes the material to form all sorts of fun and unique shapes. We call this process crystallization. Some examples of crystals can be found in your own house! Did you know that salt is a crystal? This is what salt looks like under a microscope!



In nature, crystals form when liquid rock, called magma, cools. If it cools slowly, then crystals may form. Diamonds, rubies, and emeralds are formed this way. Another way crystals form is when water evaporates or dries up. Nature can create amazing things!

There are Seven Basic Crystal Shapes!

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Can You Think of Any Other Examples of Crystals?

If you guessed a snowflake, you're right! Snowflakes are ice crystals that are formed high in the clouds when water freezes. They always have six sides, but each one is unique!



Are You Ready to Make Your Own Crystals?

MATERIALS

Borax
Sticks
Pipe Cleaners
Glass Cups
String
Water



STEPS

- 1) Form your pipe cleaner into a heart. Make sure your heart fits into your jar with plenty of room to spare.
- 2) It's time to make your solution! Boil water, then pour 3 tbsp of borax and 1 cup of boiling water into the cup, and mix together until the borax dissolves. This will be very hot, so be careful!
- 3) Grab the stick and string. Thread the string through the heart, then tie it to your popsicle stick with a knot, making sure it dangles low enough for your heart to be fully submerged in the liquid. It may need a piece of tape to help stay in place.
- 4) Now, we wait... We have to be very patient. We must not move our jars while our crystals are forming. It's best to find an area where our jars won't be disturbed, BUT where we can watch our crystals come to life. After a couple of hours you will see some changes, and after 24 hours you will have crystal hearts!



Opportunities for Expanded Learning

[What is crystallization? Click here to learn more about this fascinating process?](#)

[What's inside a rock? Click here to explore all About Geodes.](#)

[Science is sweet! Click here to make edible crystals.](#)

