

Crystals

By Sharon Fabian

¹ Salt crystals are square. Snowflakes have six sides. A diamond has many sides. Minerals like these that have flat smooth sides are all called crystals. Crystals are made of molecules that are all the same shape, and are arranged in a neat pattern. This pattern gives crystals their beautiful geometric shapes. Some crystals can be cut and polished into sparkling jewelry. These crystals are called gemstones. Diamonds, emeralds, amethyst, and rubies are crystals. Some gemstones have colorful names that match the gem. There are green phantom quartz, rainbow obsidian, and Oregon jelly opal.



² Gemstones form in the earth over a long period of time. It took about a billion years to form the Hope Diamond, which you can now see in the Smithsonian Institution at the Museum of Natural History.

³ Other crystals form much quicker. In fact, you can grow crystals yourself using just a few everyday ingredients. You can grow crystals from sugar, salt, Epsom salt, or other chemical salts that you can buy at a chemistry supply or drug store.

⁴ To start, you will need a saturated solution. Mix the Epsom salt, or whatever, in water until the water has dissolved all that it can dissolve. This is called a saturated solution.

⁵ Next, you will need a place where the crystals can grow undisturbed. A glass jar with a large opening at the top will work fine. The crystals will also need something to attach to, so you can put a rock in the jar, or hang a piece of string into the middle of the jar. You can hang the string from a pencil that you lay across the top of the jar. Once your saturated solution has cooled, pour it into the jar, and set the jar someplace where it will not be bumped for a long time.

⁶ Crystals should begin to grow on the rock or the string. Of course, crystals are not alive, but people still say that crystals "grow."

⁷ If your crystals don't seem to be growing, do a little troubleshooting. Make sure that the jar is in a place where the temperature stays the same. Make sure that it isn't getting bumped around. Also, check to be sure that the jar was a clean one.

⁸ Once your crystals start growing, you can take them out and look at them through a magnifying glass. See what shape they are, and how many sides they have. You might want to grow and compare different kinds of crystals.

⁹ If you want to grow pretty ones to keep, you might like to add a drop or two of food coloring to the solution, or put the food coloring right on the rock. Grow different kinds to make a crystal garden.

¹⁰ Then, if you would like to look at some of the really big, gorgeous crystals that took ages to form inside the earth, you might like to visit the Natural History museum at the Smithsonian, or another museum that has an exhibit of gems and minerals. You can also do a little research on the Internet to find pictures of spectacular crystals. You can find close up pictures of lacy snowflake crystals, and decide for yourself if no two snowflakes are alike.

¹¹ Whether you go to see gem stones in a museum, look at magnified pictures of snowflakes, or grow home made crystals in a jar, I think you will agree that crystals are one part of the science of matter that is both interesting and beautiful.

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<p>1. Crystals all have four sides.</p> <p><input type="radio"/> A True</p> <p><input type="radio"/> B False</p>	<p>2. Crystals all have flat, smooth sides.</p> <p><input type="radio"/> A True</p> <p><input type="radio"/> B False</p>
<p>3. Crystals all grow inside the earth, very slowly.</p> <p><input type="radio"/> A True</p> <p><input type="radio"/> B False</p>	<p>4. You can grow crystals at home.</p> <p><input type="radio"/> A True</p> <p><input type="radio"/> B False</p>
<p>5. You would need a powerful microscope to see how many sides a crystal has.</p> <p><input type="radio"/> A True</p> <p><input type="radio"/> B False</p>	<p>6. Which of the following is not a crystal?</p> <p><input type="radio"/> A Amethyst</p> <p><input type="radio"/> B Water</p> <p><input type="radio"/> C Salt</p> <p><input type="radio"/> D Snowflake</p>
<p>7. Which of the following is a saturated solution?</p> <p><input type="radio"/> A Water and sugar boiled together</p> <p><input type="radio"/> B Water with one tablespoon of sugar dissolved in it</p> <p><input type="radio"/> C A mixture of two cups of water and one cup of sugar</p> <p><input type="radio"/> D Water with as much sugar as possible dissolved in it</p>	<p>8. Name one other type of crystal that was not mentioned in the article.</p> <p>_____</p> <p>_____</p>

