

# Make Your Own Snowflake!

1. Cut a pipe cleaner into three equal lengths, then twist the lengths together at their centres to form a six-sided snowflake. Put a wide-neck jar (big enough to hold the snowflake inside) somewhere it can sit undisturbed.
2. Tie a length of thread to the end of one of the snowflake arms. Tie the other end of the thread around the middle of a pencil, then wind the thread around the pencil until the snowflake hangs in the middle of the jar.
3. Fill the jar with boiling water.
4. Add borax (buy from the supermarket laundry section) to the boiling water one tablespoon at a time, stirring to dissolve after each addition. You'll need at least 3 tablespoons of borax for each cup of water. Continue until no more dissolves and a small amount of borax settles to the bottom of the jar. This is called a **saturated solution**.
5. Rest the pencil across the top of the jar so the snowflake hangs inside, completely submerged and not touching the bottom or sides.
6. Leave the jar overnight. It might take a day or two for the crystals to grow.
7. Once the crystals are big enough, carefully remove from the solution and detach from the pencil, gently pat the snowflake dry with a tissue and hang it up in the sunshine!



**Caution: borax is dangerous if eaten.** Follow the safety precautions on the container, wash your hands after touching the solution or crystals and keep them out of reach of young children. Don't use the jar to store food afterwards. Don't get your snowflake wet or the crystals will dissolve!

Crystals are repeating structures like lattices or scaffolding, formed when certain compounds precipitate out of solution. Different compounds form different shapes, and if a saturated solution cools slowly enough they can grow quite large.

See <http://chemistry.about.com/cs/howtos/ht/boraxsnowflake.htm>

Photograph by A. Helmenstine.