

*WISHING YOU ALL AN UN-PESTIFEROUS
CHRISTMAS*

Twas the night before Christmas and throughout the house,
Lots of creatures were stirring, not the least was a mouse.

Our stockings were hung by the chimney with care
We all hoped the roaches would just leave them there.

I tucked in the kids; they were snug in their beds,
But had visions of lice crawling up on their heads.

Ma in her kerchief and I in my cap,
Had just reset all of our sure-catch mousetraps.

Suddenly, outside quite a racket ensued
But above all that noise I could make our a dude-

He called out strange names such as Dancer and Blitzen
I'd swear I was having acute toxic symptoms!

From the roof we heard sounds of skids, bumps and twirls.
I turned and said, "Dear, we have got MUTANT squirrels!"

The next thing I knew, as I sorted it out,
Some guy in a red suit slid down the rainspout.

"That chimney of yours," he said with a grin,
"is so full of birds I can't even get in."

"I've come to help with your pests that won't die
Now, don't you worry, I've been certified!"

The man came prepared, I could see from his sack.
His baits, sprays and foam were all posed for attack.

He spoke not a word but with all the right moves,
Has pest-proofed our home not a minute too soon.

He left us instruction for future distress
Though his awesome skill, I shall never possess.

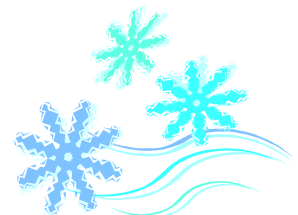
He shook my hand, then returned to his sleigh,
Checked his reindeer for fleas, then he went on his way.

But I heard him exclaim as they flew out of sight,
Merry Christmas to all ... don't let the bedbugs bite!

DECEMBER 2005

Did you know?

- **A falling snowflake may take up to two hours to reach the ground. Even the heaviest snowflake falls at only one mile per hour.**
- **Snow covers permanently or temporarily 23% of the Earth's surface.**
- **No two snowflakes are identical, but they all have six sides or six prongs.**
- **Giant snowflakes—10 –15 centimetres in diameter have been verified. These large flakes are probably aggregations of smaller flakes created by collisions and/or electrostatic attraction.**
- **On average, 25 centimetres of snow is equal to 2.5 centimetres of water. Heavy, wet snow has a higher water content; 10 – 12 centimetres of snow may contain as much as 2.5 centimetres of water. A dry, powdery snow may require 37.5 centimetres of snow to equal 2.5 centimetres of water.**
- **Snow is not frozen rain.**





Crystal Snowflakes

Grow your own snowflake inside!

Materials

String
Wide mouth jar
White pipe cleaners
Blue food colouring
Boiling water
Borax
Pencil

Procedure

1. Cut the pipe cleaner into 3 equal sections/pieces.
2. Twist the sections together in the centre so that you have a six sided star shape.
3. Take a piece of string and go around the pipe cleaners in a circle so that you form a snowflake pattern.
4. Attach a piece of string to the top of one of the points of the pipe cleaners.
5. Tie this piece of string to a pencil.
6. Fill the jar with boiling water.
7. Mix the borax into the boiling

water, one tablespoon at a time. (It should take approximately three tablespoons.)

8. You can add a couple of drops to the borax solution. This will give the snowflake a bluish hue.
9. Insert your pipe cleaner snowflake into the jar so that the pencil is resting on the lip of the jar and the snowflake is suspended in the liquid.
10. Wait overnight and by morning the snowflake should be covered with shiny crystals!



Discover the science behind making your own snowflake.

are always cube shaped while snow crystals form a six sided structure.

The Borax "grows" on your pipe cleaner because the hot water holds more borax crystals than cold water. This is due to the hot water molecules moving farther apart and making room for the borax crystals to dissolve. When no more of the solution can be dissolved, you have reached saturation. As this solution cools, the water molecules move closer together again. Now there's less room for the solution to hold onto as much of the

dissolved borax. Crystals begin to form on one another as the water lets go of the excess and evaporates.

This also applies to snowflakes—As water cools the molecules move closer together. Since all water molecules are shaped the same they align in a six sided crystal.

Source: www.teelfamily.com

How does this happen?

Borax is an example of a crystal—"a solid with flat sides and a symmetrical shape because its molecules are arranged in a unique repeating pattern".

Every

crystal has a repeating pattern based on it's unique shape. They may be big or little, but they all have the same "shape". Salt sugar and Epson salts are all examples of crystals. Salt crystals

GIVE MOM A DIAMOND FOR CHRISTMAS

Materials

- 250 mL water
- small empty jar
- 45 g (~3 tablespoons) alum
- plastic wrap

Procedure

1. Boil the water.
2. Fill the jar approximately 3/4 full.
3. Stir the alum into the water. Do not worry if some of it does not dissolve, as you are creating a supersaturated solution.

4. Loosely cover the jar with some plastic wrap.
5. Carefully check everyday for crystals forming in the bottom of the jar. Be patient, it took me at least two weeks to grow a beautiful crystal.

Why does this happen?

Crystals are formed by dissolving enough solutes or solids (such as alum) in a solvent (water) to make a saturated solution. The cooled solution allows the alum molecules to build on one another and form differ-



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p/f: (403) 527-5365
e: mhpraxis@telusplanet.net
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