

## Crystal Candy Canes You Can Make

Tis the season for candy canes everywhere! Why not **grow candy canes** you can even hang up as Christmas tree ornaments! This fun Christmas science experiment for kids explores how crystals grow and teaches a little bit about suspension science {chemistry}. Growing crystals on pipe cleaner candy canes are easier than you might think.

What you make at the beginning of this project is called a saturated solution. The borax powder is suspended throughout the solution and remains that way while the liquid is hot. A hot liquid will hold more borax than a cold liquid!

As the solution cools, the particles settle out of the saturated mixture, and forms the crystals that you see. The impurities remain behind in the water and cube-like crystals will form if the process of cooling is slow enough.

Using a plastic cup versus the glass jar can cause a difference in the formation of the crystals. As a result, the glass jar crystals are more heavy-duty, larger, and cube-shaped. While the plastic cup crystals are smaller and more irregularly shaped. Much more fragile too. The plastic cup cooled off more quickly and they contained more impurities than those in the glass jar.



### Supplies needed:

- Borax {found in laundry detergent aisle}.
- Water
- Mason jars, a wide mouth is preferable.
- Pan, Spoon, Measuring Cup and Tablespoon
- Pipe Cleaners {Red, Green, White}
- Ribbon {Make into Ornaments!}



### **STEP 1: Make Pipe Cleaner Candy Canes**

Cut your pipe cleaners in half and make small candy canes! Twist different combinations of green, white and red pipe cleaners together to make your candy canes.

Use the popsicle sticks to hang the pipe cleaner candy canes from. You don't want the candy cane to touch the sides or bottom. It will stick and grow crystals!



### **STEP 2: Make the Borax Solution**

Boil water, turn off the heat, add borax, and stir to mix as it won't completely dissolve. Pour into jars and place in an area where they won't get knocked around.

To fill three small mason jars, use 6 cups of water and 18 tablespoons of borax.



### **STEP 3: Wait Patiently**

In a few hours you will see crystals beginning to grow (all about suspension science!) and by the next morning (18-24 hours), your crystal candy canes will be covered in cool-looking crystals. The crystals are quite hardy!

### **STEP 4: Let the Crystals Dry**

Take them out and place them on paper towels to dry a bit. Grab a magnifying glass to check out your crystal

candy canes!

Check out the faces of the crystals! These ornaments look so pretty hanging in the window! They also make a great Christmas tree decoration. Add a piece of ribbon and use them to decorate for the holidays.

