'TIS THE SEASON TO MAKE

CANDY CANE CRYSTALS

December

Kristin Cook, 4-H Educator
University of Delaware Cooperative Extension

Materials:

Borax (3 Tablespoons per 1 Cup of water)
Pipe Cleaners {Red and White}
Glass Container (mason jars work great)
Pencil or Popsicle Stick
Hot Water
String/Ribbon {Make into Crystal Candy Canes into Ornaments!}
Magnifying Glasses (optional, but suggested because SCIENCE)

Instructions:

STEP 1: MAKE PIPE CLEANER CANDY CANES

Twist red and white pipe cleaners together to create candy canes.
Cut your pipe cleaners in half and make small candy canes, if necessary.
Tie the string or ribbon to the top of the candy cane and twist around the pencil or popsicle stick so that it hangs in the jar without touching the bottom or sides.
You can test the candy can, to be sure it fits, then set them aside.

STEP 2: MAKE THE BORAX SOLUTION

Boil your water, turn off the heat, add half of the borax.
If you are boiling 5 cups of water you will use about 15 Tbs of Borax.
Add approximately half of the borax immediately and stir.
Continue adding your Borax a little at a time.
The last bit may not dissolve, that is ok. It means that the solution is supersaturated.

The water should be warm, not hot. It may need to cool for a few minutes.
Pour solution into the jars leaving a 1/2" head space. Then, lower your candy cane ornament into the jar, ensuring that is is completely suspended and not touching the glass. Place in an area where they won't get moved or bumped.

STEP 3: WAIT PATIENTLY

In a few hours you will see crystals beginning to grow (all about suspension science!) After 24 hours remove your crystal covered candy canes.

STEP 4: LET THE CRYSTALS DRY

Take out your crystal covered candy canes and place them on paper towels to dry.

They are neither fragile nor overly sturdy, so be gentile.

STEP 5: CHECK OUT THOSE CRYSTALS

Grab a magnifying glass to check out your crystal candy canes!

The science behind how it works:

The borax has been 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 the settling particles from 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.

Watch a Quick Clip of this Experiment

UNIVERSITY OF DELAWARE
COOPERATIVE
EXTENSION