# December Science

Crystal Candy Canes

Age Range: All Ages

Supplies: Prediction Chart (attached), 6 Tablespoons of Borax, 2 cups of water, mason jar, measuring cups, pipe cleaners (white, red & green), popsicle sticks, yarn. The measurements above are per child.

Set Up: Tape the coloring page to a table, tape a piece of saran wrap over the coloring page being sure to cover the circular part of the coloring page. Using the foil, cover the paper plate. Make one foil covered paper plate per child.

Instructions:
Step 1: Cut the pipe cleaners in half and to make small candy canes. Twist two different combinations of green, white, and red pipe cleaners to create a candy cane. Use the popsicle stick and yarn to hang the pipe cleaner candy cane, be sure the candy cane does not touch the sides or bottom.

Step 2: Microwave the water until it is boiling. Add the Borax and stir toto mix, it will not completely dissolve. Pour into jars and place in an area where it won't get knocked down.

Step 3: Leave the crystals to grow overnight.

Step 4: Take the candy cane crystals out of the solution and place on a paper towel to dry.

The Science:
At the beginning of the project, you make what 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 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 care 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 a glass jar.

# December Science

Dissolving Candy Canes

Age Range: All Ages

Supplies: Prediction Chart, water (hot & cold), oil, vinegar, mini candy canes, clear cups or mason jars

Set Up: Fill 4 cups up with the same amount of liquid in each cup (1 cup with water, 1 cup with oil, 1 cup with vinegar).

Instructions: Drop 1 candy cane in each cup of liquid and watch what happens to the candy canes. Since this experiment will not have an instant effect, have the children make predications on what will happen in each liquid use the attached sheet.

SUNSHINE DAY CAMP

# Science Curriculum

Child's Name: _____

| Science Experiment: | |
|---|---|
| My Hypothesis<br>(What I think will happen.) | What actually happened? |
| | |
| Why do I think it happened? | |