



TAKE AND MAKE: Ice Lanterns (Ages 5-12)

Check out other ideas at: <https://ppld.org/kids/create/whats-new>

The video instructions are available at: tinyurl.com/PPLDVirtualSTEM

Materials provided:

plastic cups in 2 sizes, pipe cleaners, pompoms and other doodads, battery operated candle

Materials you provide:

tape, water, freezer, additional baubles or doodads, weights

This is an engineering challenge!

Twist your pipe cleaners up the inside of the larger cup.

Slide the smaller cup inside with the pipe cleaners in between.



Carefully push pompoms and/or other baubles or doodads between the 2 cups.

With the tops of the cups even, tape them together. Two pieces of tape crossed work well.

Gently fill the larger cup with water until it's about 1 inch from the top. You do not want water to go into the smaller cup. You may need to add something to weigh down the smaller cup.



Place in the freezer (or outside if it's cold enough) until it's frozen solid. This could take about 5 hours.

Observe your creation! You may notice that the smaller cup is higher as is the water/ice level. This is a great illustration of how water expands as it changes states from a liquid to a solid.



Carefully, remove the smaller cup. Then remove the larger cup. You may need to let them melt for a few minutes first or you may need to cut the cups off.

Turn on the battery operated candle and place it in the center of your lantern. Put your lantern outside to admire!



Based on <https://www.steampoweredfamily.com/activities/engineering-ice-lantern-stem-activity/>

