How to Make Ice Luminaries

If you can freeze water, you can easily make ice luminaries.

First, temperatures below the freezing point of water (32°F) are necessary, although large freezer spaces will work if available. Plastic pails from 1 to 5 gallons yield decorative and convenient sizes, however larger or smaller sizes will work, too.

Put the water filled plastic containers outside in the freezing weather preferably on an elevated wooden surface for better freezing consistency. When partially frozen (as indicated by the expansion of the frozen water with the slight rounding of the container's bottom), turn the pail upside down and slowly pour warm water over the bottom. The frozen mass will quickly detach itself and the container can be removed. Gently tap a hole (just large enough to insert a candle) in the thinner 'bottom,' and pour out the remaining water. Rubber gloves over a pair of cloth gloves for warmth are a practical necessity for some of these operations. A screwdriver and hammer may be used to make the hole, or some sort of 'hole saw' device could be employed. The amount of time necessary to freeze the luminary to the desired thickness depends upon both its size and the outside temperature. A candle may now be inserted in the interior space.

Food coloring and Ritz dyes added to the water produces colored luminaries. If the temperature falls below zero an interesting technique called 'cracking the luminary' can be employed to add addition refractive elegance to the ice. Lay a finished ice luminary on its side and pour a small amount of cold water over it from a water vessel. After a brief induction period (10 to 30 seconds) a loud sound of cracking ice will be heard. The wall of the luminary will appear fracture but will still be intact. Making multiple luminaries at the same time gives a few extras for test cases. There are many other variations on making luminaries.

If you are a teacher the are many good lessons in luminary making about the fascinating liquid to solid phase transition of water. If you live in a warmer climate, you may just have to be contented with paper bag luminaries!

—from Valley City State University, North Dakota