



Ice Branch Instructions

Adapted from instructions submitted for the Hose2Habitat Enrichment Contest 2016.
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General Description: During the sweltering days of summer, it can be refreshing to offer frozen water bottles to many animals. Some species use them, but many don't. Species that have a natural behavior of relaxing on a branch with their legs dangling, may be given the opportunity to coll off on a "branch" that is cool because an ice bottle is hidden inside.

Species and variations: Primates, small cats, red pandas, tayras, coatis, and many other mammals (see "Variations" below) that could benefit from cooling and would be likely to relax on the "branch".

Uses: Cooling.

Safety Concerns: Be sure "branch" is not too cold for delicate soft tissue and does not get too hot in if in the sun at any point.

Variations: On a much bigger scale, a similar device could be created for larger species such as jaguars and leopards to chill out on. This could be as simple as freezing water in a barrel, then situating it so that it doesn't roll. More terrestrial animals like meerkats or prairie dogs which sprawl on the dirt to cool off would likely enjoy a flat ice-filled device placed on the ground. This could be made by freezing water in a cake pan, then sandwiching the block of ice between plastic lunch trays.

Items Needed for Design Shown:

PVC pipe the appropriate size for the species

Bottle that fits snugly in the PVC pipe that will be used

Gatorade bottles work well since they come in many sizes. They also have wide mouths that make filling them easier. (And many keepers drink a lot of Gatorade, so the bottles may be readily available!) Milk jugs or 2-liter bottles would work for larger sized pipes.

Saw or other method to put the PVC pipe the required length

Two squares of High Density Polyethylene (HDPE)

Drill and bits for drilling holes in HDPE

Corner braces

Bolt and nuts

Rope

Paint



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Instructions

STEP 1. Pick a diameter of PVC appropriate for the species. Try different sizes of water bottles until you find a combination with a snug fit.

STEP 2. Cut the pipe to the length to accommodate one (or more, placed end to end) frozen water bottle(s).

STEP 3. Mount the pipe to a square of High Density Polyethylene (HDPE) using corner braces as shown below. The bolts stick through to the visible side because they need to be flush on the other side.

STEP 4. Drill holes through each corner of the HDPE square for mounting it to the fence.

STEP 5. Drill matching holes through a second HDPE square of the same size. The second square is placed on the other side of the mesh and bolts are used to secure the two pieces together. If access to the back side of the mesh is impractical, links or clips could also be used to attach it to the mesh from the front side only.

STEP 6. Drill a hole in the center of the PVC end cap.

STEP 7. If desired, paint the device brown, green, or another "natural" color. Make sure to paint it with the cap in place on the pipe. Paint on the end of the pipe could make the fit too snug to be able to remove the cap easily.





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STEP 8. Thread a rope through the hole in the end cap and tie a knot on both ends to create a handle to remove the cap to switch out the ice bottle as needed.



Alternative Design

As an alternative to ice bottles, the Ice Branch design could be altered slightly by using a removable PVC branch into which water could be frozen directly. The PVC pipe could have a flat style end cap (photo A) glued to one end, allowing the branch to sit upright when freezing it. No rope handle would be necessary in this design since the branch could be removed as one piece.

A female threaded adapter (photo B) could be glued to the other end of the removable PVC branch.

A flush cleanout plug (photo C) would be attached to the mounted HDPE square with screws to allow the PVC branch to be twisted into place. Several branches could be made per branch mounting location so that at least one would be in the freezer ready to go while the other one was in use.

