NATURE ACTIVITIES

DIY ROOSTING SHELTERS

During the colder months, birds huddle together for warmth. Wondering how you can help out migratory and winter birds this year? Take a look at this step by step guide in how to build a roosting shelter!

Resources/materials needed: Hand Saw, Drill, Screws or Nails and Hammer, Ruler, L Square, "1"x 5.1/2"x 5' and/or 1" x 4" x 5' wooden' board (cedar is best), safety goggles, 3/8" dowel rod

Skills: Cognitive, Motor Skills, Environmental Appreciation, Hand-Eye Coordination, Technical Skills, Woodworking, Creative Problem Solving,

DIRECTIONS:

Step 1: Measure and cut the wood pieces. If you have a miter box and hand saw, or if you are choosing to use an electric miter saw, you can, just be safe. All parts come from a single board that measures 1"x 5 1/2 x5'. Ripping the board will be necessary. (If you do not have access to a table saw, you can buy a 1"x 4" x 3' board additionally). Ideally the wood would be rough cut cedar, because it is the most weather resistant and the roughness gives something for the birds to hang on to.

Use a ruler to measure out each length of the pieces shown to the right. Use a square to make straight lines across to indicate cutting lines. If you are working with your child, teach them to measure the lines and make marks.

Measurements for 5 1/2 wide:
Roof: 6 1/2" long
Front: 9 7/8"
Back: 16 1/2"
(Make cross cut after these)

Measurements for 4" wide:
Bottom: 4"
Side: 9 3/4" angle cut to the 10 3/4 opposite side of the board (see image 2)
Side: 10 3/4 long side, 9 3/4 short opposite side

Step 2: If you are ripping the board, cut the line between the *Back* and the *Bottom* with your saw carefully regarding safety highly. Make sure the piece with the 5 1/2" measurements are actually 5 1/2" wide. If not, rip it into the correct width. For the second half of the board with the bottom and sides, rip it down to 4" wide. If you bought 2 separate boards, get ready for the next step

Photo Credit: Layers of Learning

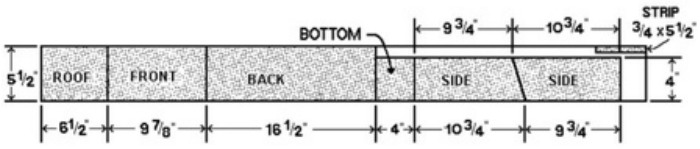

Photo Credit::Steve Gunn

Photo Credit::Spruce

Step 3: Get your miter saw out and and prepare to make crosscuts. Wear safety glasses and ear plugs for extra precaution. Keep your hands out of the way of the blade. You can use a hand miter saw and miter box to make these cuts just as well as with an electric one. An adult should do the cutting, but it would be quite informative to let your child observe from a safe distance with safety glasses on to understand how to properly cut when they are old enough.

*If your miter saw or table saw can cut angles, you can angle the roof width part to line flush with the back and the top of the sides. Only do this if you are experienced in cutting this way. A shim, wooden strip, or filler on top of the crack can replace this method.

Step 4: Use a small hand saw to cut 1/4" off each of the corners in the bottom piece. Clamp the bottom piece with the end needing cut off of the table. Keep rotating through all of the corners.

Step 5: Refer to the mountain fold shown in step one. Mountain fold the figure in half length ways along the original crease shown in the red dash in the image to the right.

Step 6 : Use a small hand saw to cut 1/4" off each of the corners in the bottom piece. Clamp the bottom piece with the end needing cut off of the table. Keep rotating through all of the corners.

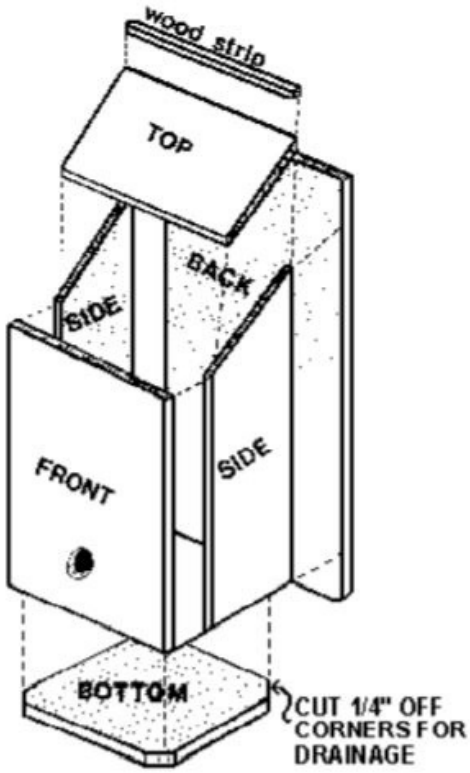

Photo Credit :Steve Gunn

Step 7: Get the front piece out and prepare for creating the hole. In winter bird shelters, the entrance hole is on the bottom to prevent heat loss. It is ideally kept at a diameter of 1 1/2 to keep large birds out. You can make additional larger boxes for larger birds if you would like.

Get your drill and change the bit to a spade bit that is 1 1/2". Make sure it is locked into place. Secure the piece of wood by clamping it or putting it in a vice where you will be able to drill down into air or you can put a spare block of wood underneath to catch any further cutting instead of your table. Mark the bottom of the hole at 2 1/4" from the bottom in the center of the 5 1/2" (2 3/4" from the side of the board). You can also measure 3" from the bottom of the board as that is the center mark of the hole. Make sure the bird is oriented vertically (taller than it is wide) When you're ready, safely start drilling with medium pressure. Once you got through the original board, pull it back out while keeping the drill in motion.

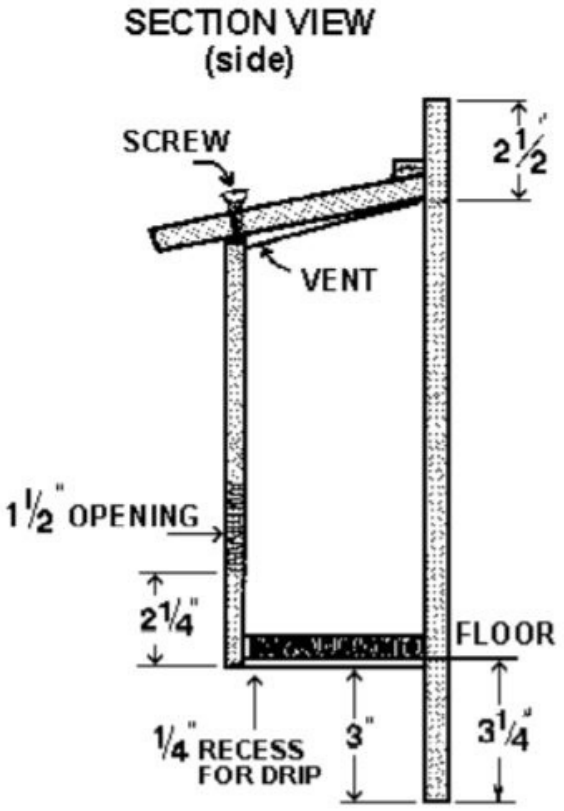

Photo Credit:Steve Gunn

Step 8: You can add interior perches above the half way point of height with dowel rods. Line the front and back piece together with 3" of the back piece extending to the bottom. make lines tracing the front piece. Now figure out where you want your dowel rods placed and make marks on one piece. 2 perches across from each other scattered will be enough. But you can fit

four in their if you choose. Measure them onto the proper place. Since it is for winter, it is better if you drill a quarter inch into each board and measure the dowel rods to be about ~2 1/2". Glue the cut dowel rods to into holes on each side and let dry.

Watch this instructional video for more of a visual of how to create the winter roosting box! Click here

Step 9: Now it's time to screw or nail the bird houses together. The screws or nails should be about 1 1/2" . Start with the front, side and bottom pieces. Stand these up around the bottom piece The width edge of the side piece should be aligned and touch the back of the front piece. Make sure the hole is at the bottom of the front piece. So the sides of the front and back piece will be exposed in the end. Making predrill holes for where you will nail or drill is a good idea, but you can just directly nail or screw attaching these pieces.

Step 10: Once you have both sides attached to the front and bottom, it is time to attach to the back. Lay the assembled part face down with the front own on the table. Make your measurement so there is an extension of 3" of wood past the bottom of the front. You should still have this line from earlier made. Now line everything up and nail or screw together. Make sure nothing is wobbly and securely fastened. Now take the top piece and align it onto its spot. You can place it on a hinge to the back piece if you wish, but nailing/screwing it down will work.

Step 11: You can decorate your roosting shelter or just leave it natural wood as that gets more use and blends in with the landscape and reused as a birdhouse in the warmer months. You can paint it a dark color for it to retain solar heat, but birds won't use it during the summer.

Step 12: Mount your box on a pole 4-6 feet from the ground facing the closest tree or shrub. If you have multiple roosting boxes, place them 100 yards apart from one another if possible. Place a layer of woodchips in the box for insulation.

Clean out each box between nesting and inhabitants. Repair every year in February if uninhabited. You can flip the front piece around so the hole is at the top to convert for spring and summer use.

Keep watching the box and see what birds go inside! Watch their movements and take photos and/or draw them! Feel good about providing assisting wildlife.

Reflection: Talk about your experience. What was challenging? How would you do this differently? Did any birds make your roosting box a home? What birds have you seen go inside?

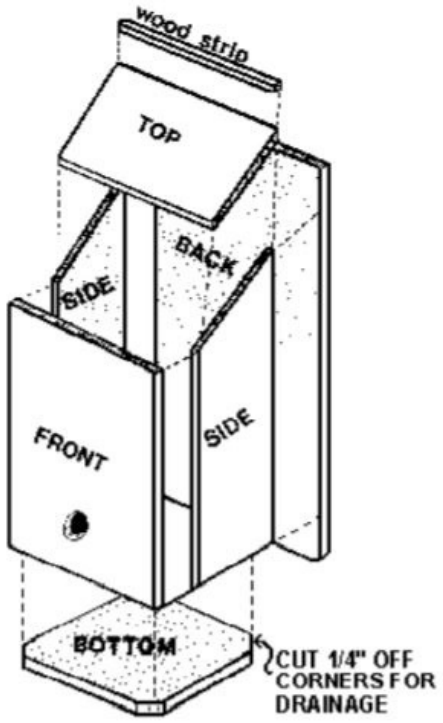

Photo Credit Steve Gunn

Photo Credit: Wildtones

Resources:

https://www.birdwatching-bliss.com/support-files/winter-bird-house-plans.pdf
https://www.pgc.pa.gov/InformationResources/Documents/plan5.pdf
https://www.wildbirdscoop.com/wild-bird-shelters.html
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