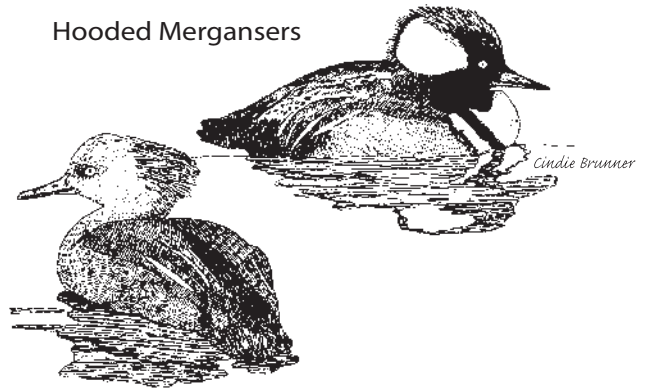


# Nest Box

Wood Duck, Hooded Merganser, Common and Barrow's Goldeneyes

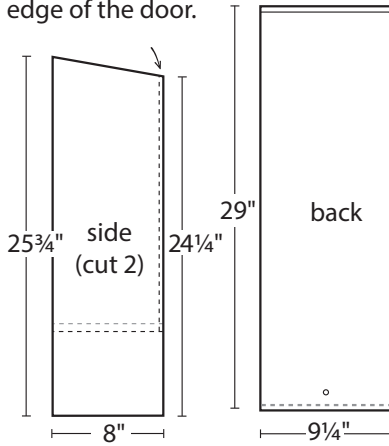
Hooded Mergansers



Note: Entrance hole (a horizontal oval) is 4" x 3" for Wood Duck and Hooded Merganser, 4 1/4" x 3 1/4" for Common Goldeneye, and 5" x 4" for Barrow's Goldeneye.

To make swing-up door, on one side make a 45° cut 6" from the bottom and trim 1/8" from long edge of the door.

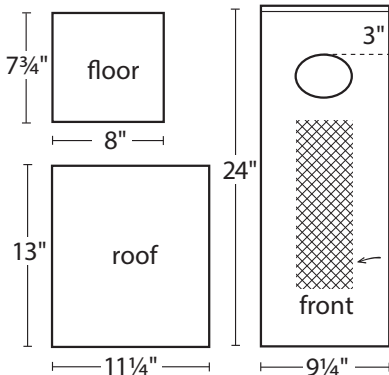
Cut top edge at a 15° angle.



Side view of 15° angle cut.



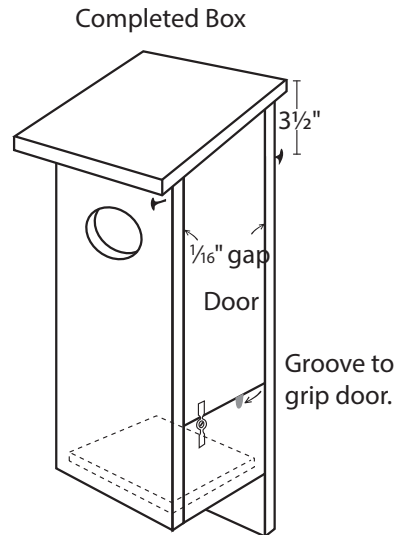
Cut top edge at a 15° angle.



Side view of 15° angle cut.



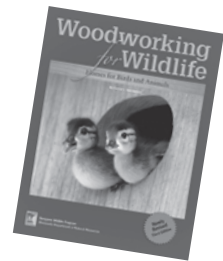
Attach 4" x 12" piece of 1/4" mesh hardware cloth.



Roof should overhang house 3/4" in the back and 1" along the sides. Recess the floor 1/2" up.

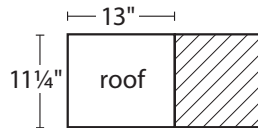
## Increase Your Chances of Nest Box Success!

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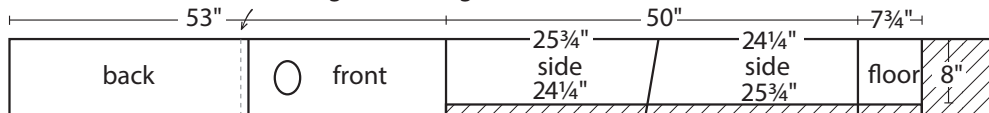
Construct house with rough surface facing out. One side will be smooth unless you're making multiple houses and you alternate the direction of your cross cut.

Lumber: 1" x 12" x 2'



Have rough side up when cutting the 15° angle cut.

Lumber: 1" x 10" x 10'

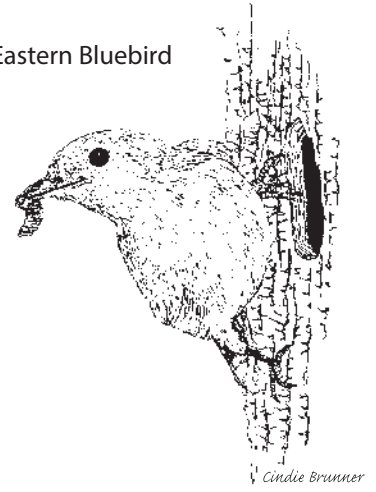


# Nest Box

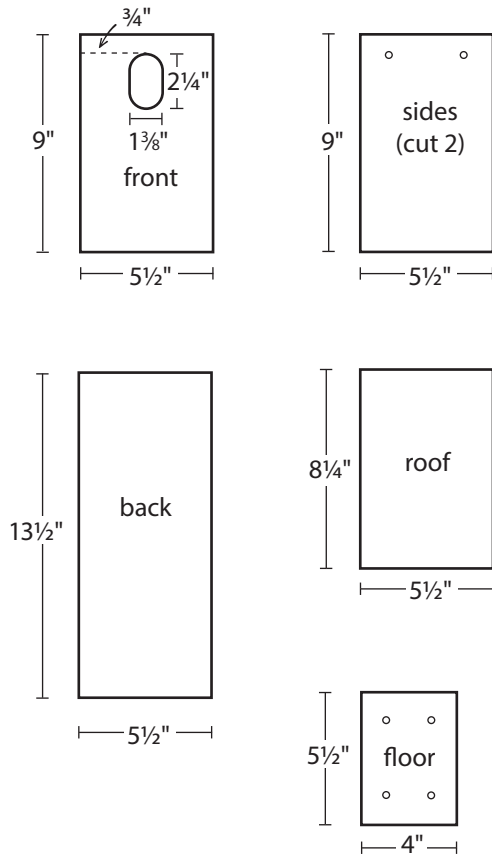
Eastern, Western, and Mountain Bluebirds;  
Tree and Violet-green Swallows

Note: Western Bluebirds need a 1½" diameter round entrance hole and Mountain Bluebirds need a 1⅞" diameter round entrance hole. Swallows are smaller than bluebirds and will be able to enter holes 1⅜" or larger.

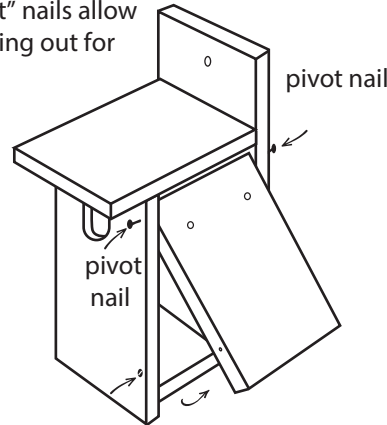
Eastern Bluebird



Candie Brunner

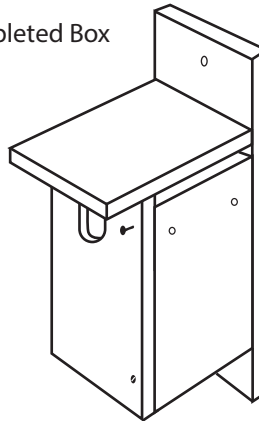


Two "pivot" nails allow side to swing out for cleaning.



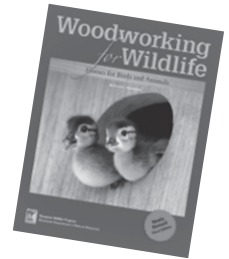
Use a nail or screw at bottom to keep side closed.

Completed Box



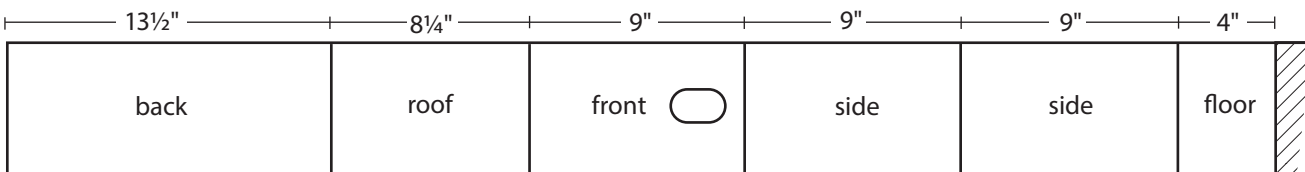
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Note: these dimensions are for ¾" thick board. Some cedar boards are ⅞" thick. If so, the floor must be 3¾" wide, not 4".

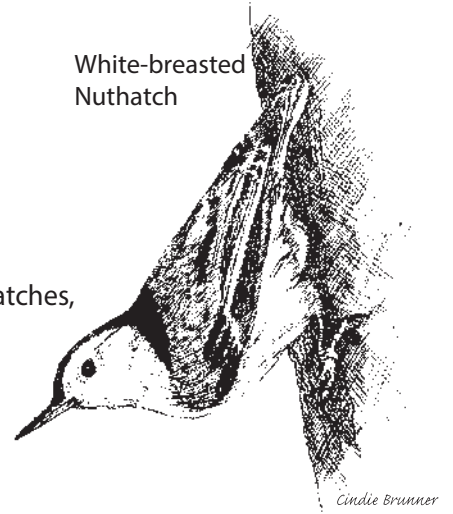
Lumber: 1" x 6" x 6'



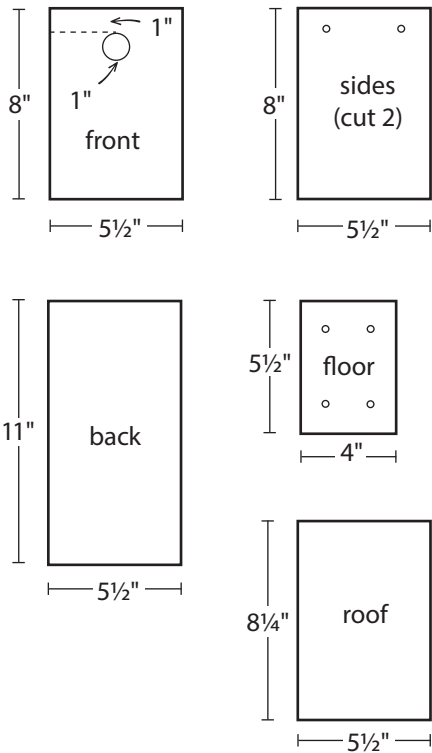
# Nest Box

House and Bewick's Wrens; Black-capped, Mountain, Boreal, Chestnut-backed, and Carolina Chickadees; Juniper, Black-crested, Oak, Tufted, and Bridled Titmice; Pygmy, White-breasted, Red-breasted, and Brown-headed Nuthatches; Prothonotary and Lucy's Warbler; and Flying Squirrel

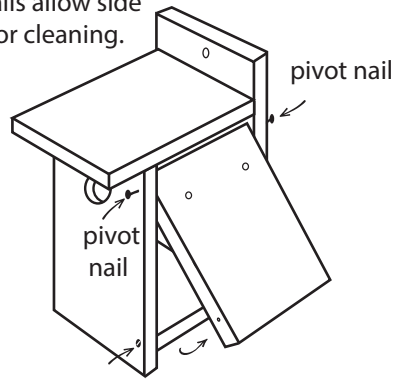
White-breasted Nuthatch



Note: Entrance hole diameter is 1" for House Wrens, Lucy's Warblers, Brown-headed Nuthatches, and Pygmy Nuthatches. Use 1 1/8" diameter for all chickadees and Bewick's Wren. Use 1 1/4" diameter for White-breasted Nuthatch, Red-breasted Nuthatch, Prothonotary Warbler, all titmouse species, and Flying Squirrel. Entrance holes 1 1/4" and larger will admit House Sparrows so only use the larger diameter in heavily-wooded areas where there are few House Sparrows.

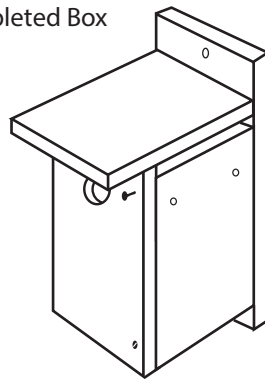


Two "pivot" nails allow side to swing out for cleaning.



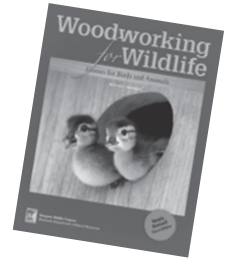
Use a nail or screw at bottom to keep side closed.

Completed Box



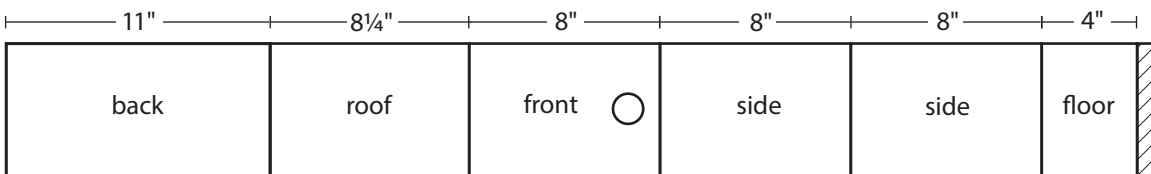
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Note: these dimensions are for 3/4" thick board. Some cedar boards are 5/8" thick. If so, the floor must be 3 3/4" wide, not 4".

Lumber: 1" x 6" x 4'



# American Kestrel, Screech-Owl, Northern Saw-whet Owl, Boreal Owl, Bufflehead



### SUPPLIES NEEDED:

Use raw pine or cedar. Do not paint or treat with a wood preservative.

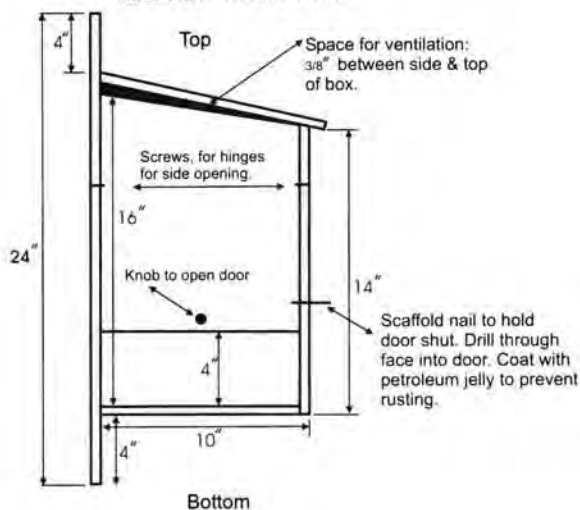
An outside perch is not necessary and may attract other species to the box.

Use 1-5/8" galvanized deck screws for the box.

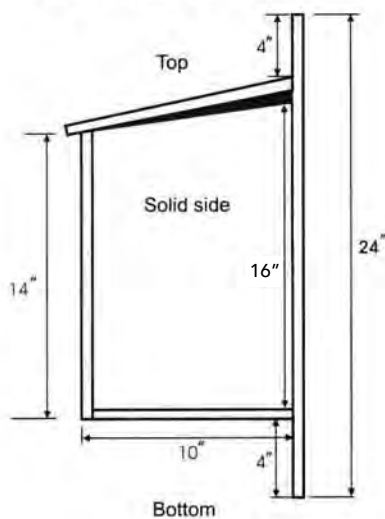
You can place a perch inside (using cutout from entrance) about three inches below entrance hole.

Place 2" of coarse wood shavings (not sawdust) in bottom of box, each year before nesting season.

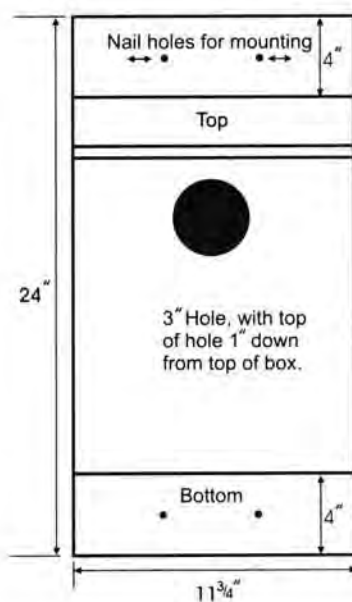
SIDE VIEW WITH DOOR



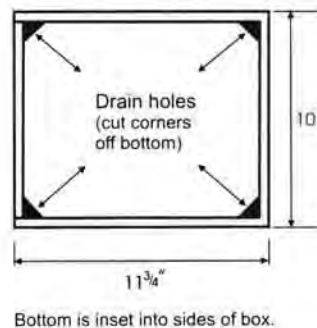
SIDE VIEW OTHER SIDE OF BOX



FRONT VIEW OF BOX



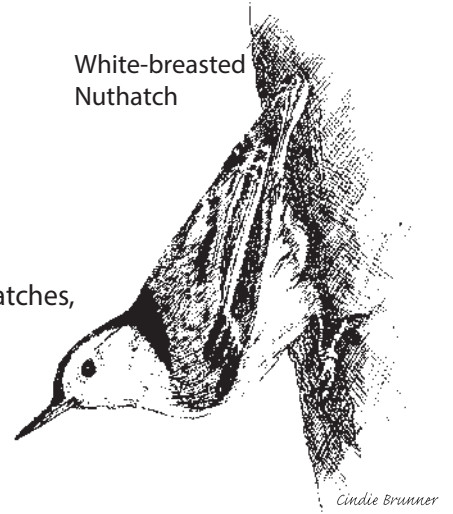
BOTTOM OF BOX



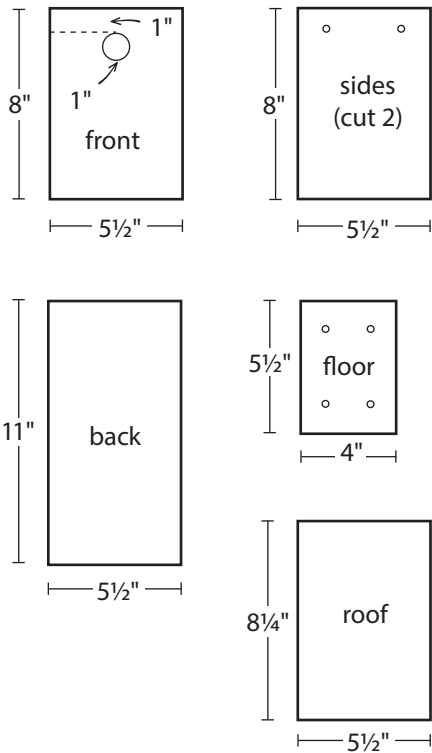
# Nest Box

House and Bewick's Wrens; Black-capped, Mountain, Boreal, Chestnut-backed, and Carolina Chickadees; Juniper, Black-crested, Oak, Tufted, and Bridled Titmice; Pygmy, White-breasted, Red-breasted, and Brown-headed Nuthatches; Prothonotary and Lucy's Warbler; and Flying Squirrel

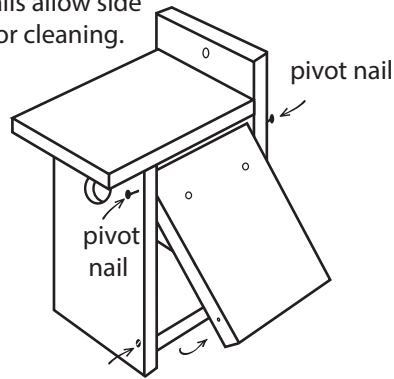
White-breasted Nuthatch



Note: Entrance hole diameter is 1" for House Wrens, Lucy's Warblers, Brown-headed Nuthatches, and Pygmy Nuthatches. Use 1 1/8" diameter for all chickadees and Bewick's Wren. Use 1 1/4" diameter for White-breasted Nuthatch, Red-breasted Nuthatch, Prothonotary Warbler, all titmouse species, and Flying Squirrel. Entrance holes 1 1/4" and larger will admit House Sparrows so only use the larger diameter in heavily-wooded areas where there are few House Sparrows.

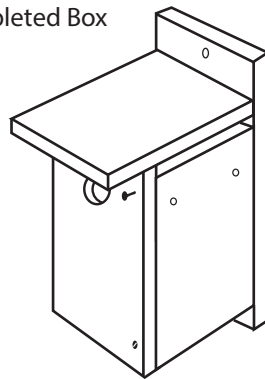


Two "pivot" nails allow side to swing out for cleaning.



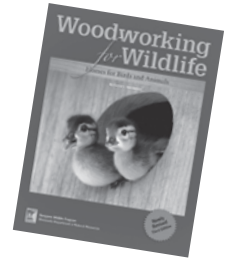
Use a nail or screw at bottom to keep side closed.

Completed Box



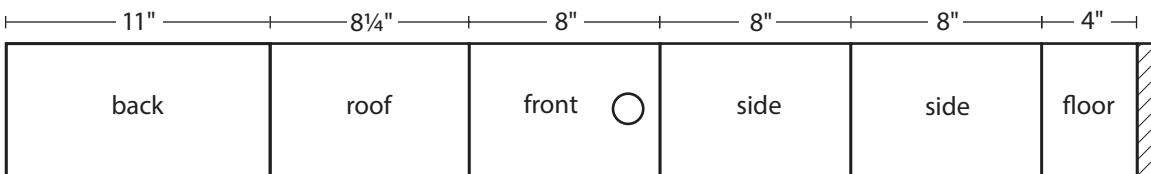
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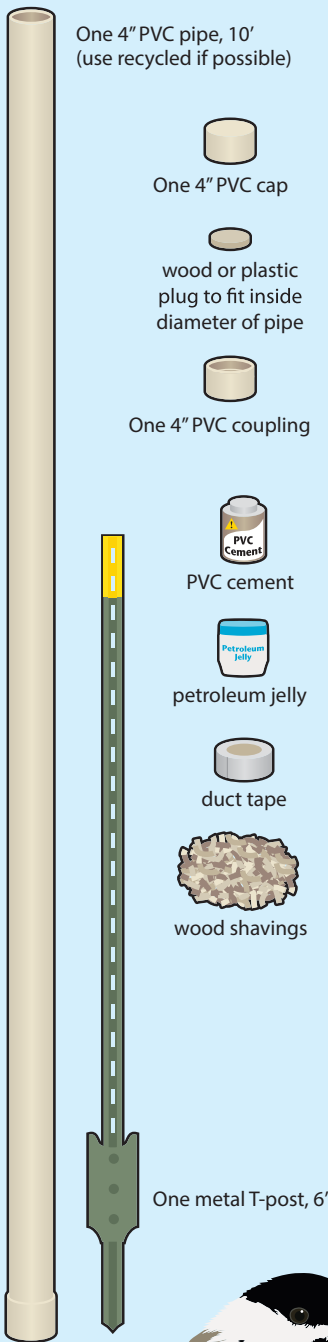

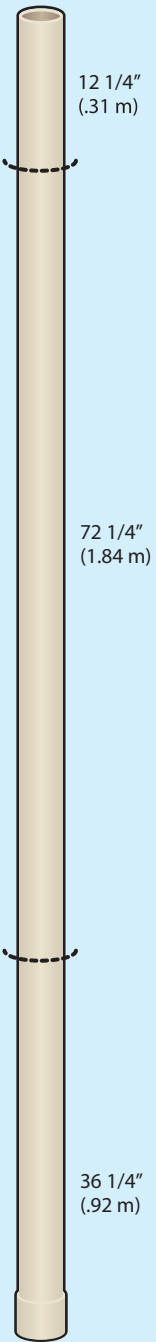
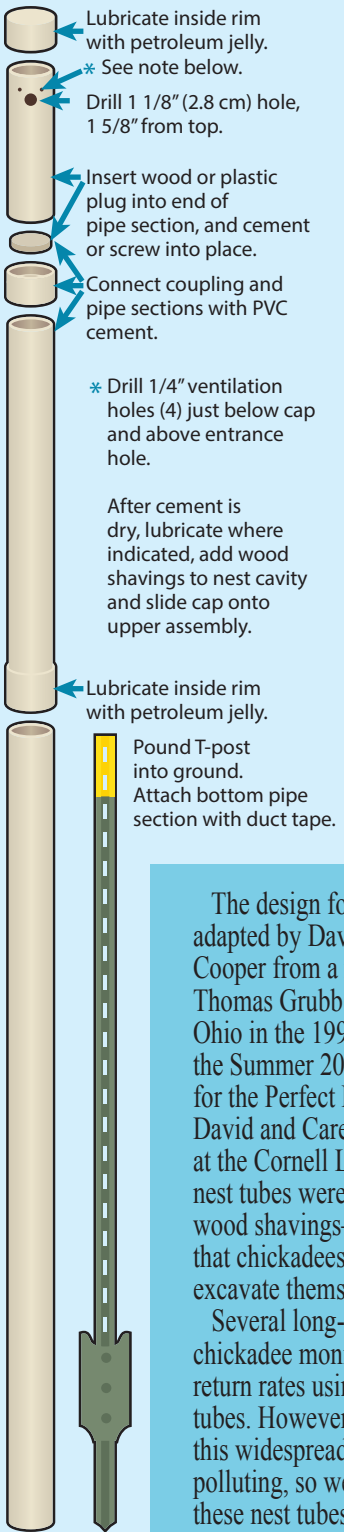
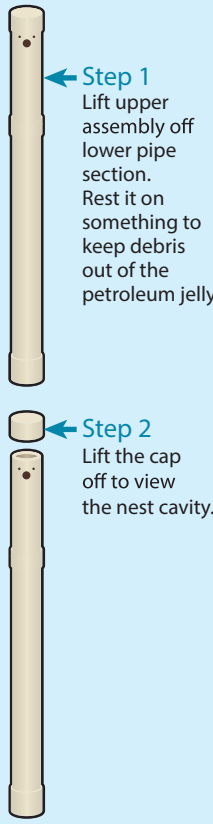
Note: these dimensions are for 3/4" thick board. Some cedar boards are 5/8" thick. If so, the floor must be 3 3/4" wide, not 4".

Lumber: 1" x 6" x 4'





# How to Make a Chickadee Nest Tube

Materials	Cutting	Assembly and Installation	Inspection
 <p>One 4" PVC pipe, 10' (use recycled if possible)</p> <p>One 4" PVC cap</p> <p>wood or plastic plug to fit inside diameter of pipe</p> <p>One 4" PVC coupling</p> <p>PVC cement</p> <p>petroleum jelly</p> <p>duct tape</p> <p>wood shavings</p> <p>One metal T-post, 6'</p> 	 <p>12 1/4" (.31 m)</p> <p>72 1/4" (1.84 m)</p> <p>36 1/4" (.92 m)</p>	 <p>Lubricate inside rim with petroleum jelly. * See note below.</p> <p>Drill 1 1/8" (2.8 cm) hole, 1 5/8" from top.</p> <p>Insert wood or plastic plug into end of pipe section, and cement or screw into place.</p> <p>Connect coupling and pipe sections with PVC cement.</p> <p>* Drill 1/4" ventilation holes (4) just below cap and above entrance hole.</p> <p>After cement is dry, lubricate where indicated, add wood shavings to nest cavity and slide cap onto upper assembly.</p> <p>Lubricate inside rim with petroleum jelly.</p> <p>Pound T-post into ground. Attach bottom pipe section with duct tape.</p>	 <p><b>Step 1</b> Lift upper assembly off lower pipe section. Rest it on something to keep debris out of the petroleum jelly.</p> <p><b>Step 2</b> Lift the cap off to view the nest cavity.</p>

The design for this nest tube was adapted by David Bonter and Caren Cooper from a model developed by Thomas Grubb and C.L. Bronson in Ohio in the 1990s, as mentioned in the Summer 2008 BirdScope, "Looking for the Perfect Fixer-Upper." In David and Caren's chickadee studies at the Cornell Lab of Ornithology, nest tubes were filled with wood shavings—studies indicate that chickadees prefer cavities they excavate themselves.

Several long-term bluebird and chickadee monitors have had excellent return rates using PVC nest tubes. However, the manufacture of this widespread material is highly polluting, so we recommend building these nest tubes from used and scrap PVC when possible.