

MASON BEE HOUSE JUNIOR WOODWORK PROJECT



Material & Equipment List:

- ❖ Pencil
- ❖ Sanding Block
- ❖ Countersink drill bit
- ❖ Tape measure
- ❖ Coping saw
- ❖ Hand saw
- ❖ Cordless drill
- ❖ 3/8" or 1/2" drill bit
- ❖ 1/8" drill bit (for pilot holes)
- ❖ #8 – 1 1/2" screws
- ❖ Class set - 12" x 4" x 4" cedar post
 - ❖ MUST BE UN-TREATED WOOD
- ❖ Class set – 5 1/4" x 3/4" x 24" cedar plank
 - ❖ Fence boards work great

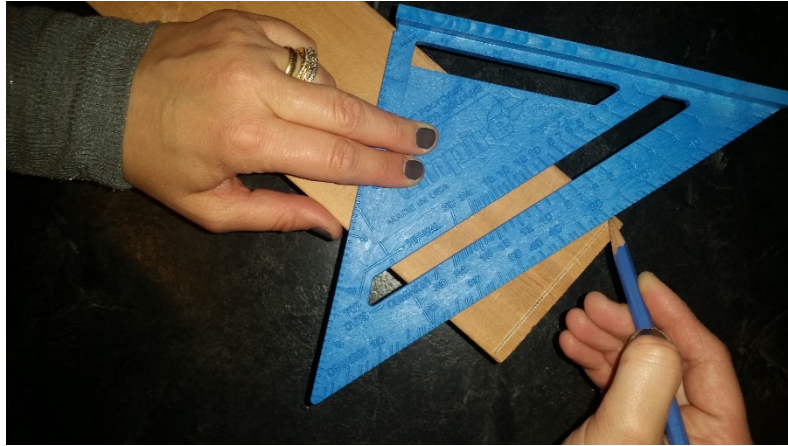
1. Gather Layout Materials & Cedar post



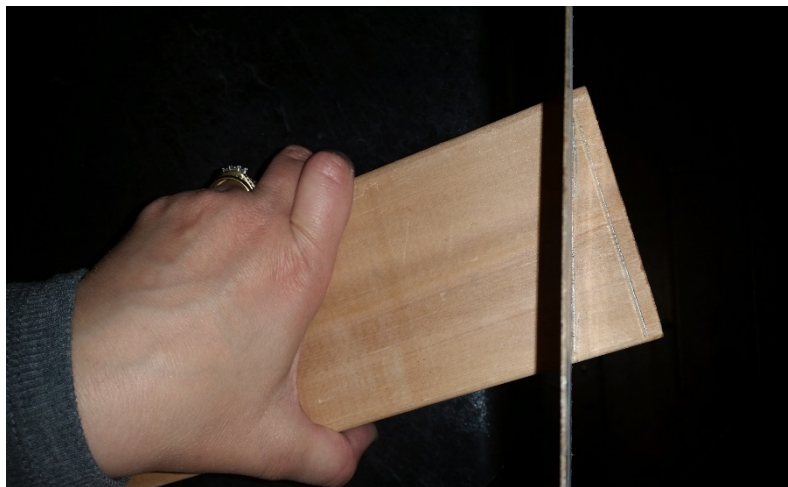
2. From one end of your 4"x4" block measure and mark a line with your pencil at 11 1/2"



3. Using your speed square, line up your line from step #2 with the 30° mark on your speed square and draw a line across your material



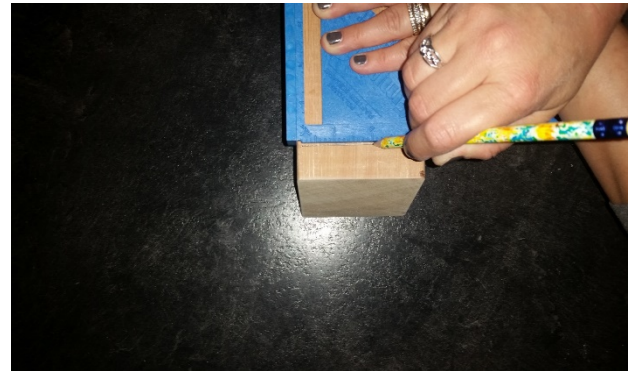
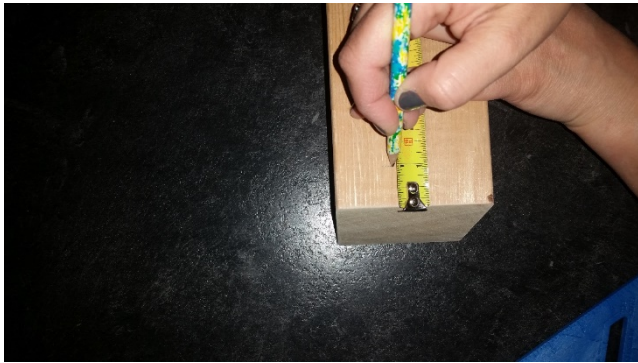
4. Secure your material to your table or workbench using clamps. Carefully begin cutting along the diagonal line using a hand saw.



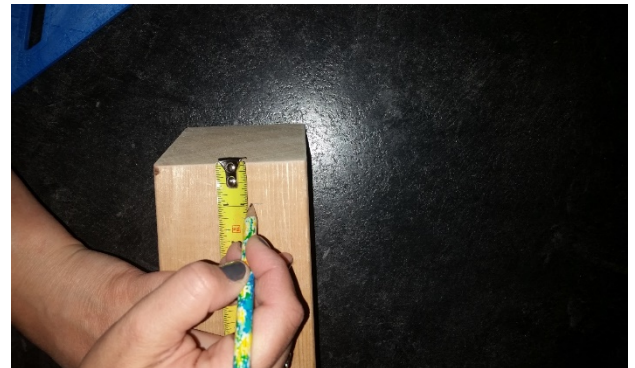
5. Sand any rough edges or surfaces using your sanding block.



6. Using your speed square and tape measure from the bottom of your block (the end WITHOUT the angled cut) measure up 1" and draw a line across your piece.

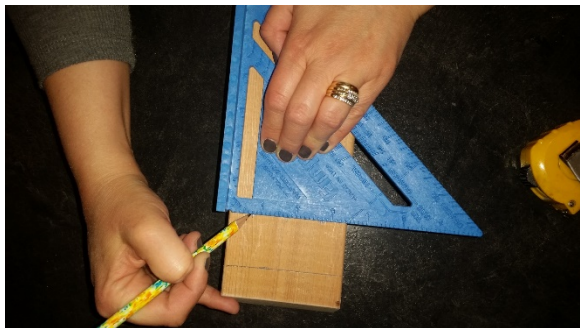


7. Now from the opposite end measure down from the angled end 1" and draw a line across the front of your board.



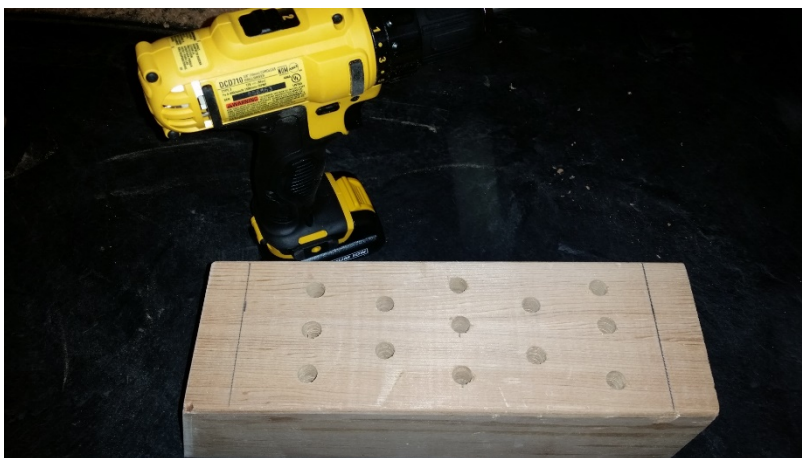
Between these lines will act as your guide for your hole layout.

8. Using your tape measure and speed square, design your own layout for your holes. Remember to leave space between holes – Be Creative.

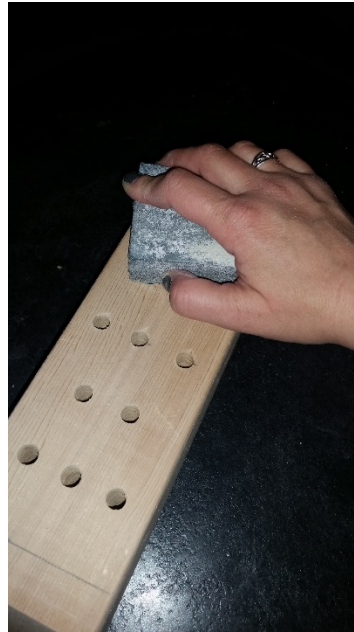


* Each hole should be marked with a +
+ This symbol indicates where you will line up your drill bit.

9. After safely clamping the block, set up to drill the holes. You should use a 3/8" drill bit in your cordless drill. Be sure to hold the drill at a 90° angle.



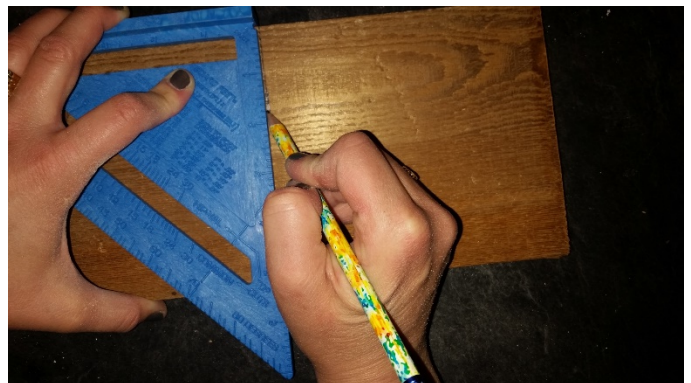
10. With your sanding block, sand all of the surfaces of your block to ensure there are no rough edges or sharp points. Once complete put this piece to the side of your workbench.



11. Gather your layout materials & Cedar fence board



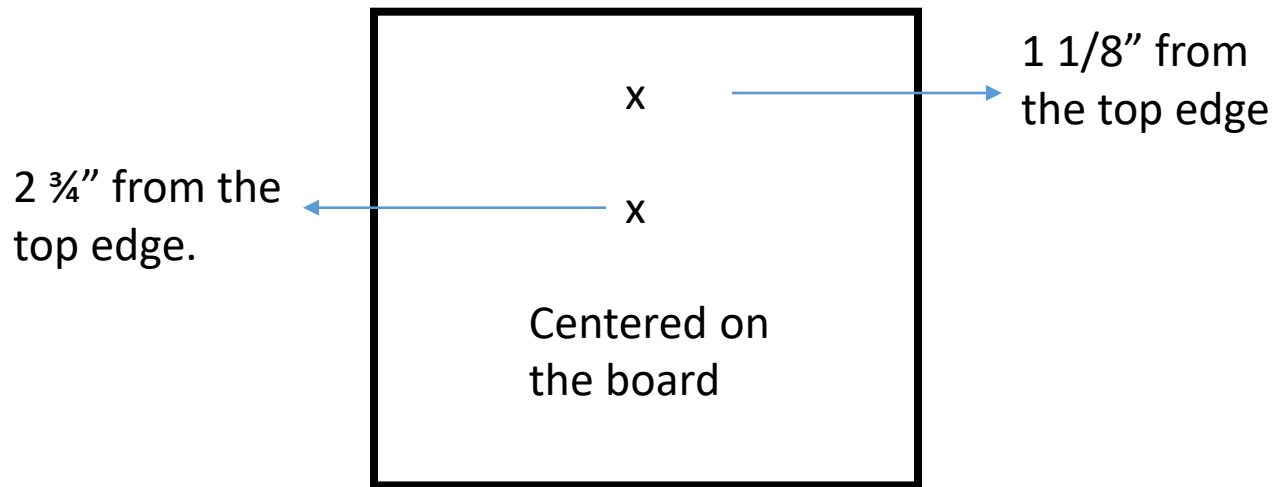
12. Using the tape measure – mark a line $5 \frac{3}{4}$ " from the end of the board. With the speed square mark the line across the entire board.



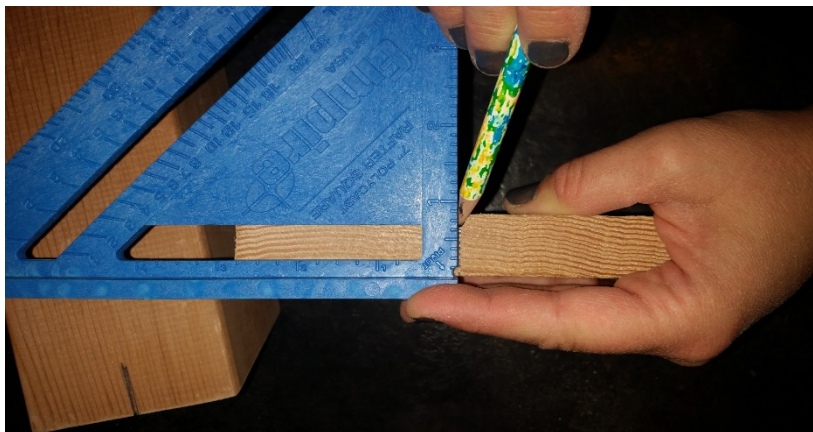
13. Secure your board to your workbench with clamps, and carefully begin sawing through. – The cut off piece will become the roof of the mason bee house.



14. Layout 2 holes using your tape measure and speed square to match the diagram below.



15. Again using your tape measure and speed square find the center on the edge of your roof piece. Do the same on the back side of the main post of your house.



16. Line up your roof with the top edge of your post. The lines you drew for center should align.

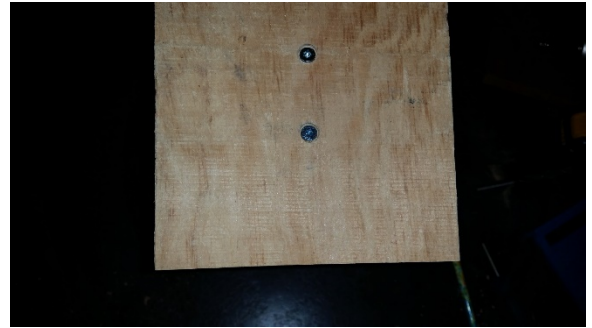


17. Use a 1/8 " drill bit in your cordless drill , and drill through the roof into you body the length of your drill bit. You will need to hold your pieces firmly in place. – This step is best done with a partner.



18. Using your counter sink drill bit on the roof piece, drill out both holes. – This will provide a divot for your screws to fit flush with your roof

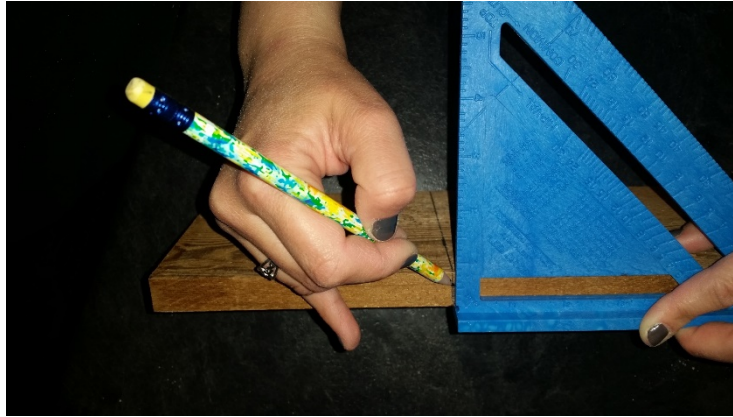
19. Using 2 - #8 x 1 ¼" screws, attach your roof to your main post.



20. Gather your layout materials and the left over piece of your cedar board.



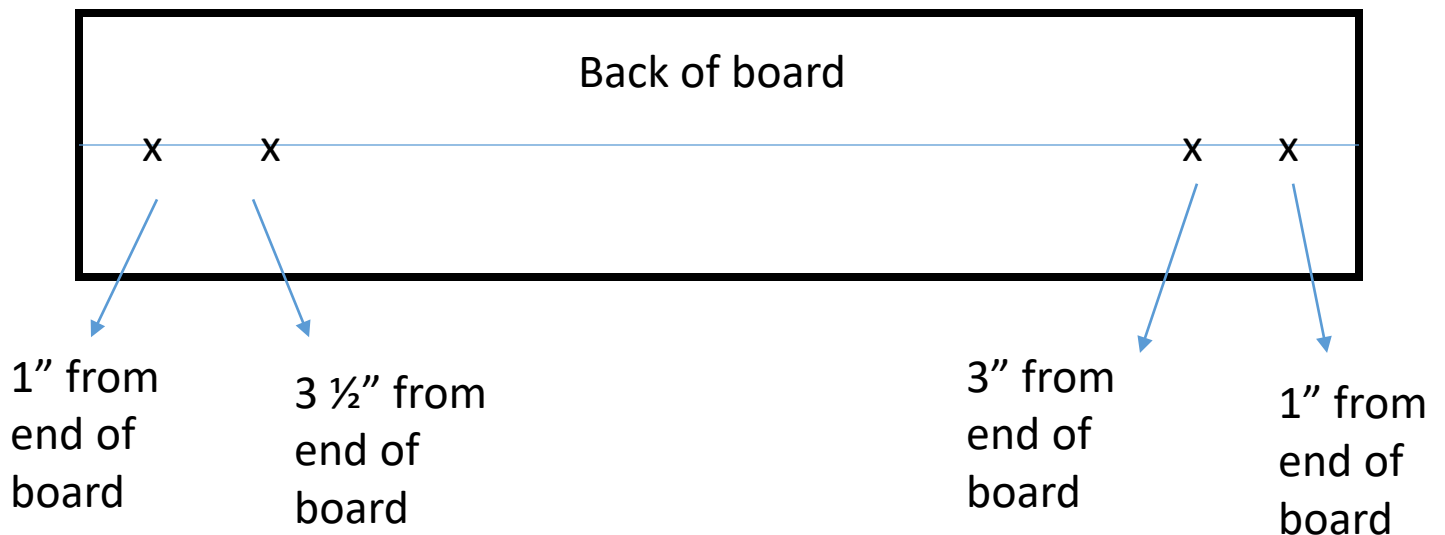
21. Measure from one end of your board 16" and draw a solid line with your speed square.



22. Secure your board to your work bench with clamps and carefully cut along the marked line.



23. You will now need to layout 4 holes for drilling according the diagram below.



24. Using your 1/8" drill bit with your cordless drill, drill all 4 holes through your board. These will act as pilot holes .



25. Using your countersink bit. Drill out your two center holes on the back side of your board.



Countersink

26. Turn the board over and counter sink each of the holes at either end of your board.



Countersink

27. Carefully place your main house body onto your table – front side down. Lay your back board on top and center it so that each end has approximately the same amount of material hanging over the edge.



28. Using your #8 screws and a screwdriver, screw your back plate to your body



29. Clean up your work area and put away properly any tools you have used.



30. Each hole should be lined with either rolled parchment paper or cardboard tube inserts . Then let the bees come.

