

Name \_\_\_\_\_

## Special Box with Fitted Lid

\*For this box the dimensions are:

9" W x 15" L x 7-3/8" H

(Note: the extra 3/8<sup>th</sup> inch is for the fitted lid)

**If you wish to change the size of this box it will change cut sizes and cost throughout.**

**It will not change the process or the procedures.**

1. Select size of the box

W \_\_\_\_\_ x L \_\_\_\_\_ x H \_\_\_\_\_

2. Select the type of material – you may use one type or glue up material (like cutting board) or do color inlays to make the project more artistic.

\* The Shopbot or Laser may be used.

3. Fill out your plan sheet – material costs and have checked by instructor

4. To choose lumber and before you cut anything: **Remember: the more machining procedures you can do before cutting out the short pieces the better.**

Example: if you cut the 9" ends first, you will be violating safety rules when you need to joint or plane the material.

5. Find material **8" W x 49" L** for the main parts of the box (**piece A**)

Side	Side	End	End
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6. Find material – (this will probably need to be glued up) **9-1/4" x 31"** for the top and bottom. (**Piece B**)

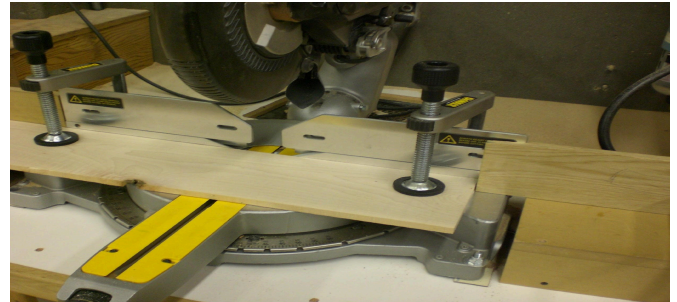
7. Plane pieces A and B to 9/16, then use the wide belt to bring the material to 1/2" or .500.

8. Take pieces A & B to the joiner and true 1 edge of each.

9. Take piece A and rip it to 7-3/8" W (wide).

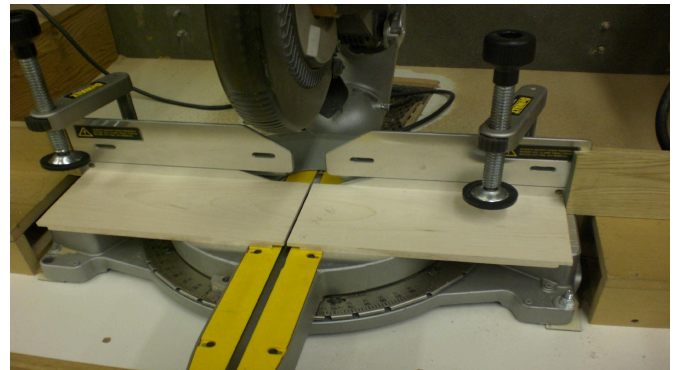
10. Take piece B and rip it to 9" W.

11. Go to the miter saw and square one edge of piece A & B



12. Set up a stop block (as per demonstration) to cut pieces 15" L (long).

13. Using the stop block cut two pieces @ 15" from piece A (label as sides) and one @ 15 (label as top)



14. Next set the stop block at 8-1/2" and cut two ends from piece A (label as ends)

15. Rip what is left of piece B on the table saw to 8-1/2" W. (label as bottom)

16. Using the miter saw, crosscut piece B to 14-1/2" L.

17. At this point all pieces should be at exact thickness – width – and length. **(MAKE SURE)**

\* Top  $\frac{1}{2}$ " x 9" x 15"

\* Sides  $\frac{1}{2}$ " x 7- $\frac{3}{8}$ " x 15"

\* Ends  $\frac{1}{2}$ " x 7- $\frac{3}{8}$ " x 8- $\frac{1}{2}$ "

\* Bottom  $\frac{1}{2}$ " x 8- $\frac{1}{2}$ " x 14- $\frac{1}{2}$ "

**(insert picture of cut pieces)**

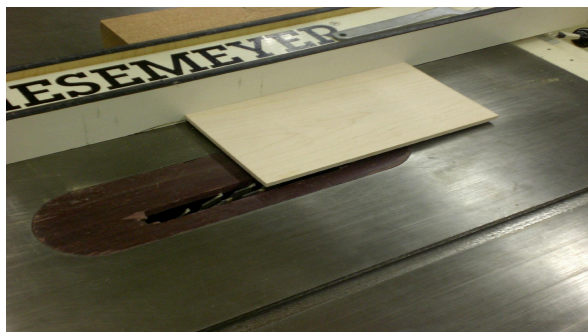
18. Set up either the dado blade (@  $\frac{1}{2}$ " ) on the table saw or the router table with a  $\frac{1}{2}$ " bit, for all dados's and rabbets.

The machine choice will depend on which you feel more comfortable with.

19. Using either the table saw or the router table, set a  $\frac{1}{2}$ " blade at  $\frac{1}{4}$ " height. \*Using a test piece, check adjustment.



20. Take your top and slot rabbet on all four edges (as per demo piece)  $\frac{1}{2}$ " wide x  $\frac{1}{4}$ " deep.



21. Take the two side pieces and rabbet both ends  $\frac{1}{2}$ " wide x  $\frac{1}{4}$ " deep (end grain)

22. Set the fence at 1" (can be changed) from the bottom for a dado slot to accept the bottom dado slot to accept the bottom. \*This 1" distance will allow for a decorative base/leg look. \*make it higher if needed. Slot is  $\frac{1}{2}$ " W x  $\frac{1}{4}$ " deep.



23. Next set up table saw or router table with a  $\frac{3}{8}$ " blade or bit to notch for the fitted top.

The placement of this cut will be determined by how deep a lid you want. It can be set from  $\frac{3}{4}$ " down from the top edge to 2 ".

24. To slot the fitted top set the  $\frac{3}{8}$ " blade or bit to  $\frac{1}{4}$ " high and make a test cut. Adjust if needed.

25. Dry fit the box together, without the top. If you see something not lining up, adjustments are needed, do them now.

\* Have this checked by your instructor.

26. Mark the outside of your box to show where the  $\frac{3}{8}$ " cut is to be done. This cut will be done at a later time.

27. Measure up 5" from the bottom and adjust the fence to match. (Depth must be  $\frac{1}{4}$ " for  $\frac{1}{2}$ " stock)

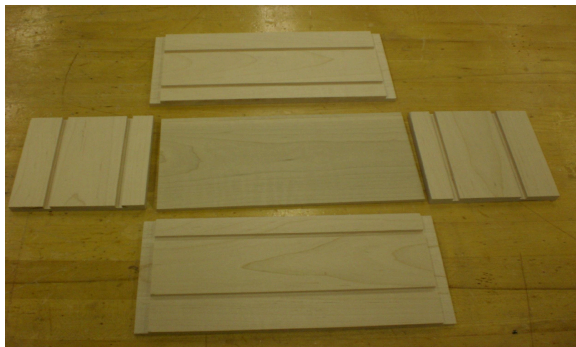
28. Cut interior dados. \* Remember mark the sides to show where the fitted top dados are.



29. Dry clamp box – for fit. IF correct – did your instructor say yes? Are the dados marked on the outside?

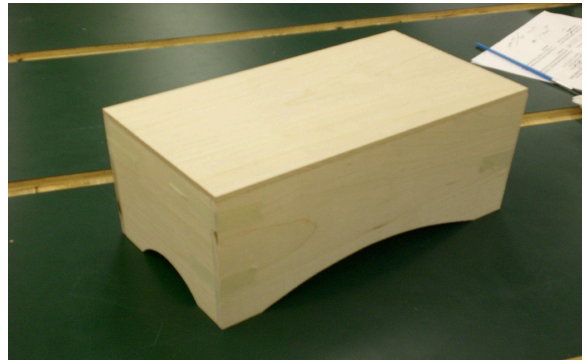


30. Mark for leg design



31. Once checked for height and design.

32. Cut out designs on band saw and sand on spindle sander.



33. Glue up. Don't over-do the glue.

34. After one day drying, unclamp the project.

35. Sand and square up the project. \* Have checked by your instructor. – Don't remove the dado marks – these are needed to line up your last cut.

36. referencing the upper dado marks, adjust the fence on the machine you used to make the last cuts.  $3/8''$  W x  $1/4''$  D.

37. The blade will need to touch that bottom of the inside dado. \* see instructors part

38. When adjusted correctly and cleared by your instructor make your first two cuts on the sides.

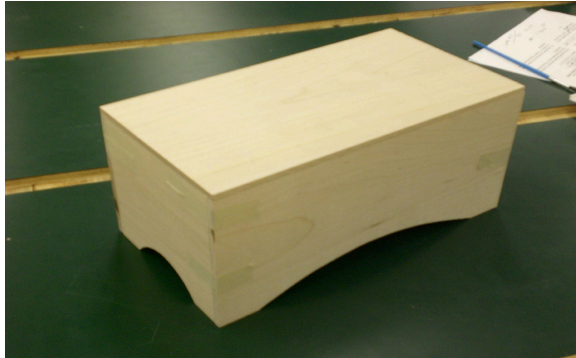
39. Get wedge blocks from your instructor. These blocks will be taped in place to keep the box stable while you make the final two cuts.

40. Make your final two cuts on the ends.

41. Un-tape the blocks – your box should come a part.

42. Using a sanding block, clean up the edges of the fitted top and box, inside edge. This should take almost no sanding. Put it together.





43. Sand the box while together.

44. Finish as per requirements of any varnished project.

Stain if desired, then two coats of clear gloss (sanded between each with 220 grit and tacky clothed). Final coat of clear satin, when ready steel wool and wax the project.

**\*\*\*\*\* SPECIAL Ideas\*\*\*\*\***

**– Before varnish is applied you might want to laser something onto the box lid.**

**A picture or saying, perhaps date and sign the bottom so people will know what a craftsman you were in high school.**