

Bookshelf Project

Take a look at the sample Bookshelf. You will be creating an exact replica by following the plans.

Safety: You must be trained to use the Router, Planner, Table Saw with Dado Blade, Band Saw, and Compound Miter Saw before doing this project.

Note: Measure twice before cutting.

Procedure:

1. You can do any of these steps in any order:

a. **Shelves**

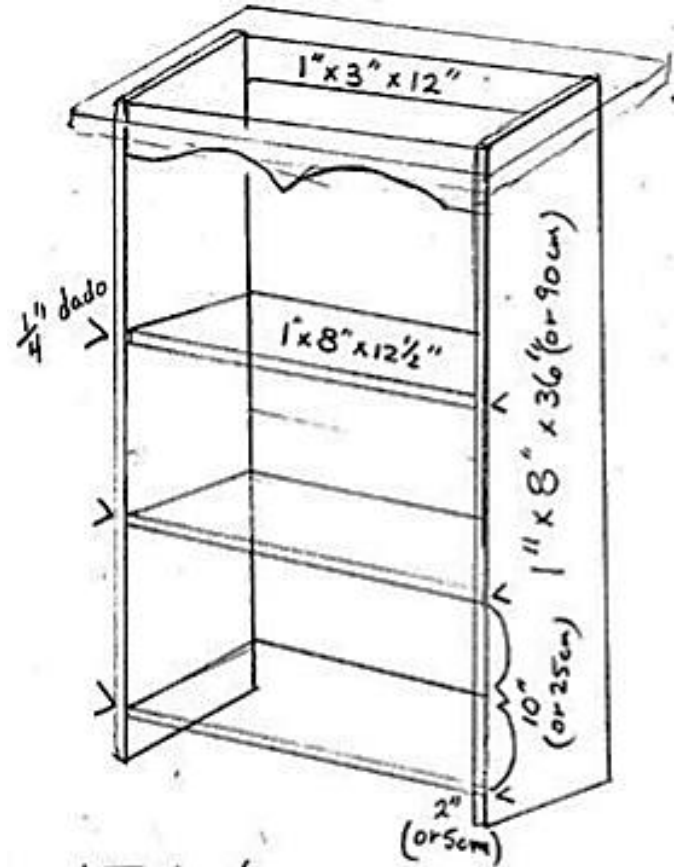
- Use the compound miter saw to cut three (3) 12 ½" (32cm) long shelves from 1" X 8" material.
- Then, plane the shelves to ½" thick.

b. **Sides**

- Use the compound miter saw to cut two (2) 36" (90 cm) sides from 1" X 8" material.
- Then, mark the Dado cuts starting at the bottom on one board. Put the two sides together and transfer the lines to the second board.
- Use the Table Saw with Dado Blades to cut the dado for the shelves. **Stop!** Ask the teacher to watch you do this step.

c. **Fancy Front**

- Create a symmetrical pattern on a panel board that is half the width of the front.
- Using the compound miter saw, cut two (2) top supports 12" (30.5 cm) long
- Mark the pattern on one of the top supports. **Stop!** Show your teacher.
- Cut the pattern on the band saw (don't forget to make relief cuts)
- Router the fancy edge. **Stop!** Let your teacher watch as you do this.
- Use 120 grit sandpaper to smooth the edges.



d. **Top**

- Using the compound miter saw, cut a 15" (38 cm) long top from 1" X 10" material.
- Use the router to shape the edges on board. **Stop!** Have your teacher watch you do this.



2. **Assembly**

a. Step 1:

- Pre-drill two holes (slightly smaller than the nail size) on each side for the top supports. Put the nails in $\frac{3}{4}$ of the way and then the rest of the way with a **Nail Center Punch**. You'll need a friend to help you hold the sides.



- Put glue in the dado slots and place your shelves in place. (keep glue away from edges – see photo)
- Use a **Square** to make sure your shelf is "square" before the glue sets. **Stop!** Have your teacher check this step.
- Carefully put two clamps from one side to the other, to secure the components until the glue dries. Check with the square again.



- b. Step 2: (glue is dry from step #1)
- Put some glue on the top of the sides and top support. Put the top in place. Make sure there is an equal overhang on each side.
 - Carefully, pre-drill 2 holes on each side so a nail can be put through the top and into the sides. Put the nails in $\frac{3}{4}$ of the way and then the rest of the way with a **Nail Center Punch**.
- c. Step 3: (glue is dry from step #2)
- Pre-drill two holes on each side for each shelf. Place the holes carefully so they are about same distance in from each side (about 1 inch in or 2.5 cm)
 - Countersink each nail using a Nail Center Punch so the head is just below the surface. **Putty** the hole.
 - Use 220 grit sand paper to sand any rough areas, or any glue. Glue will make your finish look bad.
3. **Finish** (after putty is dry and excess sanded off)
- a. Apply a coat of the stain you prefer. (You can apply a second coat later).

Material List: Pine

Top (1" X 10")
Shelves and Sides (1" X 8")
Top Supports (1" X 3")
Wood Glue
Finish Nails
Putty

