

WORKSHOP 6

Bookcase Project II

Routing Dadoes and Rabbets, Curve Cutting, Sanding & Screwed and Plugged Joinery

Date/Time: Saturday, Xtember tbd, 9 am to 12 noon

Location: Mentor's Shop

Mentors: tbd

Content: Follows FineWoodworking.com video "Getting Started in Woodworking" Season 2, Session 4, Rabbets and Dadoes with a Router; Session 5, Cutting Curves; Session 6, Sanding the Bookcase Parts; & Session 7, Joinery with Screws and Plugs.

Description:

Cutting Rabbets and Dadoes with a Router;

Dadoes are square notches cut into the surface of a piece of lumber that hold the end of a joining board. They are perfect when building shelving or cabinetry as a way to join shelves and partitions. For this bookcase project, the dado joinery is reinforced with screws, although that added strength isn't essential to the joint. A simple but foolproof T-Square jig is built to assist in cutting the dadoes. This type of jig is designed to cut exactly 90 degrees to one edge, which is perfect for our shelf dadoes. You will also need a straight router bit. Ours is 3/4-in. diameter because our lumber measures that same thickness.

Rabbets are similar to dadoes and groves in that they can go in the direction of the grain or across it. However, Rabbets are notches cut into the edge of a board. A rabbet is used to attach the back panel to the bookcase

Laying Out, Cutting and Smoothing Curves;

A changing radius curve isn't a section of a circle. This type of curve can be drawn with a variety of drawing tools, including french curves and battens. We use both of those tools to draw the changing-radius curves in this bookcase project. Then you learn how to cut curves with a bandsaw or a jig saw. To sand and smooth curved surfaces, we show two techniques: The first is with a belt sander; the second uses a curved hand sanding block made from a scrap piece of lumber from the actual curve cutoff..

Sanding the Bookcase Pieces;

This section of the workshop begins with a discussion of sandpaper types, grits and manual vs power sanding. Dust collection and safety issues are also included in the discussion. The bookcase project has most of the situations you'll encounter in woodworking, big flat surfaces, narrow edges, and curves. Sanding starts with the roughest grit you need to remove milling marks (typically 100 grit), and then work your way up through finer and finer grits with each one removing the scratches from the last grit and replacing them with finer scratches until the scratches are so tiny the eye can't see them (usually about 220 grit)..

Simple Sanding Tools

When hand sanding, a sanding block is a must. These are available commercially or can be made from a block of wood. Without a sanding block, you run the risk of missing areas, rounding over edges, or leaving scratches behind. If you want to speed up the process, power sanders are a great solution. We recommend the random-orbit sander, which spins and orbits in a way that prevents scratch patterns from forming.

WORKSHOP 6 (concluded)

Description (continued);

Dado Joinery with Screw & Plug Reinforcement;

The first step of the process is to drill a clearance hole in the top piece of wood so that the screw can pass through it freely. The other hole you need to drill is in the bottom piece; it's called a [pilot hole](#). Clearance and pilot holes are especially important when using hardwoods. Exposed screws can detract from the beauty of this bookcase project, so we decided to use hardwood plugs to conceal the screw heads. To do this, we drill a counter-bore so that the screw head sinks below the surface of the workpiece. After driving the screws, the [counterbore](#) allows us to plug the hole. We create custom hardwood plugs with a contrasting wood as an accent in this project. In this workshop, we use a really smart technique for making hardwood plugs.

Preparation before the workshop:

1. Register with Bob Mills at 248-535-6718 or 248-540-8658
2. View the "Getting Started in Woodworking" videos, Season 2, Sessions 4, 5, 6, & 7 at <http://www.startwoodworking.com/getting-started/season-two>
3. Download and study the article "Build an Oak Bookcase" by Asa Christiana at http://www.finewoodworking.com/FWNPdfFree/oak_bookcase_plan.pdf
4. Screws and sandpaper will be provided at the workshop.
5. If you have a favorite random orbit sander, you may bring it and a sequence of 100, 150, and 220 grit sanding disks for your use at the workshop.
6. Hand sanding blocks will either be made or provided at the workshop. However, if you have some you may bring them for your use at the workshop.