working with Dimensional Lumber

With a little planning and work, you can build great-looking, low-cost projects.

Lay Out the Parts. *To make the best use of material, mark and cut out the pieces before jointing and planing.*

It would be great to have a shop full of hardwood storage cabinets and benchtops. But let's face it, using expensive hardwood lumber for every shop project is a luxury few of us can afford. Fortunately, you don't have to break the bank to build durable and attractive cabinets, worksurfaces, or benches.

The solution is as near as the local lumberyard — low-cost, "two-by" lumber. You're probably already familiar with some of the downsides of dimensional lumber. It comes from a variety of species of pine, fir, or spruce and is often in pretty rough condition. In fact, warped, checked, twisted, and very wet lumber is common. So, it takes a bit more work to get the most out of this material. But with a little extra planning and patience you can get great results.

Selection. Building a successful project with ordinary lumber begins by choosing the right boards. When I shop for dimensional lumber, the first thing I look at is the moisture content. And most of the time I don't need a moisture meter to see how wet some of this lumber can be. These boards are often wet to the touch. That doesn't mean you should avoid these boards. All you need to do when you get them back to your shop is stack them with stickers (small pieces of wood) in a place with good air circulation, as shown in the photo above, and allow them to dry. Depending on conditions, they'll be dry enough to work in a few weeks.

Still Wet? *Allow the lumber to dry by stacking the boards on wood stickers for better air circulation.*

Straight Stock. Even if you can find dry lumber, chances are you'll still want to pick through it pretty thoroughly to find the best boards. The big thing I try to avoid here is twisted stock. You can usually work around slightly bowed or cupped boards, but correcting twist just takes too much effort. And since you'll most likely have a big selection to choose from, leave the twisted stock at the store.

Grain. Once I've sorted out the straighter pieces, I start to look at the grain. For most shop projects, this isn't a big concern, but if I'm going to use the lumber for cabinet doors, trim, or any other application that calls for a visual appeal, I take the time to find the straight or quarter-sawn grain I'll need.

Depending on the project, you can also come up with a strategy for cutting the stock and getting a quartersawn look. The box below gives you an idea of how to do this. In addition to being nicer looking, this will make for more stable, longer-lasting panels as well.

Cutting, Jointing, and Planing. The next step is getting the boards cut to size, squared-up, and planed to thickness. Overall, the process is pretty similar to working with rough-cut hardwood stock.

Here I like to begin by inspecting each board (again) for warping, bowing, and checking. At this point, you can lay them on the bench and start roughing out the parts you need in chalk directly on the boards, as in the lower left photo on the opposite page.

This is a good time to identify the knots or other defects you'll have to work around. I reserve the best boards for the longer pieces of my project. This way, you can compensate for bowed or warped boards by cutting them into shorter pieces and eliminating any problems.

Once the parts are cut to rough size, you can move on to the jointer to square up one edge and one face. The difference here is that you'll also need to get rid of the rounded edges typical on dimensional lumber. Then, you can plane the opposite face and trim the opposite edge at the table saw. As you can see in the photo at right, you'll lose a little more thickness and width in this process than you would with hardwood lumber, so make sure to take that into account in your plan.

Joinery. Now that you have your boards flat and square, it's time to cut out the parts for your project and work on the joinery. The thing to remember here is that you don't want to get too fancy with "two-by" stock. Softwood won't hold an edge the way oak or maple will. But that doesn't mean you can't make a mortise and tenon joint or rout a simple edge profile.

Jointed and Planed. *Your stock will end up a little narrower and thinner after flattening and squaring, so plan for the reduced dimensions.*

Sanding. You're probably already familiar with the tendency of "two-by" lumber to splinter at the cutline. So after I cut out the parts, I plan on doing a fair amount of sanding. But sanding softwood goes pretty fast. You can move through the grits and get a smooth surface quickly using either a random-orbit sander or a sanding block.

The "Two-by" Solution. By now you can see that dimensional lumber can be used as a great, low-cost material for your shop projects. It's durable, easy to work with, and if you're willing to take a little extra time and use your creative talents, it can be as attractive as hardwood. And since it's available just about anywhere, there's no good reason to put off building any of those shop projects any longer.

Create Your Own:
Straight-Grain Panels

One of the best ways to make "two-by" stock more attractive is to make a series of cuts at the table saw exposing the straighter grain, as in the photo at right. You can start by marking the boards in a way that will yield the straight-grained face. Then, it's just a matter of ripping the stock on the table saw, rotating it to expose the best edge, and gluing it back together with the straight grain surfaces facing up.

This is a great way to make table tops that are both more stable and better-looking. And using this method allows you to determine the thickness of the top just by adjusting the width of the cuts. So you can even make a top thick enough for a workbench.

Quartersawn Look. *By cutting the boards below to reveal straight-grained edges, you can reassemble them into attractive, stable panels.*