MITREPLAN PROJECT PLANNER

Build a bookcase

• An easy-to-follow guide to achieving a perfect result.
• Outlines all the tools you will need for the job.
• Includes a materials checklist.

PLEASE NOTE:
Before starting this project or buying any materials, it is worth your time to read all steps thoroughly first to be sure you understand what is required.

Mitre 10 is proudly Australian owned.

#24
mitre10.com.au
Clean finish – a matching pre-glued edging that you simply iron on is available. A single particleboard sheet patterns and colours that need no finishing. However, any cut front edges will need to be disguised to give a

An alternative

This bookcase can also be built with particleboard, which is generally less expensive than timber. It's available in a range of standard sheet sizes with either a plain finish for painting, or veneered with realistic woodgrain patterns and colours that need no finishing. However, any cut front edges will need to be disguised to give a clean finish – a matching pre-glued edging that you simply iron on is available. A single particleboard sheet 1200 x 900 x 18mm will provide all pieces with little wastage. If screwing together, be sure to ask for screws with a thread specially designed for particleboard. And don’t hesitate to seek advice and assistance at your Mitre 10 store.

An alternative

This bookcase can also be built with particleboard, which is generally less expensive than timber. It’s available in a range of standard sheet sizes with either a plain finish for painting, or veneered with realistic woodgrain patterns and colours that need no finishing. However, any cut front edges will need to be disguised to give a clean finish – a matching pre-glued edging that you simply iron on is available. A single particleboard sheet 1200 x 900 x 18mm will provide all pieces with little wastage. If screwing together, be sure to ask for screws with a thread specially designed for particleboard. And don’t hesitate to seek advice and assistance at your Mitre 10 store.

Make a place to store your stories – with help from Mitre 10.

Here’s a handsome way to store your favourite books. All you need are average handyperson skills, the right tools, and a few spare hours. We’ve chosen to build this bookcase from Radiata Pine for its attractive natural knotty appearance and colour. It’s one of the easiest timbers to work with.

The design is basically a simple box, approximately 820 x 780 x 190mm, with an adjustable centre shelf. It’s suitable for most hardbacks. But you can easily vary the dimensions to suit books of any size. For example, standard pine sizes include 140mm widths, ideal for pocket books. Or choose 240mm width if you have mostly large books.

The choice is yours. What’s more, you’ll get a real kick out of building it yourself, with the help of the step-by-step MitrePlan guide.

An alternative

This bookcase can also be built with particleboard, which is generally less expensive than timber. It’s available in a range of standard sheet sizes with either a plain finish for painting, or veneered with realistic woodgrain patterns and colours that need no finishing. However, any cut front edges will need to be disguised to give a clean finish – a matching pre-glued edging that you simply iron on is available. A single particleboard sheet 1200 x 900 x 18mm will provide all pieces with little wastage. If screwing together, be sure to ask for screws with a thread specially designed for particleboard. And don’t hesitate to seek advice and assistance at your Mitre 10 store.

MIGHTY HELPFUL CHECKLIST

Timber
Be sure to specify dressed all round (DAR) when purchasing. Lengths can be supplied sufficient for you to cut the required pieces. When ordering, be sure to say that your needs are for lengths from which 780mm pieces will be cut. Or, you can order cut-to-length at extra cost, ready to assemble.

| ORDER | 5 pieces 190 x 19 x 780mm |
| HARDWARE | 1 kickboard 90 x 19 x 780mm |
| 1 backing sheet | 810 x 690 x 4mm pine ply |

Hardware
10 – 50mm x 8 gauge counter sunk wood screws and 10 – 9.5mm screw head button caps (refer Step 1) or
4 – 5mm shelf supports
3 – 22 x 22mm angle brackets
6 – 16mm x 6 gauge angle bracket screws
Pkt. 20mm bullet head nails to fix backing sheet
Clear pine finish or pigment stain

Verbal quotes are indicative only. Written quotes on materials are available upon request from your Mitre 10 store.

Step 1: Choose your joint fittings
Today, you don’t have to be a cabinet or furniture maker to join timber securely. There are now many concealed assembly aids that you can buy to achieve a professional result using the simplest of all joints – the ‘butt’ joint (the joining of two pieces at right angles to each other). These aids not only offer you a quick and easy way to join timber, but they allow you to easily dismantle your bookcase for storage or moving.

Some assembly aids you can use for this project include matching pine button caps and plastic block fittings.

The pine button caps allow you to simply screw the pieces together (Fig. 1) and then conceal the screw heads neatly and decoratively to give your bookcase a professional finishing touch.

Plastic block fittings (Fig. 2), come in two parts that are separately screwed to the two pieces that you’re joining. A screw or bolt is then inserted to clamp the two parts together. Removal of this single screw or bolt allows you to easily dismantle the pieces.

Step 2: Prepare materials
If you’ve ordered your pine cut-to-length, you can proceed immediately to the next step. If not, you’ll find making your bookcase easier if you cut and prepare all pieces first.

Start by measuring out the first piece 780mm long and pencil a line across the board using your carpenter’s square. Cut the board to length on the outside of the ruled line. Then do the same for the remaining four pieces and kickboard. Check with your carpenter’s square that all cut ends are square.

You’ll achieve more accurate results here by cutting the timber with a sharp handsaw.

Step 3: Pre-drill holes
Before assembling, drill the holes for the top and bottom shelf positions on the inside of both sides.

Measure up 109mm from the bottom of each side to allow for the height of the front kickboard (90mm) and the thickness of the bottom shelf (18mm), and rule a line across (Fig. 3).

Next, measure down 24mm from the top of each side and rule a similar line across. The top shelf will be fixed 5mm down the sides and this line represents the bottom of the top shelf (Fig. 3).

Now check that your measurements and markings on each side are the same. Then decide where you want the middle shelf to be positioned and measure and mark this point on both sides.

Lay the pieces flat and drill 5mm holes 10mm deep for the shelf supports (Fig. 3). To make sure the holes you drill are straight, stand your carpenter’s square upright

An alternative

This bookcase can also be built with particleboard, which is generally less expensive than timber. It’s available in a range of standard sheet sizes with either a plain finish for painting, or veneered with realistic woodgrain patterns and colours that need no finishing. However, any cut front edges will need to be disguised to give a clean finish – a matching pre-glued edging that you simply iron on is available. A single particleboard sheet 1200 x 900 x 18mm will provide all pieces with little wastage. If screwing together, be sure to ask for screws with a thread specially designed for particleboard. And don’t hesitate to seek advice and assistance at your Mitre 10 store.
close to the drill while you’re doing it. Wrap a piece of tape around the drill bit to the required depth to prevent you from drilling through to the other side. Drill as many shelf adjustment holes as you like. But be careful to locate all holes opposite each other so the shelf will sit level on the four pins in any position.

**Step 4: Put it together**

Whether using timber screws or plastic block fittings, the top is set down 5mm and the bottom up 90mm (Fig. 4).

**Timber Screws & Caps** If using 50mm x 8 gauge screws, clamp the top and bottom shelves into place. Check that all edges are flush and that the shelves are level.

You may need an extra pair of hands here to hold the pieces together until you get them firmly clamped. It’s also a good idea to place a piece of scrap timber under the jaws of the clamp on both sides to prevent it from marking the surface of the board.

Now measure in 40mm from the front and back on the outside where each shelf joins the sides. Drill two holes slightly smaller than the diameter of the 8 gauge screw through the sides and into each shelf to a depth of 55mm (Fig. 5). Follow this by drilling 9.5mm holes through the sides only to a depth of 5mm. Then fix the top and bottom shelves to the sides with the screws. Cover the holes and screws with 9.5mm pine button caps to give a neat finish.

**Block Fittings** Two block fittings are screwed into position on the inside of each side underneath both the top and bottom shelves. Measure in 30mm from the front and back on the bottom of the shelves and pencil in a line. Place the edge of one part of the block fitting inside the drawn line and flush with the end of the board. Then screw it into position – first drilling the holes slightly smaller than the diameter of the screw. Do the same on the sides with the other part of the block fittings and fix the parts together with a single screw or bolt (Fig. 6).

It’s that easy.

**Step 5: Add the kickboard**

When the sides, top and bottom are firmly fixed together, turn the box frame upside down and fit the kickboard to support the bookcase at the front and provide toe room. The kickboard fits between the two sides, set in up to 25mm from the front.

Secure it to the underside of the bottom shelf with an angle bracket and screws at both ends (Fig. 7).

Also drill a hole through each side into approximately the centre of the kickboard and fit with screws and a button cap as before. Or, if you’re using blocks, give it extra strength with fittings set about 150mm in from either end.

**Step 6: Add the back**

Now, lay the unit face down and measure diagonally to opposite corners. When both measurements are exactly the same, your bookcase is square.

Then measure and cut the backing sheet to fit from the top shelf to the bottom shelf and nail onto the shelves and both sides.

If the back of the bookcase rests on the wall’s skirting board, measure the board’s height and depth and cut out a corresponding piece from each side of the bookcase. This will allow it to fit on top of the skirting board and sit flush with the wall (Fig. 7).

**Step 7: Fit the shelf**

Finally, push the shelf supports into the holes that you previously drilled in the sides. Then simply place your shelf on them (Fig. 8).

If you find it’s too high or too low for the books you want to store, it’s an easy matter to adjust the shelf by moving the supports to the holes at the required height.

**Step 8: The finishing touch**

Now all that’s left is to give your new pine bookcase a protective coat. You could paint it, but that would hide the timber’s natural rich amber colour. So instead, you may prefer to use a clear Pine Finish which brings out the timber’s true beauty while giving it a tough, satin finish. If you do want colour to mix or match with existing furniture or to add a bright, cheery note to a child’s room, choose a Pigment Stain. They add colour without hiding the timber’s grain – and they’re available in decorator colours as well as timber tones.

The choice is yours. But before coating your bookcase, be sure to sand the entire surface to a smooth finish. And be sure to sand with the grain, particularly if using a clear finish – sanding across the grain will leave scratches. Then remove all traces of dust or dirt with a damp cloth to achieve the best result.
MIGHTY HELPFUL HINTS TO MAKE THE JOB EASIER

- Measuring is easy, materials are expensive. Double check all measurements and markings before you cut any piece of timber.

- To make sure the holes you drill in the sides for shelf support are straight, lay the sides flat and stand a carpenter’s square upright close to the drill while doing it.

- When cutting the backing piece to fit, cut it up to 5mm less than the overall height and width of your bookcase. This way, when you nail on it, it will be much less noticeable.

- The jaws of clamps can mark the surface of timber or board. Prevent this by putting a scrap block of timber on either side of the pieces to be clamped and under the jaws of the clamp.

- When sawing, the waste must be supported and kept level with the rest of the board with your free hand. On long pieces of waste, get a helper to take the weight, but make sure your friend doesn’t lift the board or the saw will jam.

- Always match the size of the screwdriver to the size of the screw – the width of the blade should be the same as the screw slot. And you’ll find it easier if you use the longest screwdriver possible – you’ll get more leverage that way.

- When using power tools, always use suitable safety protection including ear muffs, goggles and mask if necessary. And never use power tools on a wet or damp floor.

IMPORTANT: This project planner has been produced to provide basic information and our experienced staff are available to answer any questions you may have. However, this information is provided for use on the understanding that Mitre 10 is not liable for any loss or damage which is suffered or incurred (including but not limited to indirect or consequential loss), for any personal injury or damage to property suffered or sustained as a result of using the information contained in this MitrePlan Project Planner. Mitre 10 advises you to call in a qualified tradesperson, such as an electrician or plumber, where expert services are required, and to independently assess any safety precautions that will need to be followed prior to using the information in this MitrePlan Project Planner.

WARNING: There may be by laws or regulations of councils or other statutory bodies that you must comply with when following this MitrePlan Project Planner.

Your local MITRE 10 Store is: