



Pet feeder build project

Workbook and project guide



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Materials and tools

Materials



Oak (1000x250x25mm)



Wood Glue



2 x dog bowls (210mm)



Lacquer

Tools



Clamps



Brush



Router



Drill (drill bits)



Set square



Jigsaw



Pencil



Orbital sander



Ruler

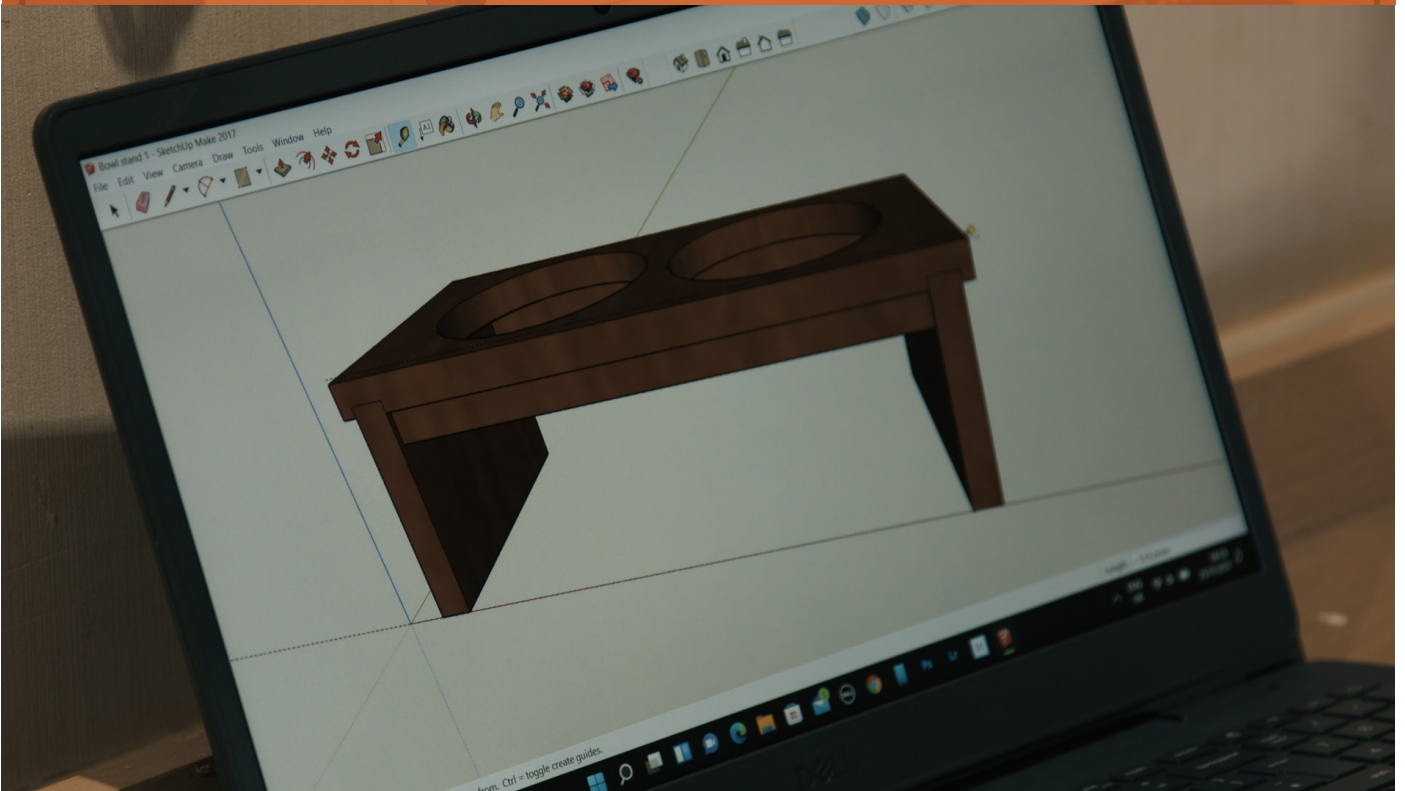


Mitre saw

Part 1

Design, measurement & initial cuts

Step 1 - Designs using SketchUp



To create the designs for the pet feeder, you can use software such as SketchUp (above) or a simple pen and paper.

The design you create will be used to set your measurements in the following step.

Step 2 - Measuring and marking



Start by measuring a centre line across your work piece. This is the line from which all other measurements will be taken.

Make a mark 160mm from the edge of your work piece.

From this mark, use the thickness of your ruler to make an additional mark. This is to ensure that you have enough space for the thickness of your saw blade.

Make another mark 160mm away from your last mark and again, use your ruler to mark out the saw blade thickness.

Use your ruler to draw lines, across your work piece, at the point of each of your marks.

Step 3 - Marking the bowls



Use a compass to mark out where your bowls will go. The bowls we used were 210mm so we are going to open the compass up to 200mm, to give enough space for the bowl to fit, without dropping through.

Use the centre line to make a mark for the centre of your first bowl. Make sure that this is to the right of the final line you made in the previous step.

Measure 510mm from the edge of the final line you made in the previous step and make a mark on the centre line.

Use this mark as the centre of your second bowl.

Step 4 - Cutting the legs on the mitre saw



The initial lines, that you made across your work piece, mark the cuts you need to make for the legs.

Make several, shallow cuts, rather than going straight through the wood, as the hard wood that we are using could put strain on the saw blade.

Make sure that you keep your fence clear of sawdust, after each cut, to ensure that your wood remains square to the saw blade.

Step 5 - Marking the legs



You now have cut two smaller pieces from your main piece of wood. These are the legs.

Place these smaller pieces at each end of the big piece (as per the image above) and use your set square to make sure that they are 10mm from the edge.

Once you are happy that the legs are straight, by measuring 10mm from the edge, at different points along their edge, use a pencil to draw a line down either side of each leg. These lines will be used as the outer edges of your trench cuts.

Step 6 - Trench cutting



The trench cut will be used as a joint for your legs. Putting the legs into this recess will provide stability and a greater surface area for the glue.

Use the depth-stop on your saw to make sure that your trench cut doesn't go all the way through the wood.

Make several passes of the saw, between the two lines that you have marked for the legs.

Once you have made the trench cut, between the two lines that you have marked for the legs, you will be left with an incline, at each end of the trench, where the saw was unable to reach the full depth. Use a chisel to remove this excess wood to ensure that you have a uniformly, deep trench for each leg.

Step 7 - Cutting the holes for the bowls



Drill a hole in each of the two centre marks you made for marking out the bowls.

Pop a dowel into one of the holes so that you have somewhere to attach a router on an arm.

You can then use the arm to rotate the router around the circle that you made for each bowl.

Once you have cut a circular groove, for each bowl, using the router, you can use a jigsaw to cut out the holes for your bowls.

Step 8 - Sanding and gluing



Use an orbital sander to clean up all the edges of both your main bowl holder and each of the legs.

Once everything is sanded, use a paintbrush to spread glue, evenly, through each trench cut. Place the legs into each trench and use clamps to hold the legs in place.

After roughly half an hour of waiting for the glue to dry, remove the clamps and use a spray lacquer to finish it all off.

You are now ready to add the bowls and use your new pet feeder.