

Cottage Style Bunk Beds

OVERVIEW



Introduction

You're about to build a solid-construction cottage-style bunk bed with three roomy "monster" storage drawers and a canoe paddle barrier decorating the top bunk. When completed, your kids' canoe bunk bed will be as fun as it is useful.

BEFORE YOU START...

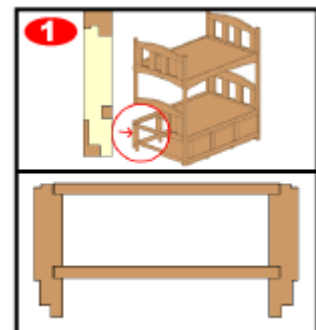
SKILL LEVEL & TIME TO COMPLETE

- Beginner - About 3 to 4 days
- Intermediate - About 2 to 3 days
- Advanced - About 1 to 2 days

STEPS

1. Construction - Uprights and Crossbars

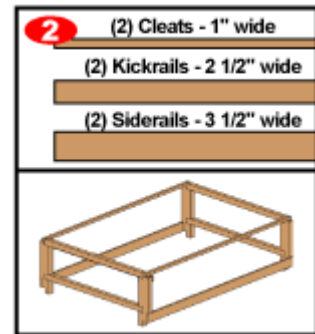
Trace a template for the 14-3/4" long uprights onto a 2x4. With your jigsaw, cut out eight identical parts. Then cut the eight crossbeams to 38" lengths from the 2X2 stock. Using glue and 3" screws, construct four assemblies, each consisting of two uprights and two crossbeams. Make sure the assemblies are square.



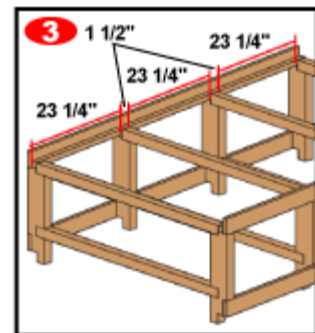
2. Construction - Cleats, Kickrails, Lower Siderails

Cut the two cleats, kickrails and lower siderails to 75-3/4" lengths and to their respective widths from the 1X6 stock. Using a router with a 1/4" radius bit, round over the exposed edges of the kickrails and lower siderails, and sand.

Attach each kickrail to the bottoms of the outside upright assemblies with glue and nails, being careful to keep it square. In the same manner, install the two cleats across the top peaks of the same four uprights.

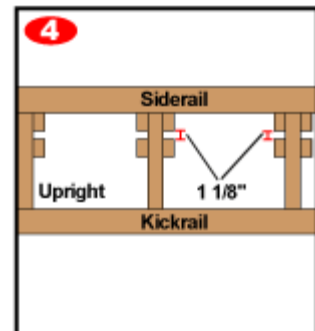


- 3.** Starting from one end of the kickrail, measure and mark three dimensions of 23-1/4" each., with 1-1/2" between each dimension. This will indicate placement of the two center upright assemblies. Install the lower siderails by running glue along the entire length, and nailing them into the upright assemblies at both ends. Install the center uprights between marked dimensions. Keeping it square, fasten it into place with glue and nails.

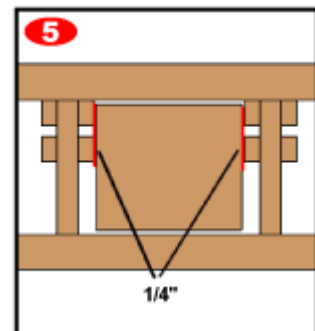


4. Construction - Monster Drawers

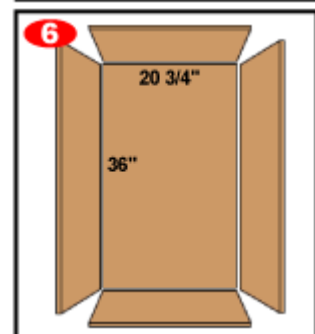
For the drawers, cut 12 drawer runners to 41-1/2" lengths from 2X6s. Sand the sawn edges where the wheels will run. Install the upper runners at the top of each opening with glue and 2" nails. Apply glue along the entire length of the top edge that contacts the crossbeam. Then install the lower runners 1-1/8" below the upper runners.



- 5.** Cut the six drawer sides from 3/4" plywood. On each end of the inner surface, cut a rabbet 3/4" wide, 3/8" deep with a dado blade or router. Along the bottom edge, cut a dado groove. Cut the six drawer backs/subfronts from the 3/4" plywood. The finished drawer should be 1/8" to 1/4" narrower than the narrowest part of the drawer opening. The backs/subfronts need to be cut 1" shorter than the narrowest point between the drawer runners to produce a drawer 1/4" narrower than the opening.



- 6.** Cut the three drawer bottoms from the 1/4" plywood. The length should be the same as that of the drawer side, and the width should match that of the backs/subfronts. Cut the three drawer fronts to 24-1/4" lengths and 11-1/4" widths from 12" wide pine shelving. Sand, and give the edges a profile with router or table saw.



7. Now you will assemble the drawer parts. Working with drawer upside down, insert the bottom into the grooves along the sides. Apply glue to the ends and bottom of the back and subfront, and nail into place between the sides with 2-1/4" finishing nails. Nail the bottom into the back and subfront with 1" nails.

Before installing the drawer fronts, fit the drawer into the opening to check. Install the 1" wheels into position with #8 1" woodscrews. Side wheels should be mounted at the correct height to keep the drawer level. Mount top wheels to keep the drawer centered in its opening, with a little play. Mount the flanged rollers at the front of the drawer opening, with a small amount of sideways play.

Attach drawer fronts using four #8 1/4" woodscrews driven from inside after lining up the three drawer fronts visually. When installing handles, either use longer screws or countersink the existing ones, due to thickness of drawer faces.

8. **Construction--Slats**

For the slats, cut 16 slats to 13-1/2" lengths from 1X6s. Make sure the widths are consistent and ends are square. If you decide to mimic the pattern shown, trace the bullrush pattern onto stiff cardboard, and from this pattern trace the outline onto the parts. Cut the pattern with a scroll saw or jig saw. One option is to paint the internal edges for a dramatic effect. You will sand off any splashed paints from the surface. With dado blade or straight cutter, cut rabbets on both faces of each end, leaving 1/4" thick tenon protruding 3/8" from ends. Using 3/8" radius router bit, round over the long edges of the slats, and finish sanding.

9. **Construction-Rails**

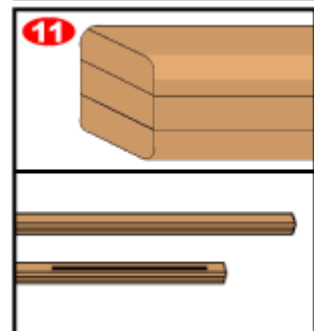
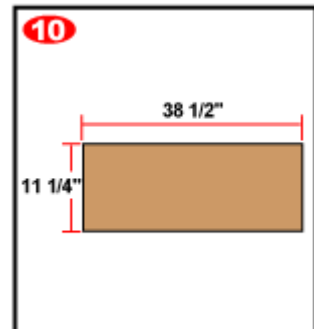
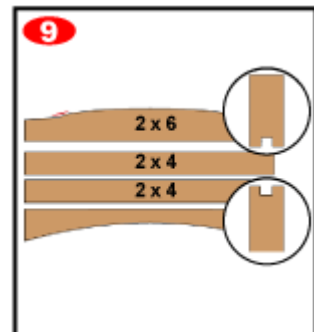
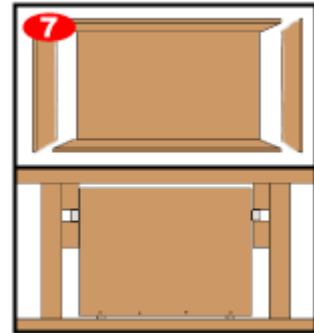
For the rails, cut the four crown rails, bottom rails, center rails and arched rails to 37-3/4" lengths. Cut a template and trace the profiles from the crown rail and arched support rail on one-half of their respective parts. Flip the template over along the center of the part to draw the opposite contour. Cut the parts with a band saw or jig saw. Sand the contours even, and round over the edges of all parts with a 3/8" radius bit. Cut 1/4" wide groove 3/8" deep in the center of crown rails and arched support rails. Finish sanding.

10. **Construction-End Panels**

For the end panels, cut the two end panels to 38-1/2" lengths and 11-1/4" widths from quarter-inch plywood. Check the fit of the plywood into the grooves of your bottom and middle rails.

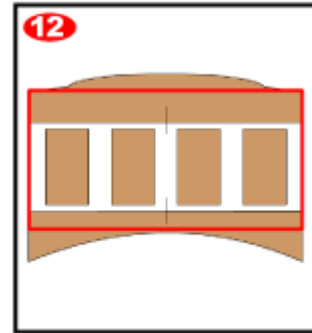
11. **Construction-Leg Posts**

Construct each 74-3/4" leg post by ripping a 1x8 into three strips, then gluing them together to make a post 2-1/4" square. Sand or plane the posts smooth and round over the edges with a 1/4" radius router bit. The top end of the post can be shaped with a profile router bit. Position posts so the best surface will be exposed when completed. On the lower inner edge of each post, cut a stopped dado, and finish sanding.



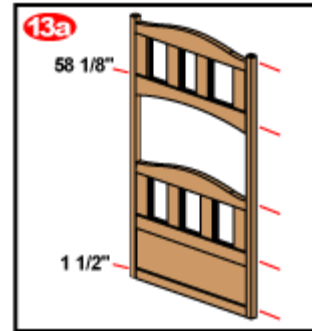
12. Construction-Slats to Rails

Arrange the slats with the mating crown and arched support rails. Mark the center of the rails and arrange slats with 3-1/4" gaps in between. Make sure the ends of the two rails are even and squared with one another. Mark slat edges on the grooves at top and bottom rails. Number the slats and their positions and fill in the gaps between slat positions with blocks of wood cut for a snug fit in the groove and extending out slightly. Glue to the bottoms of the wood blocks and tap them into place. Sand the block flush to the surface. Assemble the slats into their respective mortises. Tap a 1" finishing nail into each mortise and tenon joint, near the center of the slat to keep the assembly together. Fill holes with wood filler. Repeat the process with the other railing/slats assembly.

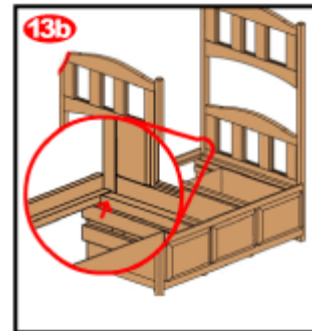


13. a Construction-End Units

To assemble the end units, mark the heights of 1-1/2" and 58-1/8" on the inner faces of the leg posts. Insert the end panel between the completed lower assembly and the bottom rail, pulling them tightly together. Place the posts into position with the upper and lower assemblies lined up with the measured marks. Drill 3/8" diameter holes about halfway through the posts at the outside tops. Glue the ends of the rails and raise them to the middle of the post thickness and drive in the 3" #8 woodscrews. Repeat on the opposite end.

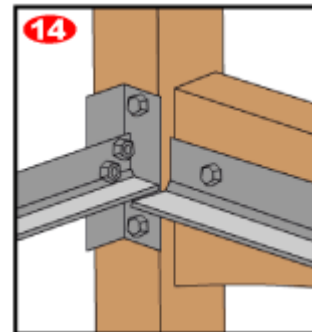


13. b Attach the completed end assemblies to the completed lower bedframe. Drill 1/4" holes, angling the drill in toward the center of the leg post. Using a ratchet wrench, drive in 3" lag bolts, four per end and add washers.

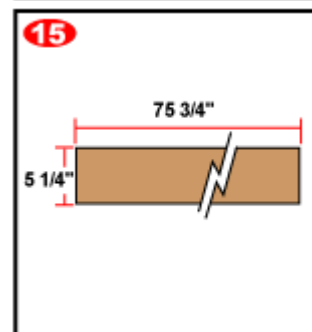


14. Construction-Siderails

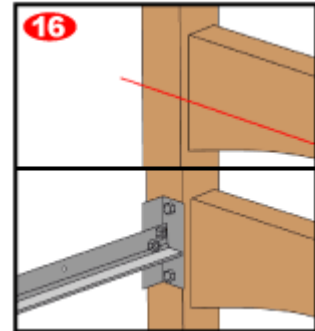
The upper siderails must be solidly bolted or welded together to accommodate the weight of a person in the top bunk. The ends of the side angle iron must be rounded over slightly with a grinder to allow the angle ends to fit tightly. Weld or bolt the angle ends to the side angle iron. If bolting, use two bolts per corner. Cut or grind any bolts protruding over nuts to prevent damage to the mattress.



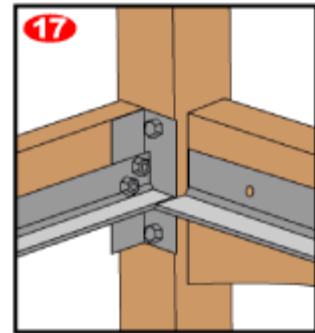
15. Cut the two upper siderails from the pine stock. Sand, and round over the upper and lower edges with the router. For a snug fit to the metal rail, trace the profile of the angle ends onto the siderail and cut it. Cut a deeper recess for the bolt heads.



16. Paint the metal parts with rust preventive paint before installing. The height of the angle iron should be 1/4" higher than the height of the 1/4" higher than the peak of the arch. Mark this elevation on all four corner posts and mount the side angles here, bolting with 2" lag bolts. Pre-drill the 1/4" holes, taking care not to penetrate the corner posts.

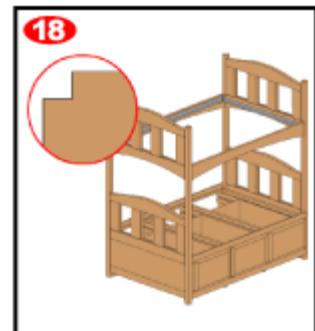


17. Mount the siderails to the angle irons with #10 woodscrews every ten inches or so, through the 1/4" holes drilled through the metal. Measure the distance between angle irons and cut the end angle iron to fit between. Install the end angle iron onto the arched support rails with at least five screws each.

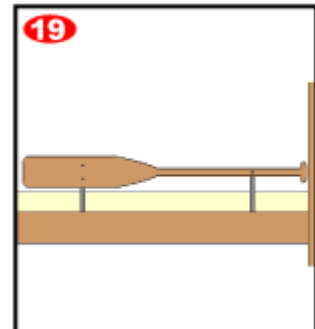


18. **Construction-Deck Plywood**

Cut the 1/2" deck plywood to fit the upper and lower bedframes. It might be necessary to create 1"X1" notches cut in the corners to clear the bolts holding the frame. Now simply drop the two sheets of plywood into position.

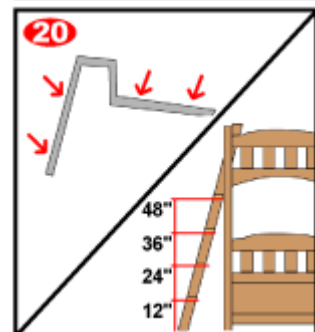


19. Cut the canoe paddle-shaped barrier to shape or buy and install a real paddle. Sand and round over the edges if needed. Cut a 27" length of barrier bracket from your flat iron, and bend it at the required location for the desired height above the mattress-about 2" is suggested. Drill through the bracket and paddle, and bolt together with three 1" carriage bolts. The stabling portion of the barrier brackets slip under the mattress.



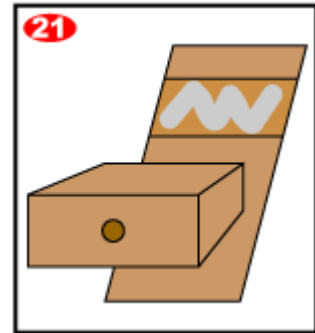
20. **Construction -- Ladder**

Bend ladder hooks to shape and drill 1/4" holes into the holes. Then, cut the two ladder sides to 73-3/4" lengths of the 2X3 or 2X4 stock. Lean the ladder sides against the bed at about a 75-degree angle, and set a bevel gauge to this angle. Cut the base of each side to angle and round over the top to roughly match the angle of the ladder hooks. Measuring from the floor, mark four rung locations at 12-inch intervals. Set the blade height of your table saw to 3/4". Using the miter gauge set to the angle of your bevel, cut away the stock within the dados in repeated passes over the saw blade. Sand, and round over the edges with the router.



21. Cut the 4 ladder rungs to 16" lengths from 2X4s. Sand and round over the edges, leaving the ends square. Drill a 3/8" hole, 1/4" deep, into the side, at the center of each rung. Apply glue into the dados on the sides. Assemble, using #8 wood screw. The rung should be centered on the side, overhanging equally at the front and back. Plug wood holes and carefully sand and round so your ladder is smooth and barefoot-friendly.

There you have it -- a cottage-style bunk bed that's an adventure in itself. Paint or stain to your taste, and you're finished.



SHOP LIST

Materials List

- (1) sheet of 3/4" G1S plywood
- (1) sheet of 1/4" G1S plywood
- (2) sheets 1/2" plywood
- (1) 12" x 96" pre-glued pine shelving
- (5) 8' pine or spruce 1x8s
- (6) 8' pine or spruce 1x6s
- (2) 10' pine or spruce 2x6s
- (4) 8' pine or spruce 2x4s
- (2) 8' pine or spruce 2x2s
- (2) 8' pine or spruce 2x3s
- 20' of 1-1/4" or 1-1/4" angle iron, 1/8" thick
- 12' of 1" flat iron, 3/16" thick
- (3) drawer handles
- (3) sets of drawer wheels
- (12) 1" diameter wooden wheels, 12" of 1/4" nylon tubing
- (8) 1/4" x 2" lag bolts
- (8) 1/4" x 3" lag bolts
- (3) 1/4" X 1" carriage bolts
- #10 x 3/4" wood screws, round head
- Finishing nails, 1", 2", 2 1/2" and 3" lengths

Tools List

- Jigsaw or Scroll Saw
- Drill or drill press
- Sander
- Table Saw
- Router
- Grinder
- Basic hand tools
- #8 wood screws, 1", 1-1/4" and 3" lengths