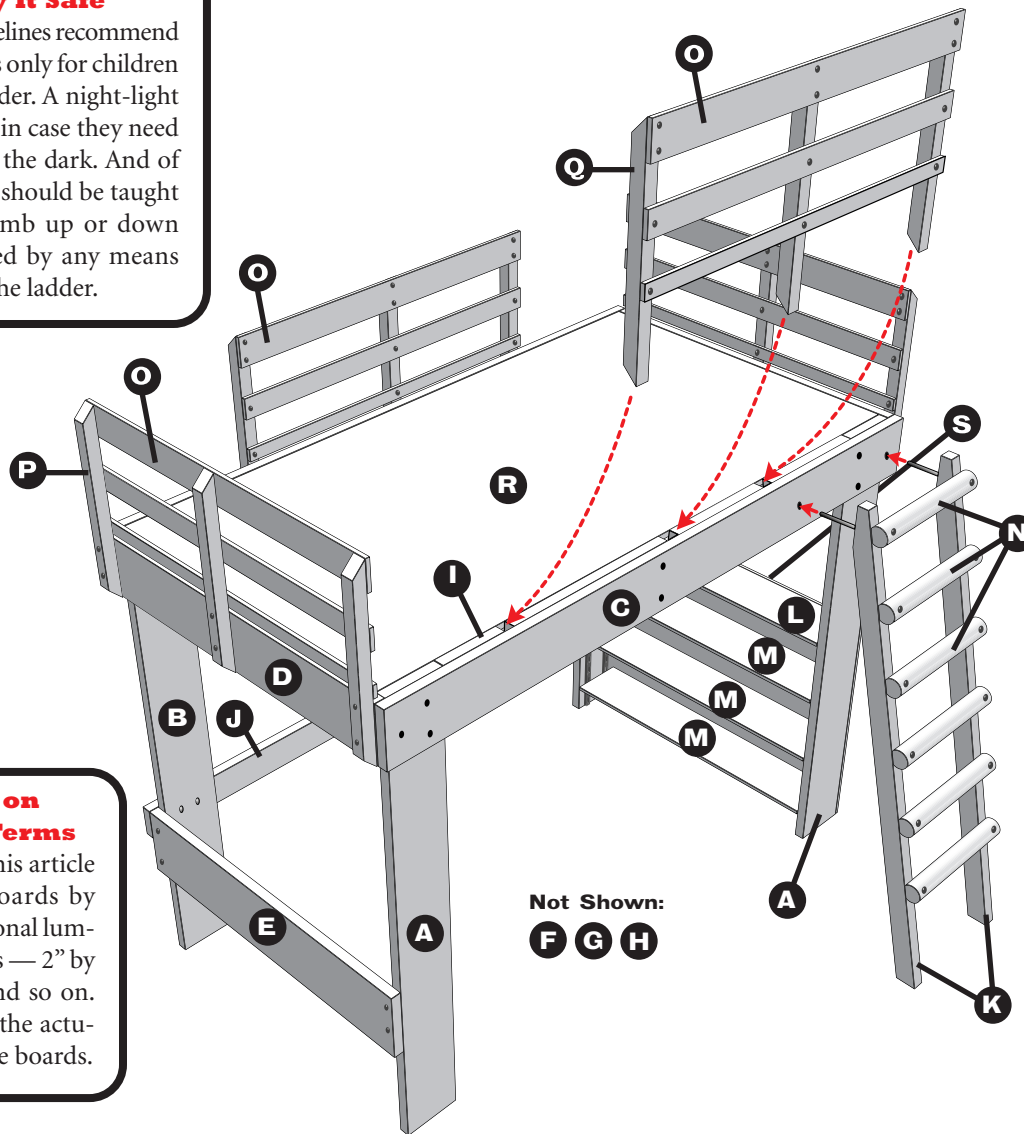


Loft Bed Plans

Play It Safe

Federal guidelines recommend upper bunks only for children age six or older. A night-light is suggested in case they need to get up in the dark. And of course, kids should be taught never to climb up or down from the bed by any means other than the ladder.



Not Shown:

F G H

A Note on Lumber Terms

Throughout this article we refer to boards by their conventional lumberyard names — 2" by 4", 2" by 8", and so on. These are not the actual sizes of these boards.

Loft Bed Cutting List

From four 2" by 8" by 10' boards

A Front legs (two 58" boards)

B Back legs (two 57¼" boards)

C Outer frame sides (two 78" boards)

D Outer frame ends (two 41" boards)

From one 2" by 8" by 8' board

E End support (one 41" board)

From one 2" by 6" by 12' board

F Front inner frame side (one 75" board)

G Back inner frame side (one 60½" board)

From two 2" by 6" by 8' boards

H Inner frame ends and crosspiece (three 36½" boards)

I Railing spacers (two 18¼" and one 13" board; you will cut the fourth spacer to fit after the others are in place)

From one 2" by 4" by 8' board

J Rear support (cut one 76½" board)

From two 2" by 3" by 8' boards

K Ladder sides (cut to fit)

From two 1" by 8" by 8' boards

L Fixed shelf (cut one 38" board)

M Adjustable shelves (cut three 37½" boards)

From handrail (9 feet)

N Ladder rungs (cut six 16" pieces)

From three 5¼" by 6" by 8' boards

O Rails (cut and sand four 41" pieces in each of the following widths: 3½", 2½", and 1½")

From six 2" by 2" by 4' balusters

P Fixed railing posts (21½"; cut and sand nine; see step 12)

Q Removable railing posts (20"; cut and sand three; see step 12)

From 1 sheet ¾" plywood

R Bed board (39½" by 75")

From ½ sheet ½" plywood

S Puppet theater front/chalkboard (30" by 41")

Materials List

Tools

Circular saw, power drill with 1/8", 5/16", 3/8", and 1" bits, power screwdriver; socket wrench set, tape measure, carpenter's square, goggles, hammer

Hardware

1 pound of 2" decking screws\$7
 1 pound of 2 1/2" decking screws\$7
 80 steel #8 finishing washers\$3
 16 3 1/2-inch-long 3/8" carriage bolts\$5
 7 5-inch-long 3/8" carriage bolts.....\$3
 2 8-inch-long 3/8" carriage bolts.....\$1
 2 5-inch-long 3/8" hex bolts..... \$1
 4 3-inch-long 3/8" lag screws\$1
 8 4-inch-long 3/8" lag screws\$4
 12 5 1/2-inch-long 3/8" lag screws\$7
 53 5/16" washers\$3
 27 3/8" hex nuts.....\$2
 4 2' adjustable shelf standards\$5
 12 shelf supports\$4
 4 2 1/2" corner braces\$2
 1 sheet medium-grit sandpaper\$1
Subtotal\$56

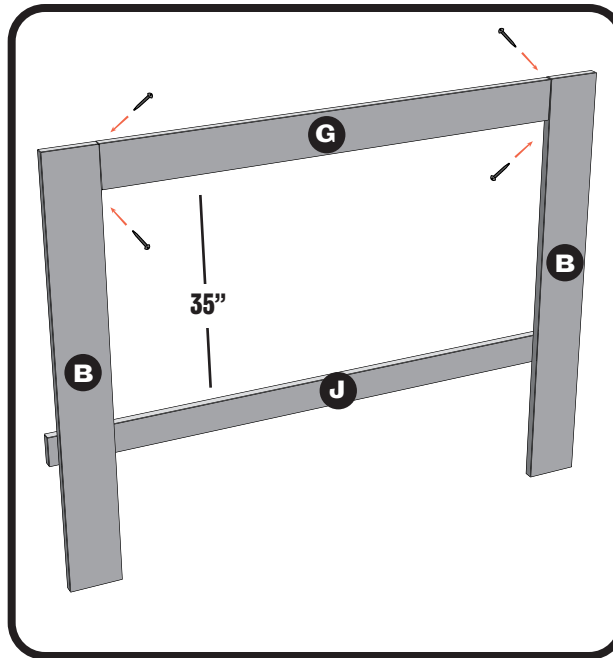
Lumber

4 2" by 8" by 10' boards..\$33
 1 2" by 8" by 8' board.....\$6
 1 2" by 6" by 12' board.....\$6

2 2" by 6" by 8' boards.....\$8
 1 2" by 4" by 8' board.....\$2
 2 2" by 3" by 8' boards.....\$4
 2 1" by 8" by 8' pine boards.....\$15
 9 feet of interior handrail.....\$10
 2 5/4" by 6" by 8' lengths of cedar decking ripped to roughly 3 1/2" and 1 1/2" ..\$18
 1 5/4" by 6" by 8' cedar decking ripped in half ..\$9
 6 2" by 2" by 4' clear cedar balusters\$14
 1 sheet 3/4" birch plywood, good two sides, cut to 39 1/2" by 75"\$66
 1 half sheet 1/2" birch plywood, good one side, cut to 30" by 41"\$30
Subtotal\$221

Optional

1 4' by 6' cork bulletin board\$32
 1 6' tension shower curtain rod\$8
 1 38" tension curtain rod \$4
 17 5/8" furniture tips.....\$4
 10 1" wooden plugs (to cover ladder countersinks) ...\$3
 1 pint chalkboard paint ..\$10
 1 pint knot sealer\$6
 1 quart white primer paint\$7
 1 quart white semigloss interior trim paint\$8
 1 pint clear high-gloss polyurethane finish\$8
Subtotal \$90
Total\$367



1. BUILDING THE REAR LEG SECTION

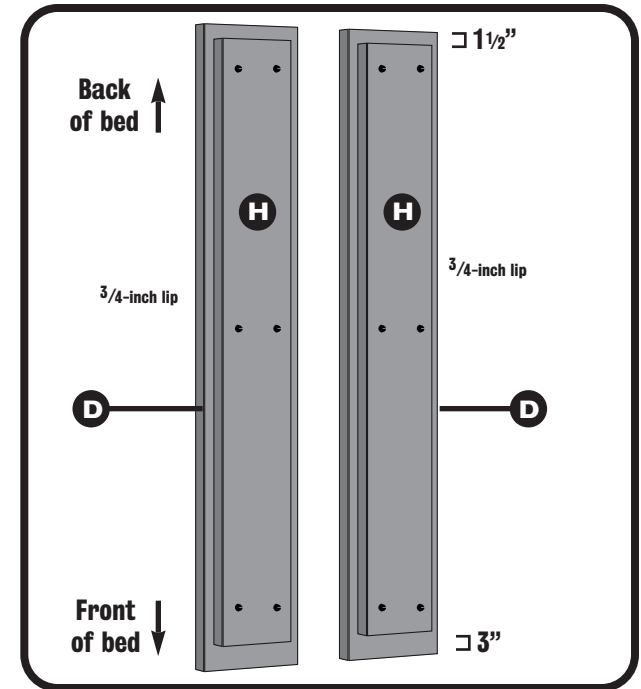
Boards needed:

- G** Back inner frame side (2" by 6" by 60 1/2")
- B** Back legs (2" by 8" by 57 1/4")
- J** Rear support (2" by 4" by 76 1/2")

Place the back inner frame side (G) horizontally on the floor in front of you, then position the two back legs (B) on each side, flush with the top of G. Attach G to the two B's by "toeing in" 2 1/2-inch decking screws (inserting them at a diagonal) from the top of G. Don't worry if it seems wobbly at this point — boards added later will provide support.

Position the rear support (J) across the two legs, 35 inches down from G, as shown in the diagram. It should be flush with the outer edge of the right leg and extend 1 1/2 inches past the outer edge of the left leg.

Temporarily secure it on each end with 2 1/2-inch decking screws (it will later be bolted on). Square the frame by measuring diagonally from corner to corner, adjusting until the measurements are equal. Hold in place with a second 2 1/2-inch decking screw on each end.

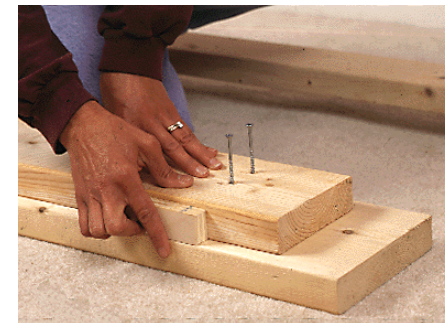


2. ASSEMBLING THE FRAME ENDS

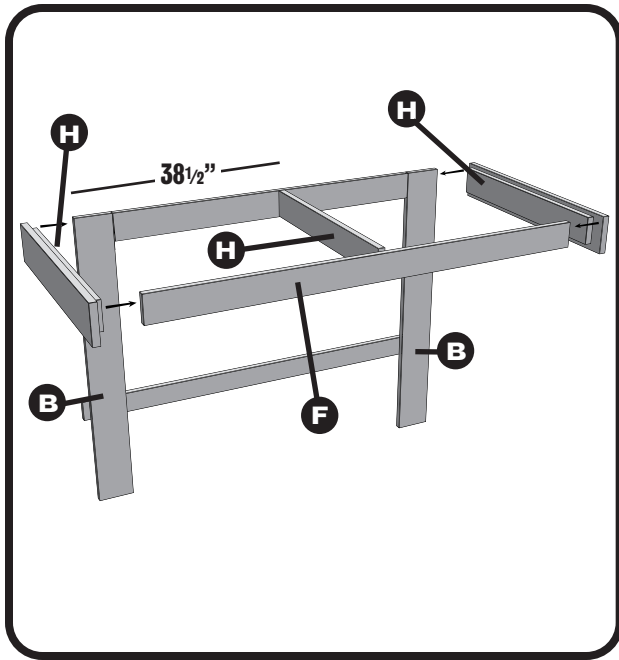
Boards needed:

- H** Inner frame ends (2" by 6" by 36 1/2")
- D** Outer frame ends (2" by 8" by 41")

Construct the first of the two frame ends by laying an inner piece (H) on top of an outer piece (D) so that H sits 1 1/2 inches in from one end of D, 3 inches in from the other end, and 3/4 inch in from what will be the top edge of D, as shown above. (Tip: To set this last distance, use a scrap of 3/4-inch plywood as a guide, as shown in the photo.) Secure with six



2 1/2-inch decking screws, as illustrated. The other frame end should be a mirror image of the first.



3. COMPLETING THE FRAME

Boards needed:

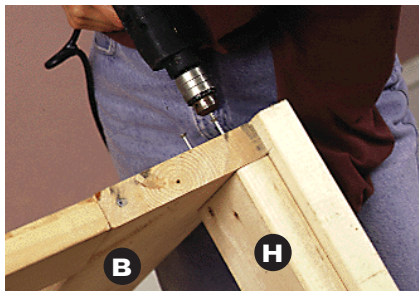
Assembled rear leg section

Assembled frame ends (H and D)

H Frame crosspiece (2" by 6" by 36½")

F Front inner frame side (2" by 6" by 75")

With a helper, lift up the rear leg section you constructed in Step 1. Place the back end of a frame end so the inner frame (H) is flush on top with the leg (B) and the outer frame (D) extends beside and above the leg (see photo). Sink two 2½-inch decking screws from B into the end of H. Do the same with the other frame end. Position the frame crosspiece as illustrated and secure it with screws as well. Finally, screw the front inner frame (F) in position.



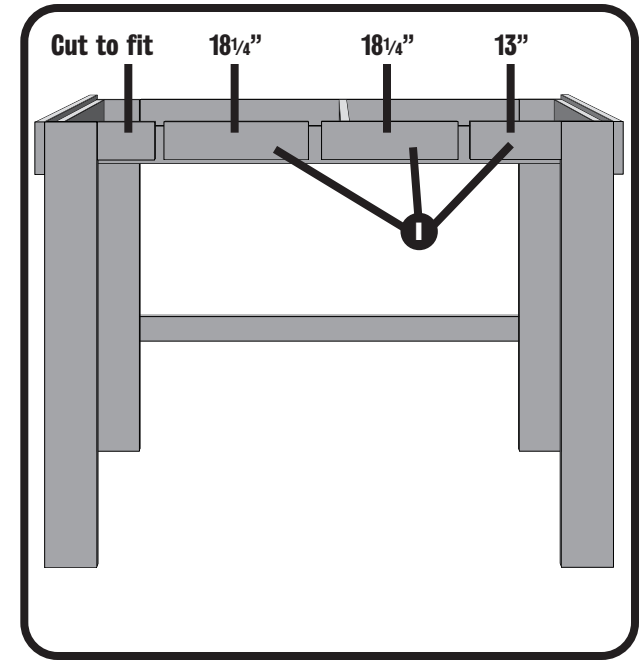
4. ATTACHING THE FRONT LEGS

Boards needed:

A Front legs (2" by 8" by 58")

With your helper holding the structure upright, attach the front legs (A) to the inner frame (F) using one 2½-inch decking screw, placed 3½ inches in from the end of the leg. The top edge of each leg should be level with the top of the outer frame ends.

Square the front legs by measuring diagonally. Adjust as needed, then secure each with a second decking screw, placed above or below the first. (Note: Be careful to place the screws as shown so they don't get in the way of bolts to be added later.)



5. THE RAILING SPACERS

Boards needed:

I Railing spacers (two 18¼" and one 13" lengths of 2" by 6"; you will cut the fourth spacer to fit after the others are in place)

P Railing post (2" by 2" by 21½")

The slots into which the removable front railing slides are created by using spacer boards (I) of various lengths. Work from the right side to the left, using a railing post (P) as a guide. Begin by screwing a 13-inch spacer in position (using 2½-inch decking screws), flush against the right leg with their top edges even. Holding the railing post against the end of



that first spacer, screw the 18¼-inch spacer in position (see photo). Repeat the process with the other 18¼-inch piece. Finally, hold the post up as a guide again, measure the remaining distance to the edge of the left leg, and cut the final spacer to fit.

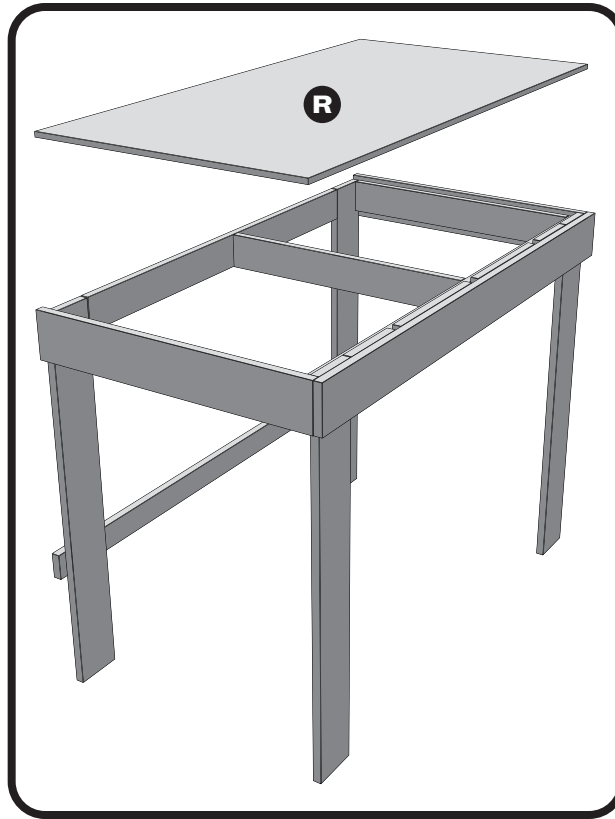


6. BOLTING ON THE FRONT OUTER FRAME

Boards needed:

- C** Front outer frame side (2" by 8" by 78")

Mark the front outer frame (C) for drilling, as shown on the diagram (holes located 4 inches in from the left end, centered vertically; 7 inches in from the right and left ends, 2 inches from top and bottom; and 39 inches in from both ends, 2½ inches from the top and bottom). With a helper, position C over the railing spacers, flush with the top of them. Temporarily secure it in place with decking screws or clamps. Using a long ⅜-inch bit, drill the holes all the way through to the inside of the structure, then secure with 5-inch-long carriage bolts, attaching a washer and hex nut on the inside. Remove clamps when done.

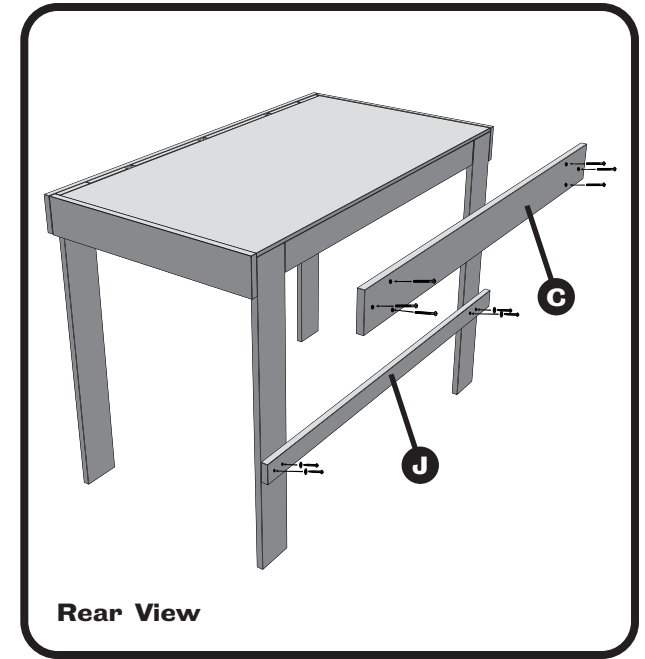


7. LAYING IN THE BED BOARD

Boards needed:

- R** Bed board (¾" plywood, cut to 39½" by 75")

Lay the bed board (R) on the inner frame and secure with 2½-inch decking screws, tightening them down to below the surface of the wood.



Rear View

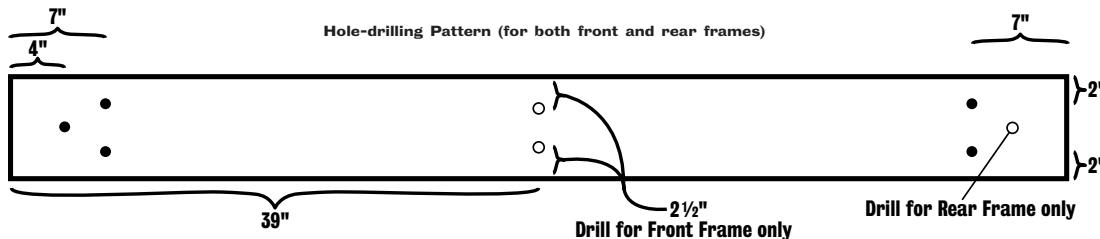
8. ATTACHING THE REAR FRAME AND SUPPORT

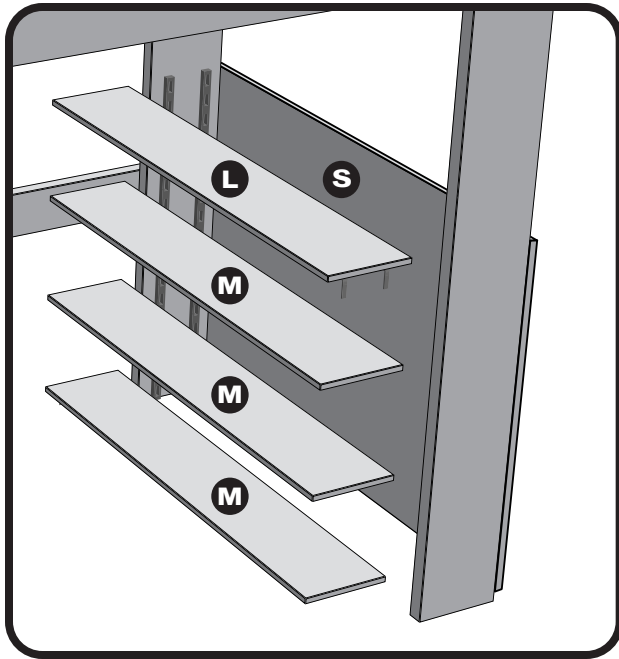
Boards needed:

- C** Rear outer frame side (2" by 8" by 78")
- J** Rear support (2" by 4" by 76½")

Mark and drill the rear outer frame (C) with a ⅜-inch bit as shown in diagram (holes located 4 inches in from each end, centered vertically; 7 inches in from each end, 2 inches from top and bottom). Continue holes through the legs and secure with 3½-inch-long carriage bolts, with washers and nuts on the inside. Mark and drill the rear support (J), holes centered 2 and 5 inches in from the edge of each leg, drilling just through the support itself with the ⅜-inch bit.

Continue the holes into the back legs with a ⅝-inch bit and secure J with 3-inch lag screws and washers. You can then remove or putty over the decking screws from step 1.





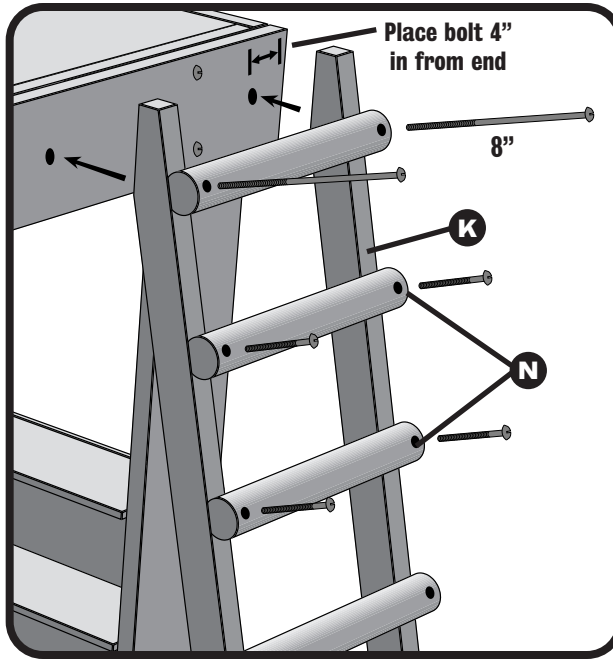
9. THE PUPPET THEATER AND BOOKCASE

Boards needed:

- S** Puppet theater front/chalkboard (½" plywood, cut to 30" by 41")
- L** Fixed shelf (1" by 8" by 38")
- M** 3 adjustable shelves (1" by 8" by 37½")

Square the legs on the puppet theater end by measuring diagonally. Position the plywood front (S) — painted with chalkboard paint, if desired — 1 inch above floor level and secure with 2½-inch decking screws (pre-drill with ⅛-inch bit) and finishing washers. Attach the fixed shelf (L) flush with the top edge of the plywood using four corner braces. Secure S to L with additional 2-inch decking screws and finishing washers.

Attach two 2-foot shelf standards to the inside of each leg, insert 12 shelf supports, and place the three adjustable shelves (M) in position.



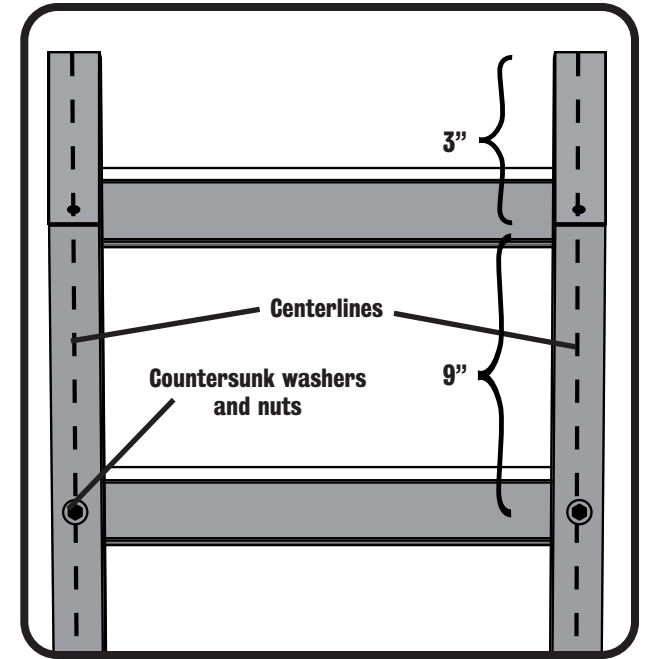
10. THE LADDER

Boards needed:

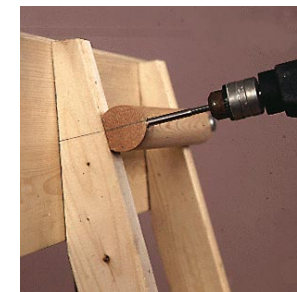
- K** Ladder sides (2" by 3", cut to fit)
- N** Ladder rungs (six 16" lengths of handrail)

Place a ladder side (K) in position against the bed frame at roughly the angle shown in the photo. Cut the bottom at the appropriate angle so it rests squarely on the floor, then mark and cut the top angle so it meets the bed (see photograph, top right). Cut the second ladder side to match. Lay the two sides next to each other on the floor with the back edges up and draw a centerline down each, from top to bottom, as shown in diagram. Mark the rung holes, spaced 9 inches apart and beginning 3 inches down from the top. (The first one will fall on the angle. Extend that mark along the side of the 2 by 3. You will need it later when attaching the ladder to the bed.) Using a 1-inch bit (for a countersink for the nuts), drill ½ inch in at each spot where the rung and centerlines intersect, except on the topmost one. (Tip: Wrap masking tape ½ inch up the bit as a guide.) Then use a ⅜-inch bit to drill through the center of these holes and out the other side of the 2 by 3.

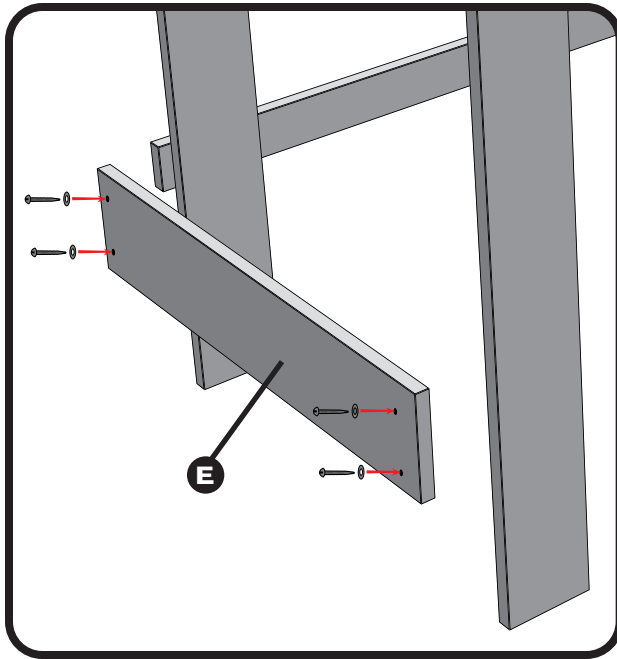
Drill the holes in the rungs (N) ¼ inch in from each end with the ⅜-inch bit. Attach the bottom five rungs using 3½-



inch-long carriage bolts, with washers and nuts countersunk on the back side. Position the ladder against the bed, 4 inches in from the end. Draw guidelines on the ends of the top rung, as shown in the bottom photo, and hold the rung so the lines match up with your earlier marks on the sides of the 2 by 3's. Drill through the rung into the frame with a long ⅜-inch bit. When you have sunk the bit in as far as you can, remove the ladder and continue the hole through to the inside of the



frame. Secure the ladder in place with 8-inch-long carriage bolts. (Tip: If the ladder attachment bolts don't reach all the way through on the inside, you can countersink the nuts with a 1-inch bit or get 9-inch bolts and trim them with a hacksaw.)

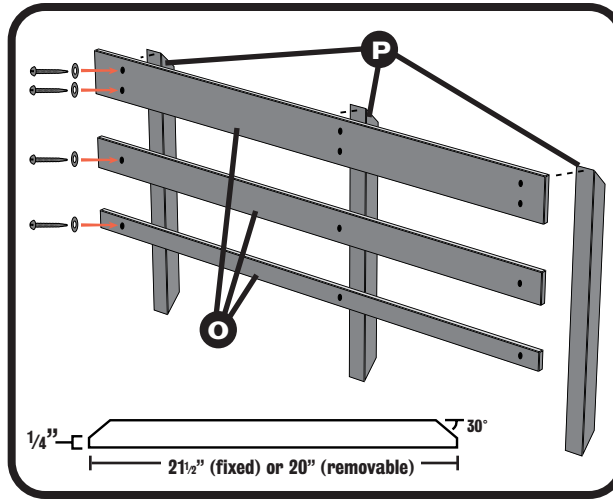


11. ATTACHING THE END SUPPORT

Boards needed:

E End support (2" by 8" by 41")

Square the legs on the end of the bed opposite the puppet theater. Drill two $\frac{3}{8}$ -inch holes, $\frac{3}{4}$ inch in from each end of the end support (E), as shown, and position the support across the legs. Continue the holes about 4 inches into the legs using a $\frac{5}{16}$ -inch drill bit and secure with $5\frac{1}{2}$ -inch lag screws and washers.



12. MAKING THE RAILINGS

Note: In assembling the railings, you will notice one change from the photos. Because our bed was built for my daughter's 4-inch-high futon, the side rails required only two crosspieces. These instructions include three, enough to provide safe coverage for a mattress up to 9 inches thick. To make your railings a little lower, simply reduce the space between the crosspieces.

Boards needed:

P Fixed railing posts (2" by 2" by 21 $\frac{1}{2}$ ", with angled ends)

Q Removable railing posts (2" by 2" by 20", with angled ends)

O Rails. (Cut four 41-inch pieces of $\frac{5}{4}$ " cedar in each of the following widths: 3 $\frac{1}{2}$ ", 2 $\frac{1}{2}$ ", and 1 $\frac{1}{2}$ "

For each railing, lay out three posts of equal length (either P's or Q's), with the angled edges down, and set a section of 3 $\frac{1}{2}$ -inch cedar (O) across the top, flush with the tops and sides of the outer posts. Secure it to these posts with 2-inch decking screws and finishing washers. Then check the alignment of the center post with a tape measure and framing square and secure it also. Continue in the same manner, attaching the 2 $\frac{1}{2}$ -inch crosspiece, then the 1 $\frac{1}{2}$ -inch, leaving 3 $\frac{1}{2}$ inches between the rails. Drill through the bottom



end of each post on the three fixed railings with a $\frac{3}{8}$ -inch bit, 2 inches and 6 inches up from the bottom, and $\frac{3}{4}$ inch in from the side.

Set the two end railings in place, as pictured, and using a $\frac{5}{16}$ -inch bit, continue the postholes into the frame, drilling 4 inches in on the side posts and 2 $\frac{1}{2}$ inches in on the center post. Secure the side posts with $5\frac{1}{2}$ -inch lag screws and washers and the center posts with 4-inch lags. Slip the removable railing into place, then measure its location and position the rear side railing directly across from it. Affix the rear railing's side posts with 4-inch lag screws, as above, using a $\frac{5}{16}$ -inch bit and washers. Drill all the way through the center post with a $\frac{3}{8}$ -inch bit and attach with hex bolts and washers, securing with nuts and washers on the inside. (Tip: It's a good idea to cover at least the lower nuts with furniture tips to protect little noggins. If desired, the tips can be trimmed to size with a hacksaw.)

13. PAINTING THE BED

We opted to paint our bed white to maximize the light underneath and minimize the impact on the room. But I couldn't bear to cover up the beautiful cedar, so we finished the side rails and rungs (which will get a lot of wear) with clear polyurethane. Although framing lumber tends to be knotty, you can give the whole bed a few coats of stain and polyurethane for a more rugged look. We also finished the puppet theater with Crayola chalkboard paint, giving my daughter a handy place to post announcements, and added a large bulletin board inside for her artwork. Because chalkboard paint takes three days to cure, consider painting the chalkboard right after you pick up the lumber. (Tip: If you plan to paint the wood, you should seal all the knots first with two or three coats of BIN or similar sealer, so they won't bleed through.)

14. HANGING A BULLETIN BOARD AND CURTAIN RODS

If you want to add a back wall cork bulletin board, attach it to the rear support and the frame with 2 $\frac{1}{2}$ -inch decking screws and finishing washers. For a play space privacy curtain, install a tension shower curtain rod behind the front frame and double a flat sheet over it to the floor. For the puppet theater curtain, we used two pillowcases hung over a tension rod. 