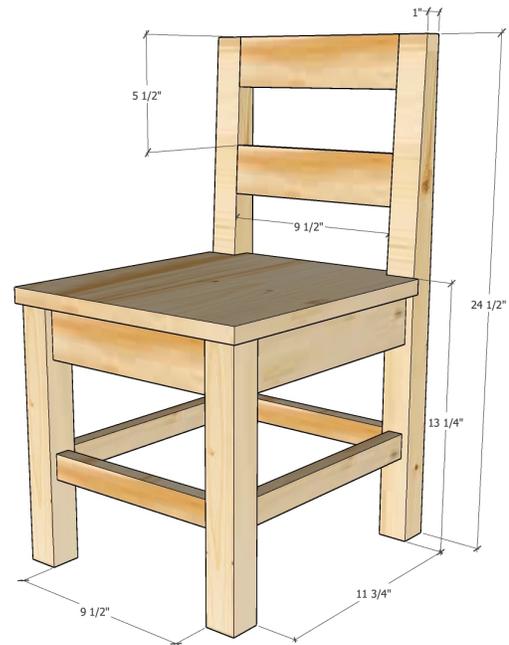
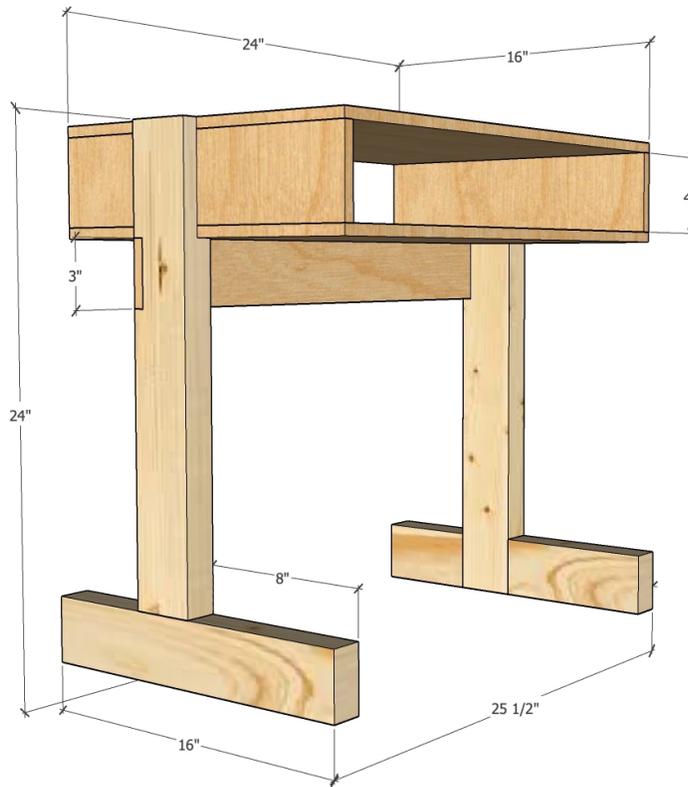


Kid's Desk & Chair

A simple 16x24-inch writing surface, 24-inches tall with optional chair.



Introduction

The basic kid's desk was designed by Marc Spagnuolo, a.k.a. *The Wood Whisperer* (<https://thewoodwhisperer.com/>) and is copyrighted by him. A video showing its construction can be found on that website.

The chair was designed by David O. Gunter and is not copyrighted. It is a little more complex to assemble so you may wish to simply purchase a separate chair. However, it is not too difficult and is really inexpensive to make.

A single quarter-sheet of ½-inch 2x4 feet sanded plywood and three 96-inch 2x4 studs are all that is needed to construct a single desk.

Each chair is constructed from one 3-foot long 1x8 board, one 8-foot long 1x3 board, and one 8-foot long 2x2 board. The cost per desk and chair combo is around \$45.

The desk is assembled using glue and brad nails, but glue and 1-inch screws would work just as well. The chair is assembled using glue and pocket hole screws. Three sizes of screws are used: 1-½, 1-¼, and 1-inch.

The purpose of the design was to be relatively inexpensive, placing function over looks. Do not fret if you are not a fine-furniture builder.

Tools

A table saw is essential to rip the 2x4 boards to 3 inches wide as well as for making the dado cuts. You could use stock

2x4s (3-½ inches wide) and adjust the plans accordingly, and use a circular saw for the plywood and dado cuts. You would need a long, straight edge guide for accurate cuts.

The use of a nail gun for the brad nails is ideal but you could use 1-inch wood screws instead, all that is needed is a drill (for pilot holes) and a screwdriver.

If making the chair, a pocket-hole jig is essential. A biscuit cutter is useful for edge-joining the chair seat but these can be accomplished with pocket screws as well.

Any interior wood glue will suffice for all the joints.

120-grit sandpaper is used for final sanding and a wood rasp, plane, or file is used to clean up the dado cuts.

Optionally, a clamp that opens to 25 inches wide for the final leg attachment would be useful to have. Clamps are also useful for holding the chair parts in place while glueing and screwing.

Desk Construction Steps

1. Begin by cutting out the plywood pieces needed to make the box top. (See *cut list* illustration.) First, rip the 3-inch wide strip from which the stretcher will be cut. Next, cut the 4-inch wide strip that will be used for the sides (*exploded view* illustration). Lastly, cut the 16-inch wide strips that will be used to cut out the desk top pieces. Cut that 16-inch strip in half to get two 24x16 inch top pieces.
2. Do not cut the stretchers to length at this point. Go ahead and cut the side pieces to

16-inch lengths, matching the width of the top pieces.

3. Construct the desk top box by applying glue to the side piece edges and aligning the top pieces as shown in the illustrations. Use 1-inch brad nails to hold the pieces firmly in place. Wipe off excess glue and set aside for the glue to dry, at least 12 hours.
4. Cut the leg and foot pieces from the 2x4 board to the dimensions shown.
5. Rip the leg and foot pieces to 3-inches wide to remove the rounded edges. First, remove 3/16-inch from one edge, then rip to the final 3 inches.
6. Cut the 3-inch wide, 3/4-inch deep dados in the feet. These cuts start in the middle of each foot (see illustrations) leaving 8-inches protruding towards the front of the desk and 5-inches towards the rear.
7. Cut the matching 3-inch wide, 3/4-inch deep dado cuts at the bottom of each leg piece.
8. Cut the 5-inch wide, 3/4-inch deep dado cuts on the top of each leg **ON THE OPPOSITE SIDE** from where the bottom cuts were made (see illustrations).
9. Cut the 3-inch wide, 1/2-inch deep dado cuts for the stretcher on the back side of each leg, just below the top dado cut. **NOTE: The legs will be mirror images of each other**, so decide which is the left and which is the right for these last cuts. The stretcher holds the legs together and supports the underside of the desk top.
10. Clean out the dado cuts on all pieces with a file or chisel and ensure leg and foot pieces mate together cleanly.
11. Construct the left and right leg assemblies (see *leg detail* illustration). Apply glue to the lap joint on each foot. Press the leg piece into place and ensure it is square. Drive in three 1-1/4-inch brad nails to hold the assembly together. Wipe off excess

glue and set aside to dry. Make sure you have a paired set of left and right leg assemblies at this point.

12. After the top assemblies have dried, sand them with 120-grit paper, making sure side edges are flush at each joint. Sand to round over all edges to prevent sharp edges and remove splinters.
13. Sand all the leg assemblies to smooth out joints and to round over all the edges.
14. Attach the legs to the desk tops using glue applied to the 5-inch leg dado cut. These are set 8 inches starting from the front of the desk, matching the feet. Press the leg into place and drive in 3 or 4 1-inch brad nails. Wipe away excess glue. Optionally, use a clamp to hold the legs to the desk top until the glue dries.
15. Measure the distance between the outside edge of each leg at the point where the stretcher attaches. It should be 25-1/2 inches but this may vary depending on the actual depth of your dado cuts and other factors during assembly. Cut the stretcher to length to match this measurement. Glue the stretcher into place and drive in two brad nails on each side to hold in place. Wipe off excess glue.

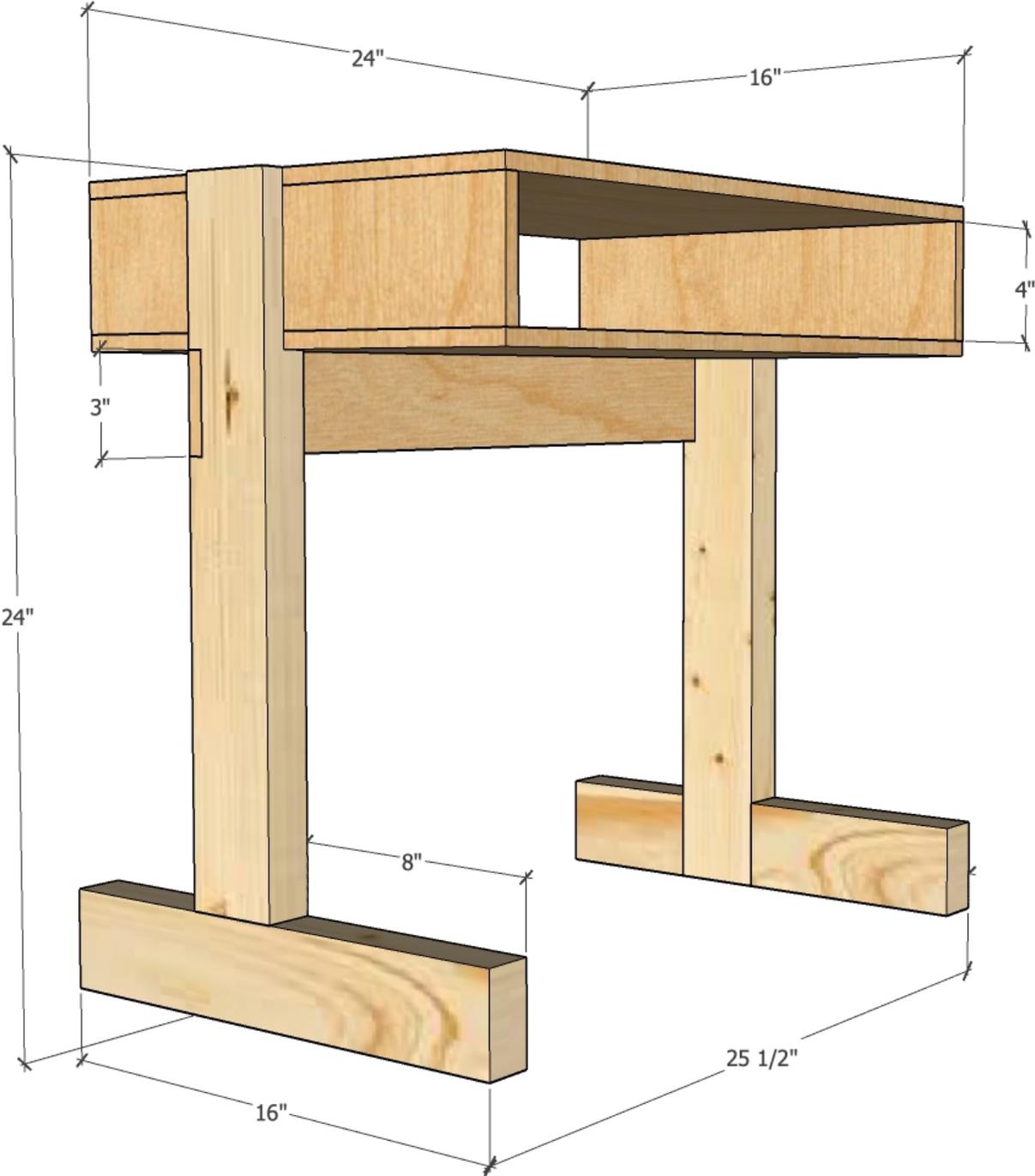
Chair Construction Steps (optional)

1. Start by making the chair seat. Cut two 15-inch long pieces from the 1x8 board. These boards are 7-1/4 inches wide. They will be edge-joined to form a board that is 14-1/2 inches wide. Cut three #20 biscuit slots into the inside edge of each board, add glue and biscuits and clamp together until dry, about 12 hours. Alternatively, use 1-1/4-inch pocket hole screws and glue

- to join these boards. After the glue has dried, cut the seat to the final dimensions of 13 inches wide by 14-½ inches long (see illustration). Use a hand saw to cut the notches out of each corner along the back edge of the seat.
2. Cut the chair legs from the 2x2 board. The rear legs are 24-½ inches long and the front legs are 12-½ inches long. If you have access to a taper jig, cut a taper in the rear legs starting at 13-¼ inches up from the bottom, to create a 1-inch width at the top of the leg. This is only to create a slight incline in the backrest and is not absolutely necessary.
 3. Cut the four aprons and two backrest pieces from the 1x3 board. Then rip the remaining 1x3 board into two ~1-¼-inch wide strips. These will then be cut to the same lengths as each of the aprons and will make up the lower chair stretchers (see illustrations).
 4. **Drill pocket holes.** Drill two pocket holes into the ends of each apron. Drill one pocket hole into the ends of each backrest. Drill a single pocket hole into the ends of each stretcher. Use blue tape to label these pieces if necessary to help with assembly later.
 5. With all the chair pieces cut out, sand them with 120-grit sandpaper before assembling the chair. In particular, round over any sharp edges.
 6. Add glue to each end of the front apron (9-½ inches long) and screw it to the two front legs. The top edge should be even with the top of the legs and the apron should be centered between the legs, offset ⅜-inches from the leg edges. To accomplish this, I cut two 1x3 scrap pieces to exactly ⅜-inches wide and used them as spacers when attaching the aprons. Screw in the aprons with 1-½" pocket hole screws.
 7. Attach the side (11-¾-inch) aprons to the front legs, similarly to how the front apron was attached.
 8. Measure and mark out lines to where the side aprons will join the rear legs. Glue the rear legs to the side aprons and clamp into place, Double check for proper alignment before screwing into place.
 9. Attach the rear apron between the rear legs. Unlike the front apron, the rear apron is attached flush with the inside-edge of the rear legs.
 10. Attach the backrest pieces in a similar fashion as the aprons. These are attached flush with the inside edge of the back legs as well, tilted to match the taper (if cut). **Use 1-¼-inch pocket hole screws for the back rests.**
 11. Attach the lower stretchers in the same manner as the aprons, roughly 5 inches up from the bottom of the legs. These are glued and screwed with a single 1-½-inch pocket hole screw on each end.
 12. Set the chair on a flat surface and ensure everything is in alignment before the glue completely dries. Even with the screws in place, minor adjustment is still possible. Make sure all legs touch the surface and then apply clamps as necessary to hold this configuration until the glue completely dries, about 12-24 hours.
 13. Finally, apply glue to the top edge of each apron, and the two front legs, and attach the seat. Hold the seat in place with 1-½-inch brad nails. Alternatively, pocket holes can be drilled into each seat apron towards the seat direction. Attach the seat using 1-inch pocket hole screws. A third alternative to attaching the seat is to use standard furniture Z-clips and cut slots into the side aprons.

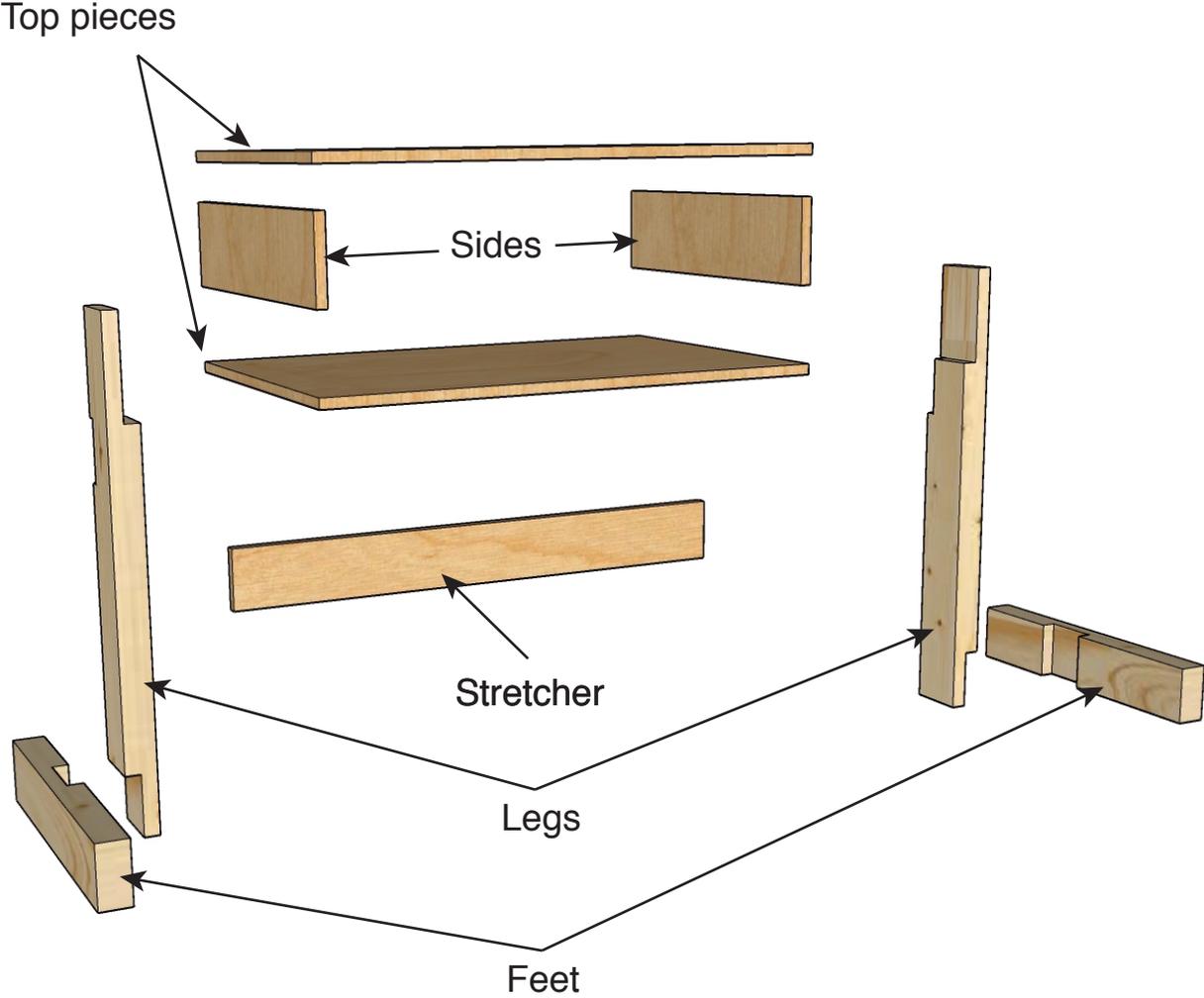
Kid's Desk & Chair

The assembled desk



Kid's Desk & Chair

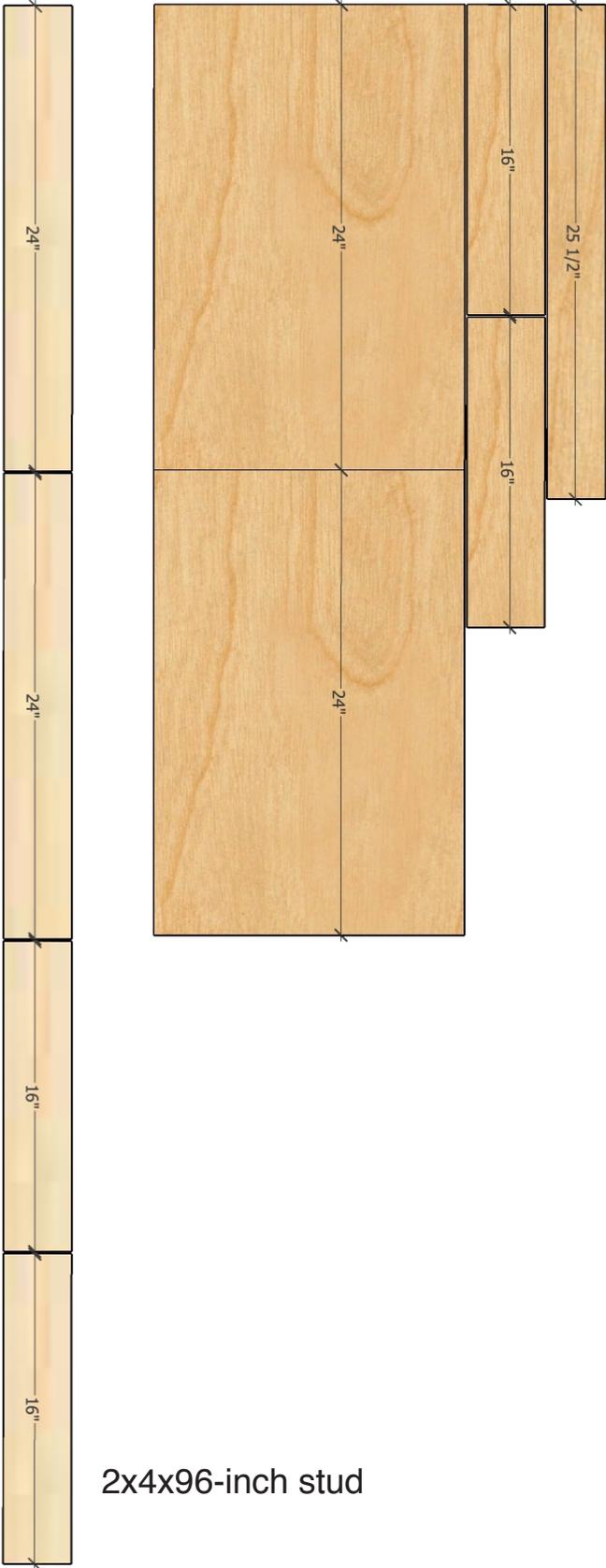
Exploded Desk View



Kid's Desk & Chair

Desk cut list

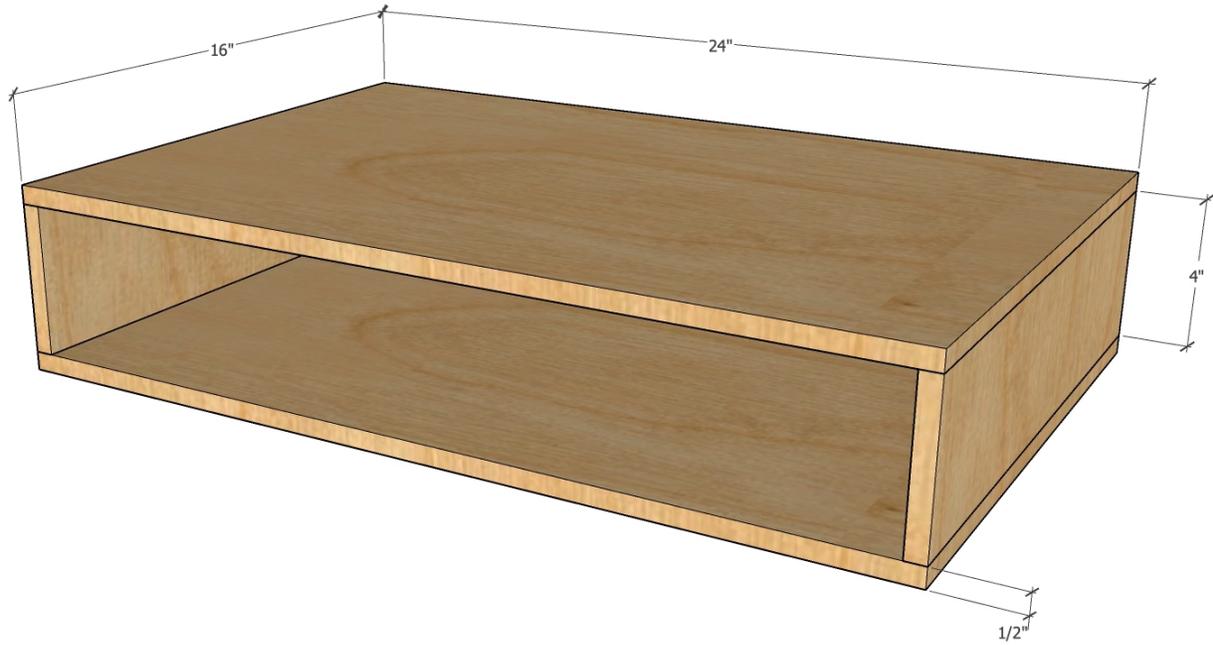
1/2-inch 2x4 ft. sanded plywood



Kid's Desk & Chair

Desk Top

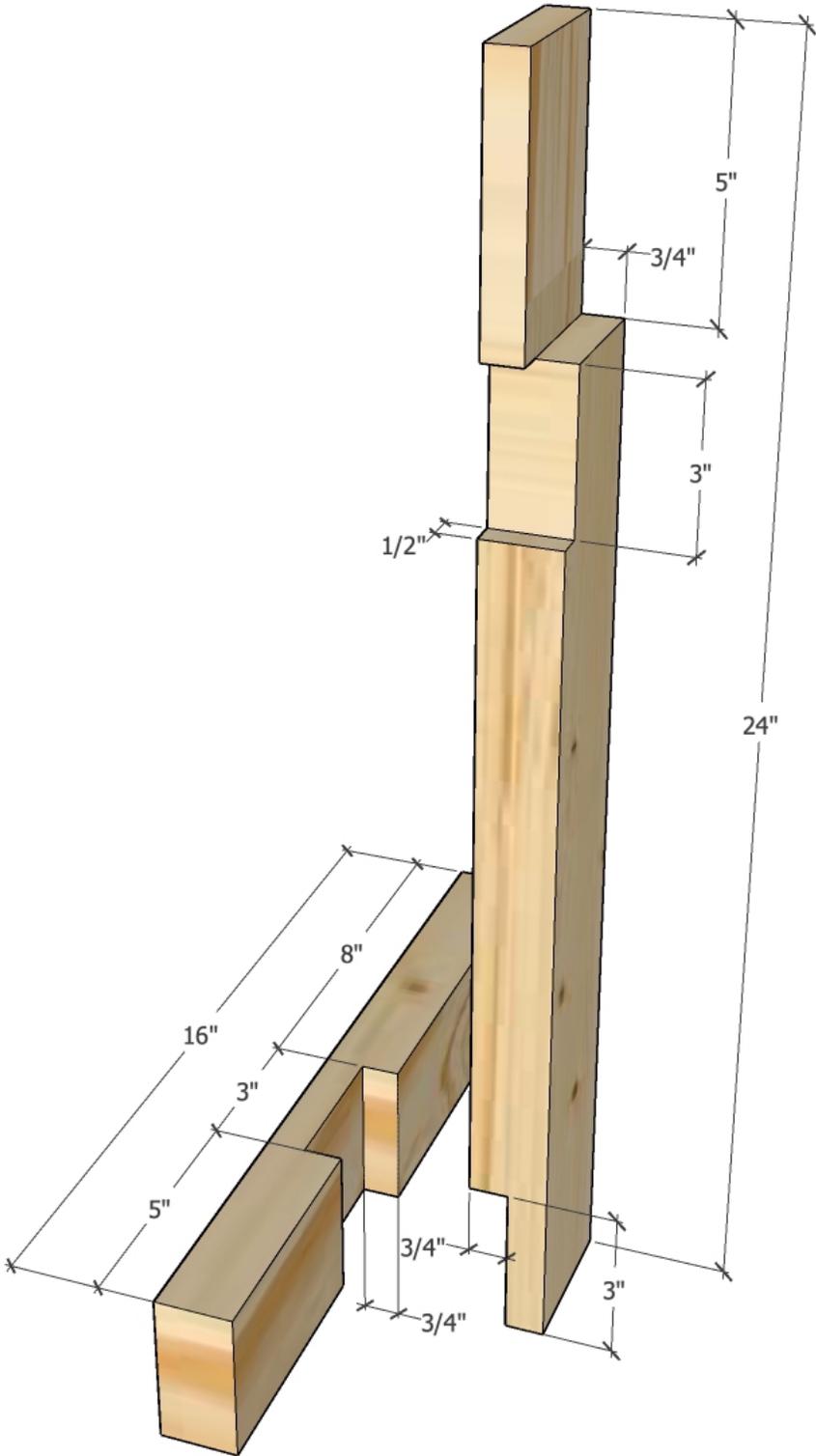
1/2-inch plywood, end-glued and brad nailed.



Kid's Desk & Chair

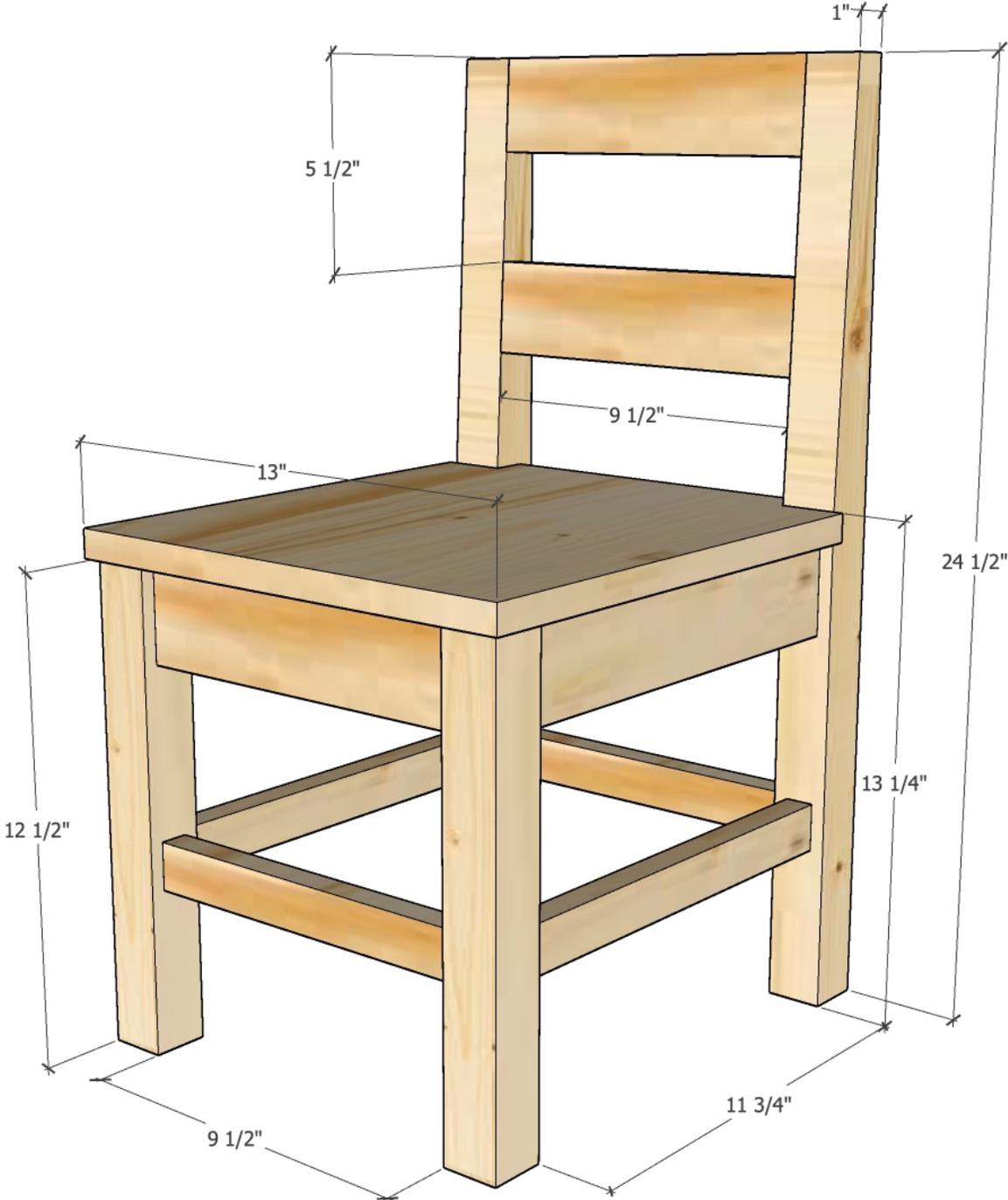
Leg Assembly

Note: left and right legs are mirror images of each other



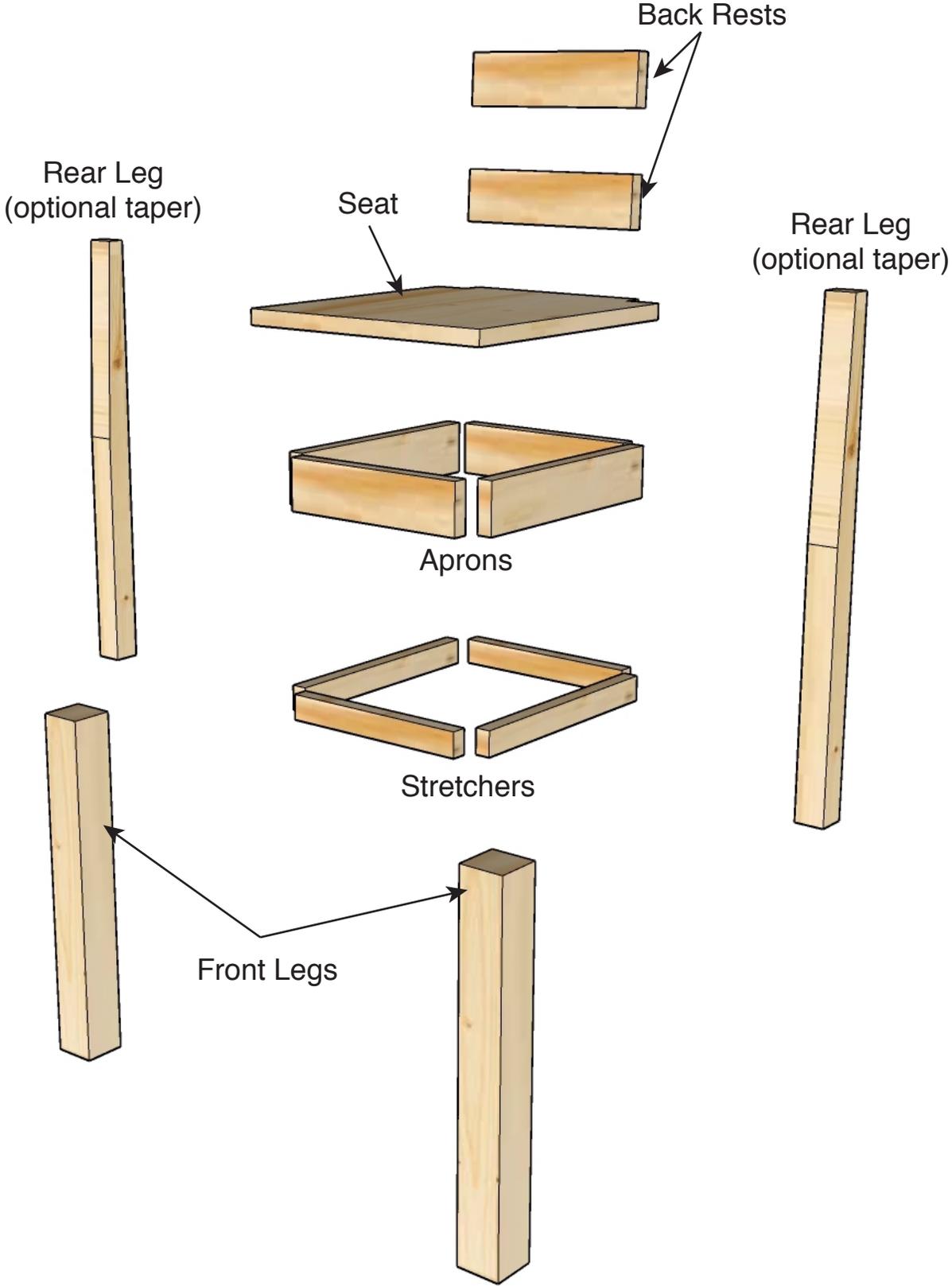
Kid's Desk & Chair

The assembled chair



Kid's Desk & Chair

Exploded Chair View



Kid's Desk & Chair

Chair seat, assembled from two 1x8 boards, edge-glued and biscuit joints.

