

DESK AND SHELF

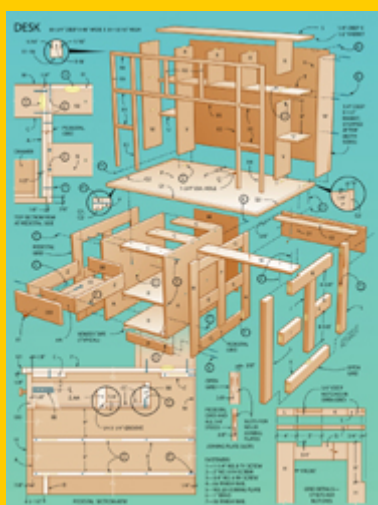


The information age at your child's fingertips.

Kids are not known for their neat work habits--neither are many adults, for that matter. But at least with kids, there's always hope that they can learn something better. Certainly the right desk can help. Our design provides sufficient work surface and storage space. The desktop is large enough to accommodate a computer, and it still has room for software, papers and books. The pedestal provides a drawer for smaller loose items, and two deep shelves can

hold a small printer and other supplies. The storage shelf has lots of space for CDs, tapes and collectibles.

The desk is built from birch plywood with poplar edge-banding, and the parts are held together with joining plates, nails, screws and glue. Any beginner can build it. Its construction is so rugged, it's just about impossible to damage it, and it disassembles to make it easier to move--a handy feature when transporting it from your shop to the bedroom.



MATERIALS LIST--DESK

Key	No.	Size and description (use)
A	2	3/4 x 25 x 28-7/8" plywood (side)
B	2	3/4 x 15 x 28-7/8" plywood (shelf)
C	3	3/4 x 5 x 15" plywood (cleat)
D	1	3/4 x 2-3/4 x 16-1/2" poplar (toe kick)
E	4	3/4 x 3-1/2 x 9-3/4" poplar (short rail)
F	2	3/4 x 3-1/2 x 20-3/4" poplar (mullion)
G	4	3/4 x 3-1/2 x 23" poplar (rail)
H	4	3/4 x 3-1/2 x 27-3/4" poplar (stile)
I	2	1-1/2 x 3-1/2 x 9-3/4" poplar (short rail)
J	1	1-1/2 x 3-1/2 x 20-3/4" poplar (mullion)
K	2	1-1/2 x 3-1/2 x 23" poplar (rail)
L	2	1-1/2 x 3-1/2 x 27-3/4" poplar (stile)
M	1	1/4 x 16-1/2 x 25" plywood (back)
N	1	3/4 x 5 x 28-1/2" plywood (cleat)
O1	1	3/4 x 8 x 28-1/2" plywood (back cleat)
O2	1	3/4 x 3 x 27" plywood (cleat)
P	1	3/4 x 30 x 46-1/2" plywood (desktop)
Q1	1	3/4 x 7/8 x 48" poplar (edging)
Q2	2	3/4 x 7/8 x 30" poplar (edging)
R	4	3/4 x 8 x 9" plywood (partition)
S	1	3/4 x 8-1/4 x 45" plywood (top)
T	1	3/4 x 8 x 45" plywood (shelf)

U	2	3/4 x 6 x 8" plywood (shelf)
V	2	3/4 x 8 x 20-3/4" plywood (side)
W	2	3/4 x 8-1/4 x 31-1/4" plywood (side)
X1	4	3/4 x 7/8 x 5-7/8" poplar (facing)
X2	2	3/4 x 7/8 x 8-7/8" poplar (facing)
X3	2	3/4 x 7/8 x 30-7/16" poplar (facing)
X4	2	3/4 x 7/8 x 31-5/16" poplar (facing)
X5	1	3/4 x 7/8 x 31-3/8" poplar (facing)
X6	1	3/4 x 7/8 x 44-7/8" poplar (facing)
Y	1	1/4 x 31-3/4 x 46" plywood (back)
Z	2	3/4 x 4 x 18" poplar (drawer side)
AA	1	3/4 x 4 x 12-1/2" poplar (drawer front)
BB	1	3/4 x 3-1/2 x 12-1/2" poplar (drawer back)
CC	1	1/4 x 13 x 17-1/2" plywood (drawer)
DD	1	3/4 x 5-1/4 x 14-3/4" poplar (drawer face)
EE*	1	18" drawer tracks (Accuride No. 3037-18")
FF**	1	1-1/4"-dia. knob (Hafele No. 13893100)

Misc.: No. 20 joining plates; 2" No.8 fh woodscrews; 1-1/4" No. 8 fh woodscrews; 3/4" No. 6 rh woodscrews; 6d and 3d finish nails; 1" wire brads; birch veneer (Rockler No. 10801); grommet (Rockler No. 14598); glue; sandpaper; latex primer and enamel.

Notes: All plywood birch veneer dimensions include veneer tape where applicable.

*Available from Rockler Woodwork and Hardware, 4365 Willow Dr., Medina, MN 55340 (Stock No. 32821)

**Hafele America Co., 3901 Cheyenne Dr., P.O. Box 4000, Archdale, NC 27263

Making Pedestal Parts

Rip and crosscut the plywood pieces to size. Guide the circular saw using a straightedge clamped to the panel (**Photo 1**). Note that a 40-tooth thin-kerf, crosscut blade was used for these cuts. Next, use a clothes iron to apply birch veneer edge tape to the plywood pieces (**Photo 2**). Let the veneer cool to room temperature before trimming it to length and width using a sharp chisel (**Photo 3**). If the veneer tears out as it is trimmed, cut from the opposite direction.

Next, mark the locations of the joining plate slots in the pedestal parts. The joining plates hold the



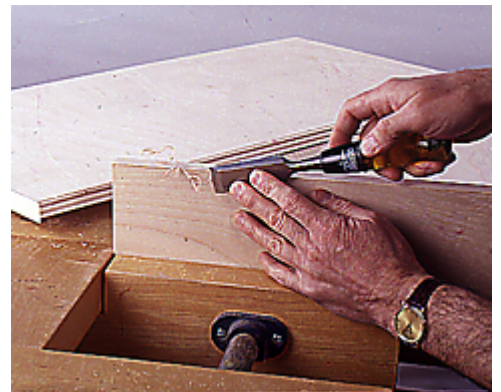
1--To cut the plywood desk parts to size, use a circular saw guided by a straightedge clamped to the panel's face.

parts in position, and screws are used to pull the parts together. The screwheads are hidden under the applied grids.

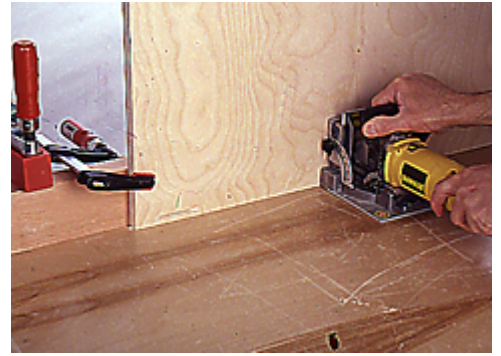
Cut the joining plate slots in the pedestal parts using the plate joiner. For the slots at the top and bottom of the pedestal sides, clamp a tall fence to the workbench. Then clamp a pedestal side to the fence, and cut the slots with the plate joiner held against the workbench (**Photo 4**). To cut the slots in the center of a panel, clamp a straightedge across the panel to guide the plate joiner (**Photo 5**).



2--Use an iron to apply heat to the birch veneer tape. The banding has heat-sensitive adhesive on its back.



3--Use a chisel to trim the birch veneer tape to width. Cut from the opposite direction if the tape tears out.



4--To cut joining plate slots on the panel's face, clamp the panel upright, and slide the plate joiner on the work surface.



5--To cut plate slots in the panel's center, clamp a fence across the panel to guide the vertically positioned plate joiner.

To cut the slots in the shelf ends and cleats, hold the workpiece to the bench, and use the top as the registration surface **(Photo 6)**.

Bore and countersink pilot holes through the pedestal sides for joining the sides, shelves and cleats. Install joining plates in the side panels, and check the pieces' fit before the assembly sequence **(Photo 7)**.

Desk Construction

Now assemble the pedestal sides, shelves and cleats without using glue in the plate joints. Bore pilot holes into the ends of the shelves and cleats. Then drive the screws to fasten the sides to these parts **(Photo 8)**. Rip and crosscut the poplar toe kick to size, and cut the joining plate slots in its top edge. Spread glue in the slots and on the plates. Clamp it in place until the glue sets.

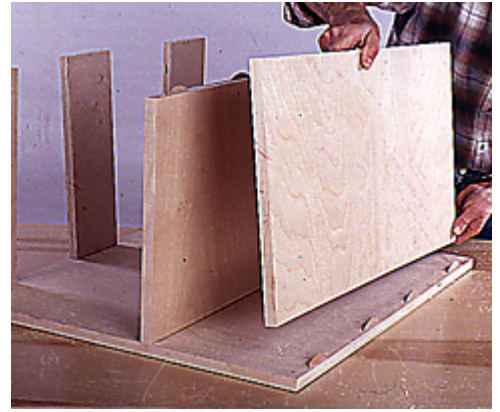


6--To cut plate slots in the end of plywood parts, hold the workpiece down and slide the plate joiner on the bench.

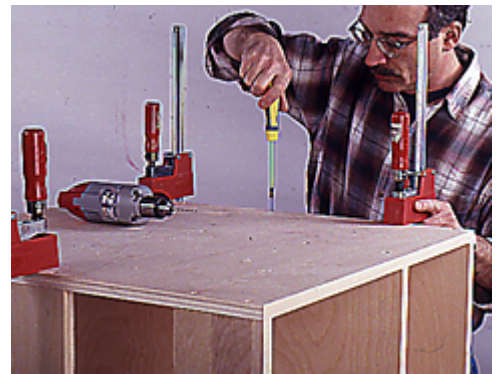
Rip and crosscut all the grid parts and mark the parts for joining plates. Use two plates at each joint on the open grid. When cutting slots in the endgrain of the poplar pieces, clamp the workpiece to the bench.

To assemble either grid, first spread glue on the joining plates and in the plate slots. Glue and clamp together the crosspieces in the center of the grid (**Photo 9**). When the glue is dry, glue and clamp the horizontal pieces to the top and bottom of the cross, and then glue and clamp the two vertical pieces to the assembly.

Cut the cleat notch on the top of the pedestal grid and the open grid. Then cut the 3/4-in.-deep rabbet on the open grid stile using a router and straight bit. After it is cut, square its ends with a chisel (**Photo 10**).



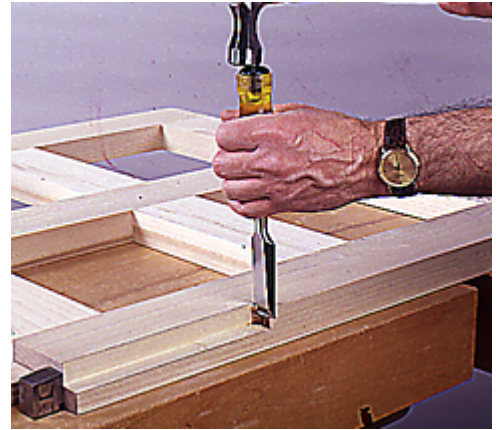
7--Bore and countersink the pilot holes in the pedestal sides, and test fit the parts before the final assembly.



8--Clamp the pedestal parts together, bore pilot holes into the shelves and cleats, and drive the screws.



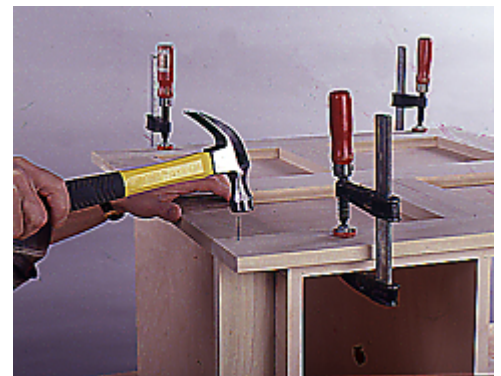
9--Begin the assembly of the open grid by gluing and clamping together the center horizontal and vertical pieces.



10--Cut the stopped rabbet in the open grid using a router. Then cut the end of the rabbet square using a chisel.

Place the pedestal on its side, and position one of the pedestal grids on it. Clamp the grid to the pedestal, and nail it in place without using glue. Nail the grid to the toe kick (**Photo 11**).

Cut out the pedestal back and nail it in place. Next, apply birch veneer edge tape to the exposed edges of the front and back cleats that join the pedestal and open grid. Cut joining plate slots in the vertical back cleat and in the edge of the rear cleat. Install joining plates with glue and clamp these cleats together. This cleat assembly is installed when the pedestal and open grid are joined.



11--Clamp the grid to the desk pedestal. Nail the grid to the pedestal sides with 3d nails and the toe kick with 6d nails.

Rip and crosscut the poplar edges for the desktop. Glue and clamp them to the top, and fasten them with 6d finish nails so they are flush with the top, but overhang the bottom by 1/8 in.

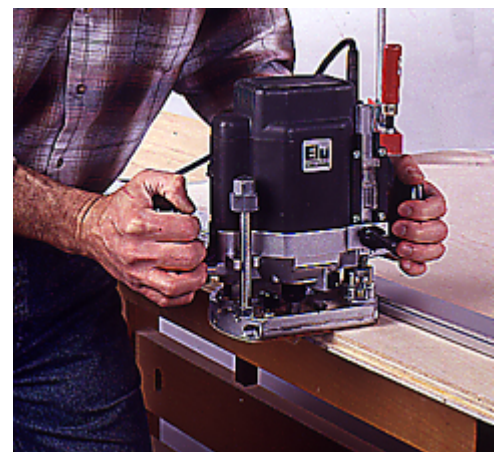
Building The Storage Shelf

Use a router and straight bit to cut the notch in the back of the desktop (**Photo 12**).

Apply birch veneer tape to the top edges of the storage shelf sides, and use the router with an edge guide to cut the stopped rabbet on the sides. Then square the rabbet using a chisel (**Photo 13**).

Square the ends of the cut with a chisel. Next, bore the grommet hole in the top.

Cut the joining plate slots for the storage shelf.



12--Use a router to cut the notch in the top of the desk. The first cut forms a

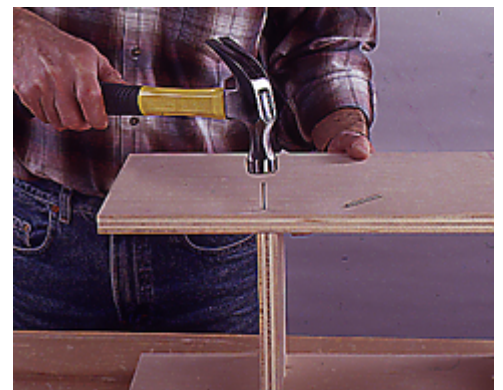
Begin the storage shelf assembly by spreading glue in the slots and on the plates for the joints between the partitions and the top. Join these parts, and drive 6d finish nails to fasten the joints **(Photo 14)**. Clamp these joints until the glue sets.

Glue and clamp the short shelves to the inner sides. Then glue and clamp those sides to the bottom of the middle shelf (Photo 15).

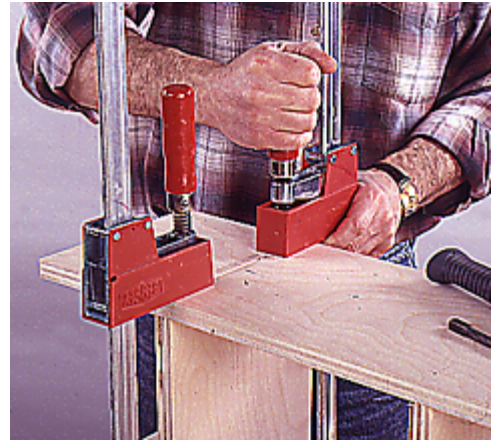
rabbet, and the second cut completes the notch.



13--Cut a stopped rabbet in each side of the storage shelf. Then use a chisel to cut the end of the rabbet square.



14--Begin the shelf assembly by joining the top and partitions with joining plates and glue. Also nail the pieces together.



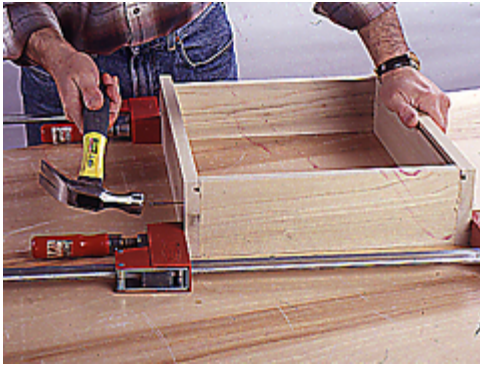
15--Join the short shelves and inner sides. Then use glue, plates and clamps to join these parts to the middle shelf



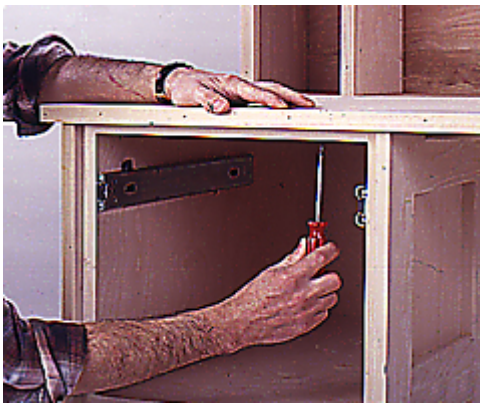
16--While holding the parts in position with clamps, drive a nail through the shelf and into the top of the inner side.



17--Fasten the storage shelf to the desktop by driving **SCREWS** through the desktop and into the shelf sides.



18--Spread glue on the endgrain joints of the drawer box parts, and clamp them together. Also fasten them with finish nails.



19--Drive screws through the cleats into the bottom of the desk top to fasten the top and bottom subassemblies.

30-3/4" DEEP X 48" WIDE X 59-13/16" HIGH

