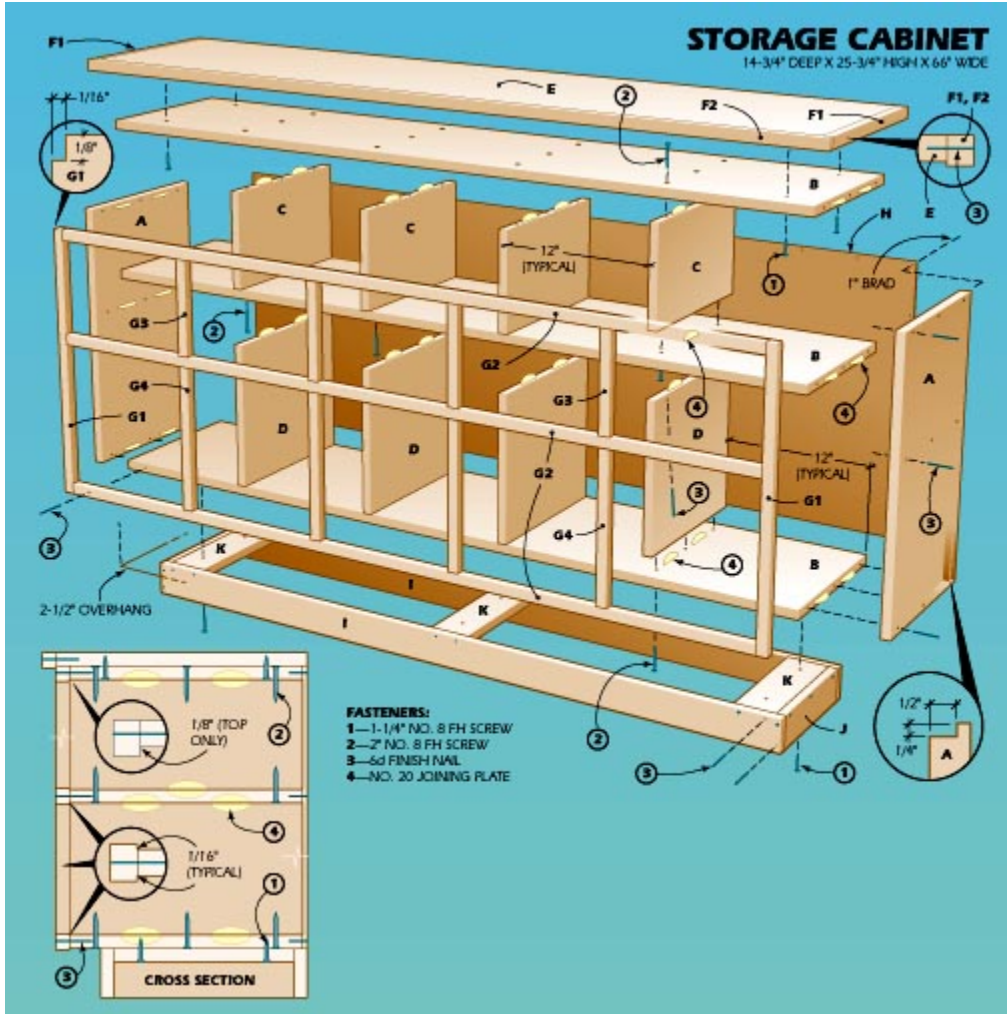# STORAGE CABINET

This storage shelf is designed to be as versatile as possible. In other words, it holds just about anything that is likely to end up scattered all over the floor in your child's room. Its tall spaces hold oversize children's books, school notebooks, stacks of games or stuffed animals. The smaller spaces are proportioned for tapes, CDs, art supplies and the odds and ends that inevitably clutter a child's room. It also functions as a night stand because it falls at the right height for a lamp, radio and alarm clock.

The construction of this piece employs the same materials as the child's bed–birch plywood and solid poplar. The assembly techniques rely on a combination of plate joints, screws and finish nails to draw shelf parts tightly together, so you won't need a bunch of expensive clamps.

STORAGE CABINET
14-3/4" DEEP X 25-3/4" HIGH X 66" WIDE

FASTENERS:
1—1-1/4" NO. 8 FH SCREW
2—2" NO. 8 FH SCREW
3—6d FINISH NAIL
4—NO. 20 JOINING PLATE

2-1/2" OVERHANG

1/8" (TOP ONLY)

1/16" (TYPICAL)

CROSS SECTION

12" [TYPICAL]

1" BRAD

Making Case Parts

Use a circular saw and 40-tooth thin-kerf, crosscut blade to cut the plywood case parts to size. When plywood is cut, there is a tendency for the face veneer to chip where the blade exits the cut. You can prevent this chipping by using two techniques. First, clamp a straight board across the panel stock to guide the saw. Next, advance the saw slowly, and keep the saw base tight to the guide strip **(Photo 1)**.

1--Clamp a straightedge across the workpiece and crosscut it with a circular saw. Support the piece that will be cut off.

Set up the router with a straight bit and an accessory edge guide. Adjust the router to cut the rabbet at the back edge of the case sides. Test the setup on a piece of scrap stock. Then clamp a case side to the workbench and cut the **(Photo 2)**. If you use a router bit with a 1/2-in.-dia. shank, you can make the cut in one pass. If you are using a bit with a 1/4-in.-dia. shank, you should take two passes to cut the rabbet.

2--Use a straight bit in the router and the edge guide attachment to cut a rabbet along the back edge of the side panels.

Mark the locations of plate joint slots in the cabinet sides, shelves and partitions. Note that the middle shelf has staggered slots on the top and bottom surfaces. It's important to stagger the slots to prevent too much wood from being removed in one location.

3--Clamp a fence across a case side, and use it to guide the plate joiner when cutting the plate slots for the shelves.

Clamp a guide block to the case sides and shelves to help locate the plate joiner when cutting the slots in the center of a panel **(Photo 3)**. When you cut the slots in the sides for the case top and bottom, you can use the fence on the plate joiner to register the cuts **(Photo 4)**.

4--Clamp the case sides upright in a vise and cut the slots along their upper edge using the plate joiner's fence for alignment.

Use the workbench top as the registration surface when you cut the slots in the ends of the shelves and partitions. Firmly hold both the plate joiner and the workpiece to the benchtop when making the cut. Keep your fingers well away from the cutting area to avoid accidents.

Countersink pilot holes through the top, bottom and middle shelves.

5--The short partitions are attached to the panel above with screws, so there is no need to use glue with the joining plates.

Case Assembly

Begin the case assembly process by joining the case top to the short partitions **(Photo 5)**. Install the joining plates in their slots and position the short partitions over them. You do not need to use glue on these plates because they merely locate the joint. Turn the assembly over, and bore pilot holes in the partitions **(Photo 6)**. Then screw the partitions to the top panel.

Spread glue in the joining plate slots for the joints between the short partitions and the middle shelf. Place the middle shelf over the short partitions, bore pilot holes into the partition ends and fasten the shelf and partitions with screws.

6--Bore and countersink pilot holes into the top of the short partitions. Then drive screws to fasten the partitions and panel.

Next, install joining plates in the slots for the joints between the bottom and the tall partitions. Assemble the partitions and bottom, and fasten them with screws. Spread glue in the slots and on the plates for the joints between the tall partitions and the middle shelf. Install the plates, clamp the assembly together and drive 6d finish nails through the middle shelf into the short partitions **(Photo 7)**.

Spread glue in the slots and on the joining plates for the joints between the middle shelf, top and bottom, and the case sides. Assemble the parts, and drive 6d finish nails to fasten the joints.

7--Drive finish nails at an angle through the tall partitions and the middle shelf, and into the short partitions.

Rip and crosscut the edge strips for the top. Apply glue to them, clamp them to the top, and nail the parts together.

Apply poplar facing to the front of the sides, top, bottom, middle shelf and partitions. Start with the case sides, then apply the facing to the horizontal parts and finally to the partitions. Note that the strips overhang the plywood panels by 1/16 in. on each edge except for the case top, which has a 1/8-in. overhang.

Use a chisel to cut the notch at the top outside corners of the facing strips **(Photo 8)**.

8--Use a chisel to cut a small clearance notch in the top corner of each vertical facing strip. Cut in toward the case.

Place the top panel upside down on the work surface, and invert the case assembly over it. Bore pilot holes, and screw the top to the assembly. Complete the case by nailing on the back.

9--Use a putty knife to press drying filler into the nail holes. Slightly mound the filler, and let it harden before sanding.

Rip and crosscut the pieces of poplar and plywood for the toe kick assembly. Clamp the assembly together, and join the parts with glue and 6d finish nails. Clamp the toe kick assembly to the bottom. Then bore and countersink pilot holes through the cleats into the bottom. Screw the cleats to the bottom.

10--Sand the surfaces carefully using a random-orbit block sander. This tool is small enough to fit into the compartments.

Finishing

Set the heads of all finish nails below the surface. Then fill the holes with a wood filler **(Photo 9)**. Mound the filler slightly over each hole since it shrinks when it dries. Sand the cabinet, inside and out, with 120-, 150- and 180-grit sandpaper **(Photo 10)**. Remove all sanding dust before moving to the next finer grit of sandpaper. Carefully ease all sharp edges with a sanding block **(Photo 11)**. Move the sanding block perpendicular to the wood's edge to achieve a crisp bevel. Remove all sanding dust by vacuuming and using a tack cloth before applying the primer.

11--Put a small, crisp bevel on the facing and edge strips with a sanding block that you move perpendicular to the strip's edge.

Use a small-diameter, smooth-surface paint roller to apply a coat of latex primer to all cabinet surfaces **(Photo 12)**. Note that the long-handled roller used here has one end that is somewhat shaggy. This allows you to apply paint right to the corner. When the primer is dry, sand it lightly with 220-grit sandpaper. Finish the project by applying two coats of latex semi-gloss paint for an attractive finish.

12--A small-diameter roller is used to apply the primer and top coat. The square end of the roller allows it to paint into corners.

MATERIALS LIST–STORAGE CABINET

Key	No.	Size and description (use)
A	2	3/4 x 13 1/4 x 22 1/4" plywood (side)
B	3	3/4 x 13 x 63" plywood (shelf, top, bottom)
C	4	3/4 x 8 x 13" plywood (partition)
D	4	3/4 x 12 x 13" plywood (partition)
E	1	3/4 x 14 x 64 1/2" plywood (top)
F1	2	3/4 x 7/8 x 14" poplar (edging)
F2	1	3/4 x 7/8 x 66" poplar (edging)
G1	2	3/4 x 7/8 x 22 5/16" poplar (facing)
G2	3	3/4 x 7/8 x 62 7/8" poplar (facing)
G3	4	3/4 x 7/8 x 7 13/16" poplar (facing)
G4	4	3/4 x 7/8 x 11 7/8" poplar (facing)
H	1	1/4 x 22 1/4 x 64" plywood (back)
I	2	3/4 x 2 3/4 x 59 1/2" plywood (toe kick)
J	2	3/4 x 2 3/4 x 10" poplar (toe kick)
K	3	3/4 x 3 1/2 x 10" plywood (cleat)

Misc: Misc.: No. 20 joining plates; 2" No. 8 fh woodscrews; 1 1/4" No. 8 fh woodscrews; 3/4" No. 6 fh woodscrews; 6d finish nails; glue; sandpaper; latex primer and enamel.