

# Art Cart



## Supplies:

<b>2 - 24x48 boards</b>	<b>Oak \$28-32</b>
<b>4 – 2x4x8 boards</b>	<b>\$12</b>
<b>Box of 2 ½ inch screws</b>	<b>\$4.00</b>
<b>Wood Glue</b>	
<b>Electric Screwdriver</b>	
<b>Electric drill and bits</b>	
<b>4 casters (wheels)</b>	<b>\$13.00</b>
<b>Phillips Screwdriver</b>	
<b>Chop saw, Circular saw, or Hand saw</b>	
<b>Clamps</b>	
<b>Washers</b>	

**Notes on Tools:**

**Selecting wood** – Always make sure your wood is straight by looking down the edges with one end at eye level and the other at the floor.

**Cutting wood** – It is possible to cut wood for this project with a simple hand saw but you need to make sure you cut it straight. A circular saw would also work but for the best results use a chop saw.

**Wood glue** – Wood glue is a must for all projects. Many people do not realize that wood glue holds wood together better than nails or screws. Spreading wood glue can be easier by using an old plastic gift card or credit card.

**Screws** – Wood screws work best. I used drywall screws for mine and it turned out fine.

**Clamps** – Use clamps to hold together all that you can.

**Drill bits** – To predrill your holes you will need a drill bit that is the same size as the core of the screws (minus the ridges). To counter sink the screws you will need counter sinking bits or another drill bit that is the same size as the head of the screw. To make the holes for the screws you will need to use your smaller drill bit and drill a hole in the center of where you want the screw to go. Do not worry about drilling too far into the wood as long as it does not come out the other side. Drilling too short may cause the wood to crack. To counter sink the holes use the larger drill bit to drill a hole centered over the smaller holes and go in only about ¼ of an inch. This will make your screws level with the table surface.

**Casters** – It is best to get 2 locking and two non locking casters to prevent the cart from rolling on its own on non level surfaces.

**Washers** - Depending on your casters you may need 12 washers. The center hole will need to be wide enough for the center of your screws to pass through but not the head. The total size of the washer will need to be bigger than the holes for attaching the casters.

1. Cut all of the wood into:
  - a. 4 – 48in sections
  - b. 4 – 24in sections
  - c. 4 – 20 ½ in Sections

24	24	24	24	0
20 ½	20 ½	20 ½	20 ½	14in (Extra)

48	48
48	48

2. Start with one board that will become the bottom board laying right side up on a level floor or large table.

3. Lay out 2 of the 48in boards and 2 of the 20 ½ boards on top of the bottom board and make sure they line up right. Clamp or hold the boards in place and pre drill holes for the screws, one ¾-1 inch below the top and ¾-1 inch above the bottom on each end of the 48in boards. You need to make sure there is ample room for another set of screws to go in between these two later. (Figure 1)

4. Remove one 20 ½ board and glue both surfaces, the bottom of the 2x4 and the top edge of the bottom board and put it back. Do the same with one of the 48in boards. Once you have the boards glued up, put in the screws in the predrilled holes. Repeat this with every corner. Clamp both the 2x4's to the bottom board and to each other if possible. Wipe off excess glue with a wet paper towel or rag.

5. Flip the unit over and predrill holes to secure the top board to the 2x4's about 8 inches from every corner then put in the screws. (8 holes total) Figure 2

6. Repeat this process (steps 1-5) to create the top section, but this time make sure the surface you want to be the top surface of your cart against the table or floor.

7. To connect the top and bottom pieces lay the bottom section upright on the floor or table and place one of the 24 inch boards standing upright in a corner. Glue both the bottom edge and the two sides that will be touching the other boards. Predrill holes at the ends of the 20 ½ boards about halfway up. Make sure these screws will not run in the previous two. Repeat this for all four corners.

8. The next step is to put the top section on. You may need to adjust the 24 in vertical boards to fit snugly into the top corners. Attach the top to the vertical boards the same way as in step seven.

9. Flip the whole unit over to attach the wheels. Depending on the casters that you bought, you may need to place a washer or two in between the screws and the wheels. Place your wheels in the corners of your cart. Mark where the holes in the casters are. You do not need to screw down all four sides, just the three going along the edges. Check your marks and make sure none of the screws will be bumping into your previous ones. Do not drill holes too close to the edges of your boards or your wood may crack and your screws will show. Predrill your holes. You do not need to countersink these holes. Put each one of your screws through a washer and screw down your wheels.

Figure 1

Red arrows for step #3 Blue arrows for Step #7



Figure 2

