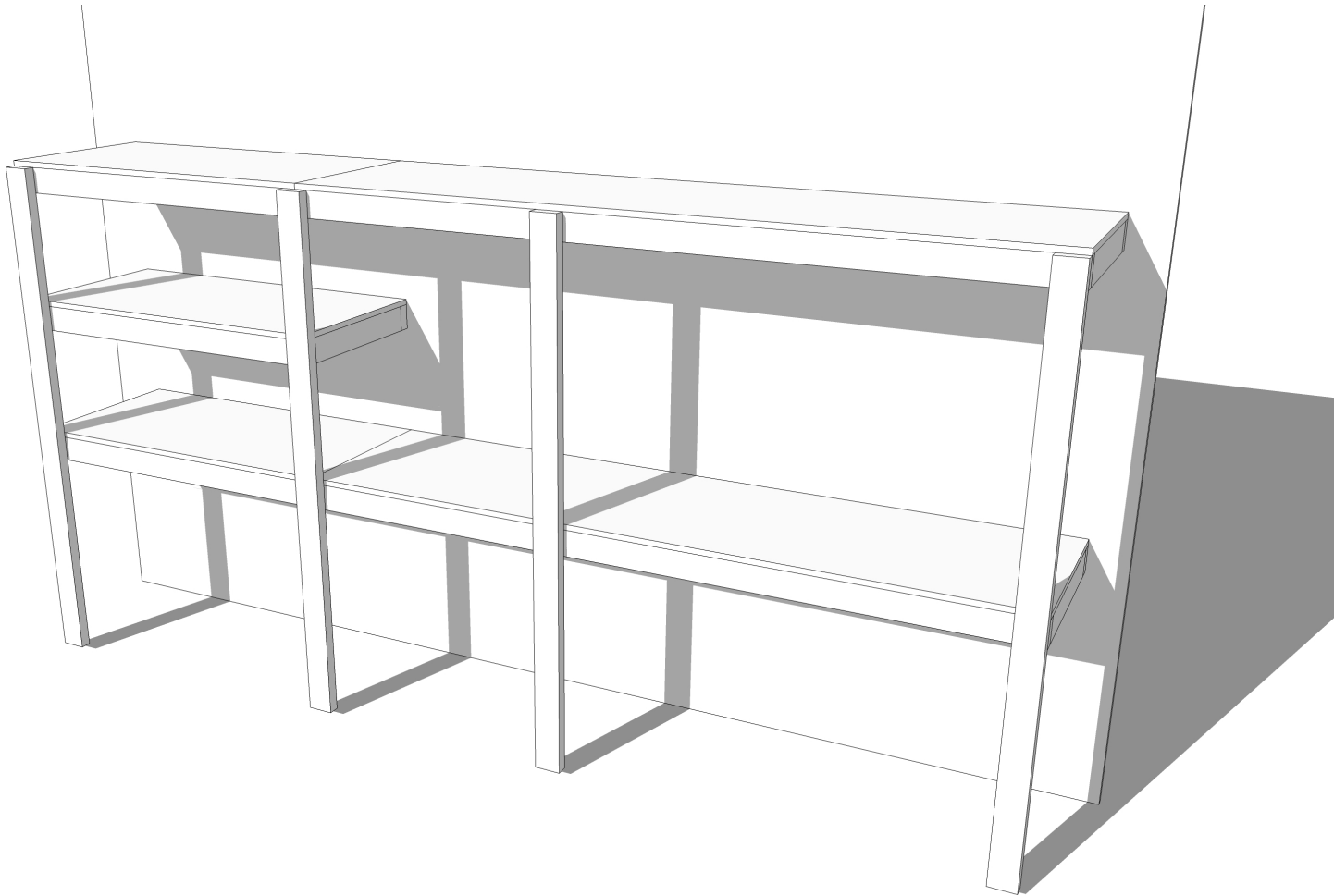


Garage Storage Shelves



By: Jonny Builds

Tools Needed:

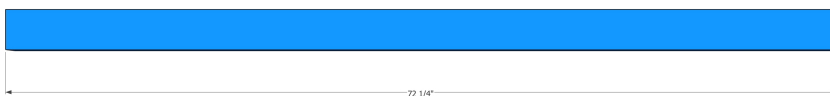
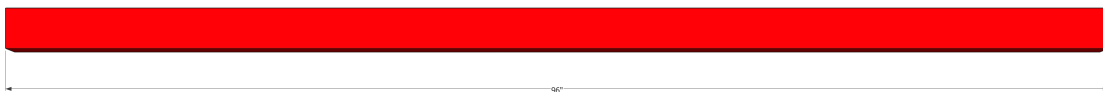
1. Circular Saw
2. Drill
3. Jigsaw or Hand Saw
4. Speed Square
5. Clamps

Materials Needed:

1. (Qty. 22) 2"x4"x8' boards
2. (Qty. 3) 2'x4' 3/4 inch MDF Project Panels
3. (Qty. 6) 2'x4' 1/2 inch MDF Project Panels
4. (Qty. 2 pkgs) 3 inch Hinge
5. (1 Box) 2 1/2" screws
6. (1 Box) 1 1/4 inch screws
7. (Optional) 4 inch casters

Cut List:

1. (Qty. 21) 21 inch 2x4 cross members
2. (Qty. 4) 72 1/4 inch 2x4 uprights
3. (Qty. 4) 8 foot 2x4 shelf front/back
4. (Qty. 6) 48 inch 2x4 shelf front/back

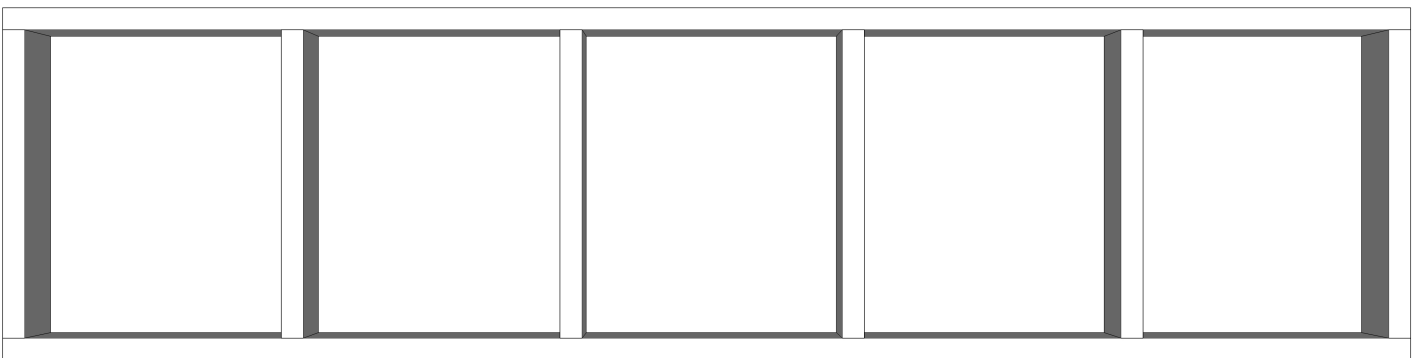


Step 1:

- Using a circular saw and a speed square cut (21) 2x4 pieces at 21 inches long. These will be the cross members for both the 8 foot shelves and the 4 foot shelves.

Step 2

- Build the 8 foot shelves.
- Lay out (2) 8 foot long 2x4's parallel to one another, and then lay out (2) of the 21 inch 2x4's on either end.
- With the long sides overlapping the 21 inch cross members use a speed square to make sure they are 90 degrees and drive in (2) 2 1/2 inch screws on either side. The total width of the shelf should be 24 inches.
- Lay out 4 additional cross members along the shelf spacing them 17.5 inches apart from the edges.
- Using a speed square to keep these cross members at 90 degrees attach them with (2) 2 1/2 inch screws on either side.
- Build a second 8 foot shelf exactly as the first.

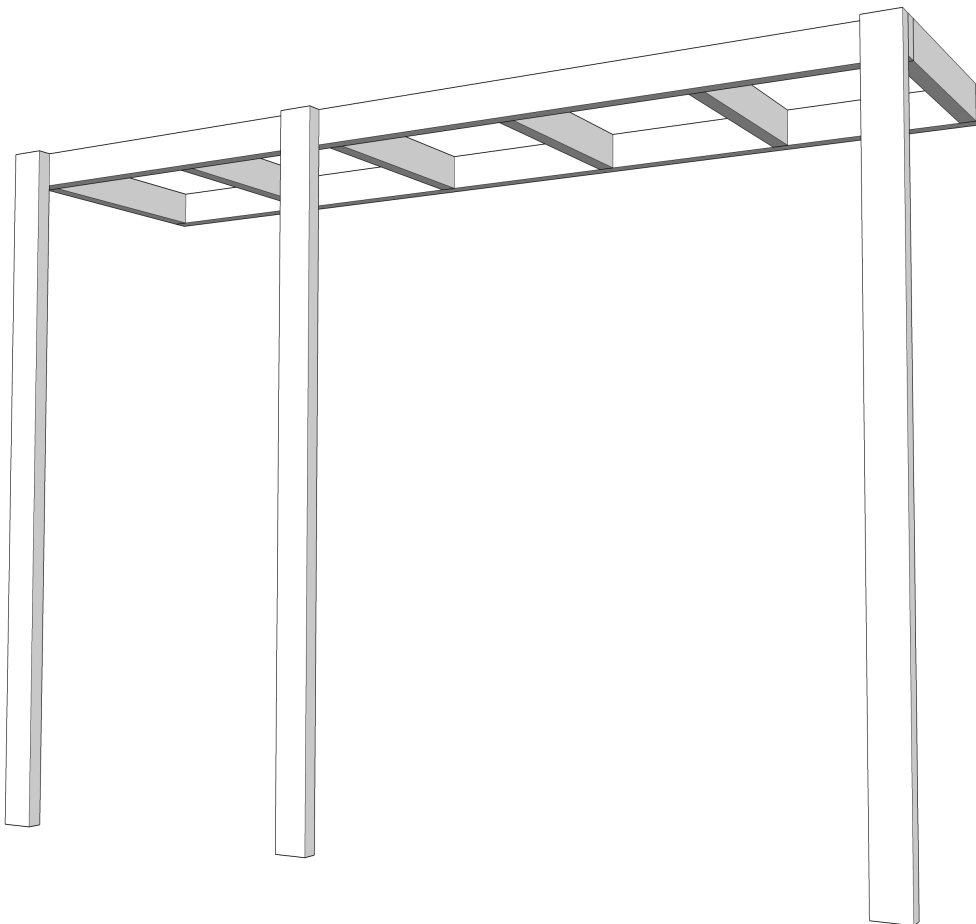


Step 3

- Cut the uprights.
- Clamp (4) 2x4's together and mark them at 72 1/4 inches.
- Using a speed square as a straight edge to keep the circular saw on the mark cut the 2x4's to length.

Step 4

- Attach the uprights.
- Starting at the far right end line up the top of the upright to the top of the upper 8 foot frame.
- Use a speed square to ensure they are 90 degrees and attach with 2 1/2 inch screws.
- Measure over 54 3/4 inches from the edge of that first upright and mark the location of the right edge of the middle upright.
- Attach with 2 1/2 screw and use a speed square to keep it 90 degrees.
- The third upright on the 8 foot section gets attached to the far left end so the upright is hanging off the edge half of its width.

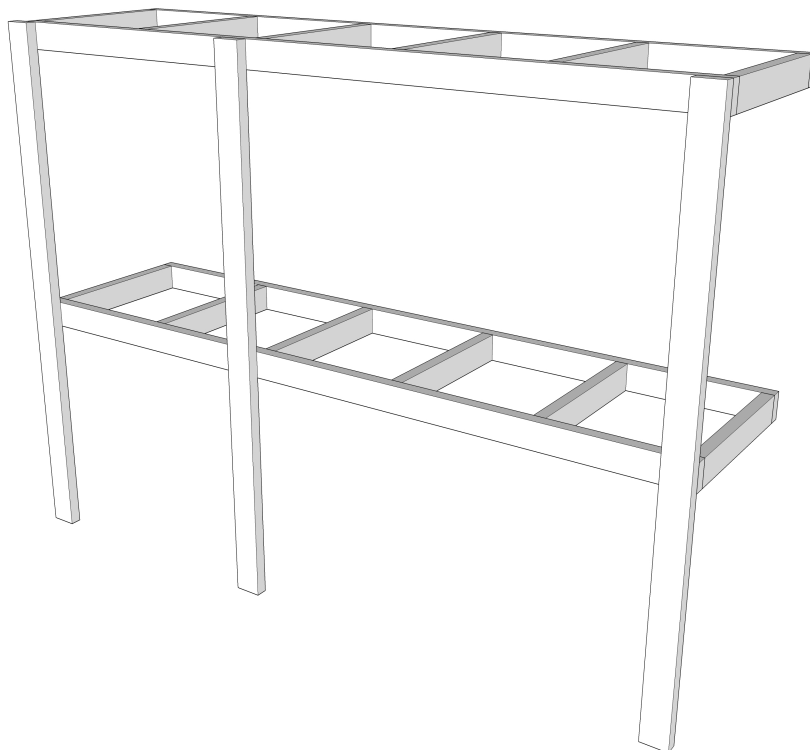


Step 5

- Attach the frame to the wall.
- Mark the location to mount the frame to the wall by using a stud finder to locate your studs, and drawing vertical lines from those marks using a level.
- Have a spare 2x4 nearby to help brace the frame.
- Raise the frame into position on the wall, brace with the 2x4 so it stays upright, and adjust until the frame is level
- Attach the frame to the studs in the wall using 3 1/4 inch screws.

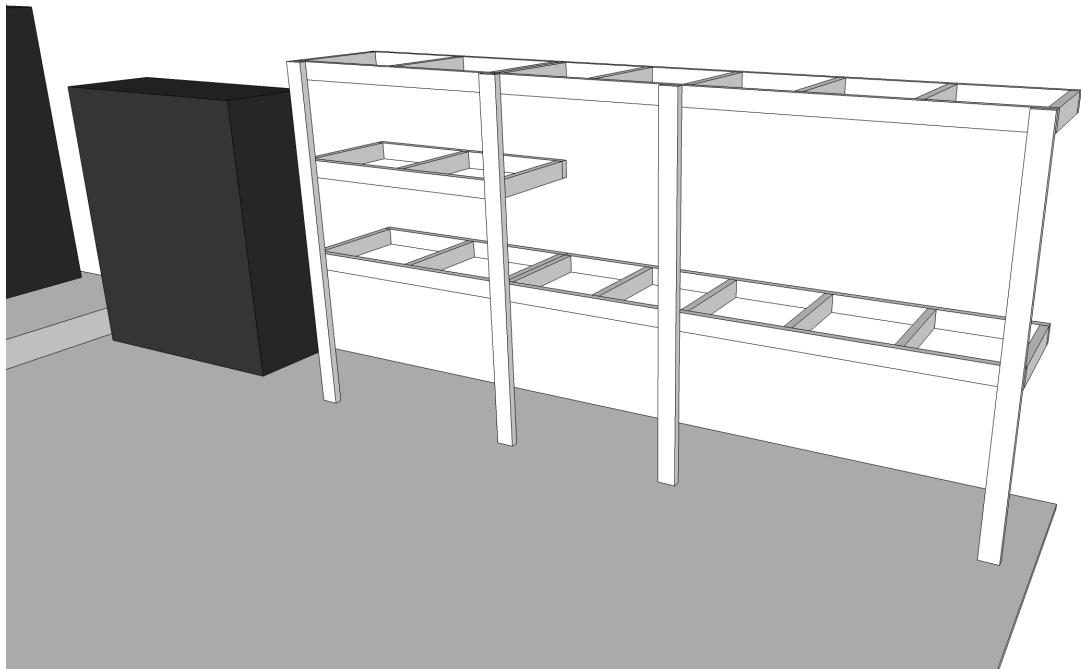
Step 6

- Attach the lower 8 foot shelf.
- My workbench is spaced to the top of the bench is 34 inches high once the MDF panel is attached. This is a standard height for a workbench, but you can adjust for your needs.
- Measure up from the ground 33 1/4 inch and mark a horizontal line on the wall. The top of the lower frame will align to this mark.
- Having several shorter 2x4 scraps on hand raise the lower shelf into position on the wall and brace in place.
- Once that shelf is aligned with the mark on the wall and level secure it to the studs with 3 1/4 inch screws.
- Secure the front of the lower shelf to the uprights with 2 1/2 inch screws.



Step 7

- Build the 4 foot frame and shelves.
- Clamp (3) 2x4's together and measure to the middle (48 inches)
- Cut the 2x4's in half
- Using the remaining (9) 21 inch cross members build (3) 4 foot long shelves using the same method as the 8 foot shelves.
- The middle cross support is attached centered on the 24 inch mark of the shelves.
- Attach the remaining 72 1/4 inch upright to the left end of the upper 4 foot shelf.
- Raise the 4 foot frame into place along the left end of the 8 foot frame and edge in along the 3rd upright overhanging the 8 foot section.
- Ensure the frame is level and attach to the studs with 3 1/4 inch screws.
- Attach to the 8 foot section with 2 1/2 inch screws.
- Add the lower 4 foot shelf at 33 1/4 inches up from the floor aligned with the lower shelf of the 8 foot section.
- Attach to the studs with 3 1/4 inch screws.
- Mark a line 16 inches down from the bottom of the upper shelf and install the middle 4 foot shelf with the top of the frame aligned with this mark.

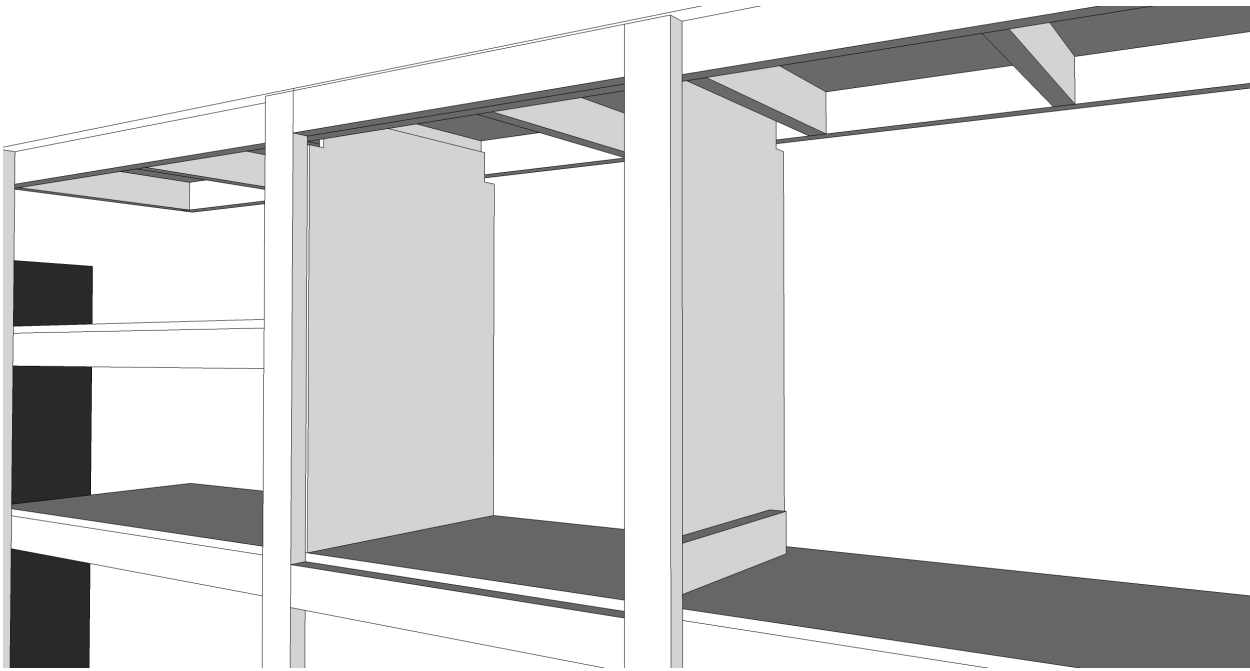


Step 8

- Place the MDF project panels
- I used (3) 3/4 inch 2'x4' MDF project panels along the lower frames of the storage unit.
- I used (4) 1/2 2'x4' MDF project panels for the middle 4 foot shelf and remaining upper frame.
- Attach with 1 1/4 inch screws into the 2x4 frame.

Step 9

- Build the center cabinet.
- Cut (2) 1/2 inch MDF panels to 37 inches long.
- Notch out the tops of each panel to fit in around the 2x4 frame.
- Measure down 3 inches from the top, and measure in 1 1/2 inch from the sides along the top.
- Cut these notches out with a jigsaw on both panels.
- Attach inside the left side of the frame with 2 1/2 inch screws.
- Cut a 21 inch long 2x4.
- Along the right side of the cabinet section resting on the stop of the MDF panel wedge this 2x4 in between the middle upright and the wall.
- Attach to the upright with 2 1/2 screws from the front.
- I was able to toe nail (screw) into the stud in my garage which lined up with this 2x4. If you cannot do so screw the back of this 2x4 down into the back of the lower shelf frame.
- Attach the 2nd MDF panel you notched out to the right side of the cabinet with 2 1/2 inch screws.
- Frame in recess created by the uprights along the sides of the cabinet by cutting (2) 2x4's to fit this span on the top and bottom.
- Screw the 2x4's into place.



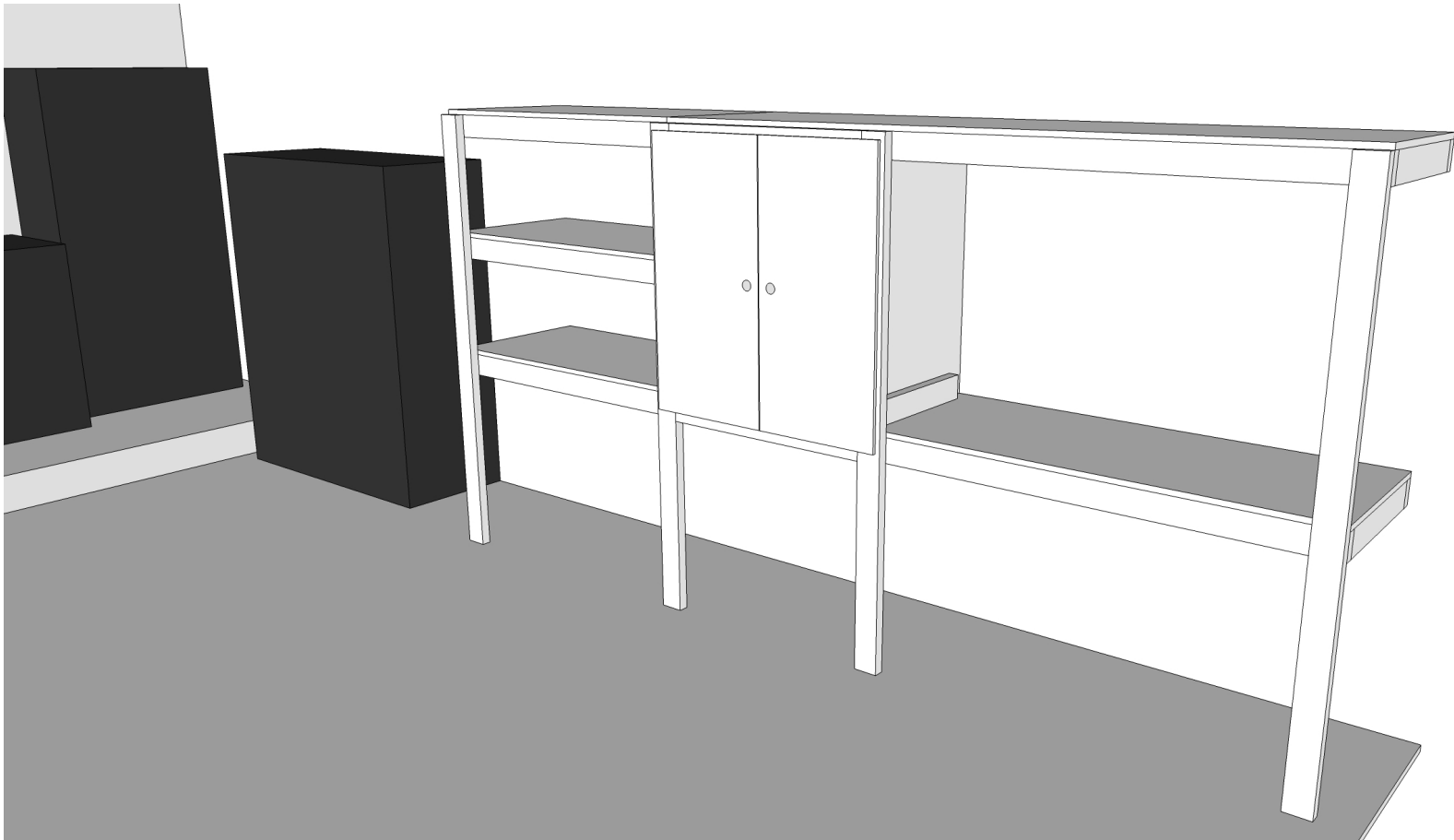
Step 10

- Build Shelves. (Optional)
- Using 2 sets of approx. 12 inch 2x4 off cuts make two shelves.
- I used a 3/4 inch plywood project panel for the shelves, and cut it in half to make (2) 24"x24" panels.
- Attach the 2x4 offcuts as legs along each corner screwing down into the 2x4's through the plywood with 1 1/4 inch screws.
- Make a second shelf.
- Install along the left side of the cabinet interior.
- To attach the first shelf toe nail the 2x4 feet into the frame below.
- Install the 2nd shelf on top of the 1st toe nail it to the shelf below.

Step 11

- Build doors.
- Clamp (2) 2'x4' 1/2" MDF project panels together and aligned.
- Cut the panels 40 inches long and 19 inches wide.
- Drill finger pulls with a 1 1/4 inch Forstner bit half way down and inset 2 inches from the edge.
- Install 3 inch hinges with 1/2 inch screws. It helps to use a combination square to set the distance and keep the hinges aligned when attaching the screws. Also ensure the hinges are spaced far enough from the edges that the screws in the frame will not interfere with installation.

- To attach the doors to the cabinet front I first clamped the left door in place and centered.
- I held the right door in position while I used a pencil to mark the outer position of the hinges.
- Open the hinges of the right door and align with the marks you just made.
- Attach the hinges to the frame with 1/2 inch screws.
- Attach the left door in the same fashion leaving a 1/8th gap.
- My doors were well balanced and stayed closed. You may need to add in a magnetic catch.



You're finished! If you any questions or comments email me at jonnybuildsstuff@gmail.com

