

# Wooden Stool

This guide will show you how to make a small wooden stool with an optional seat cushion that's perfect for beginners! Everything required to build this project can be found in SILab.

## Tools required for stool:

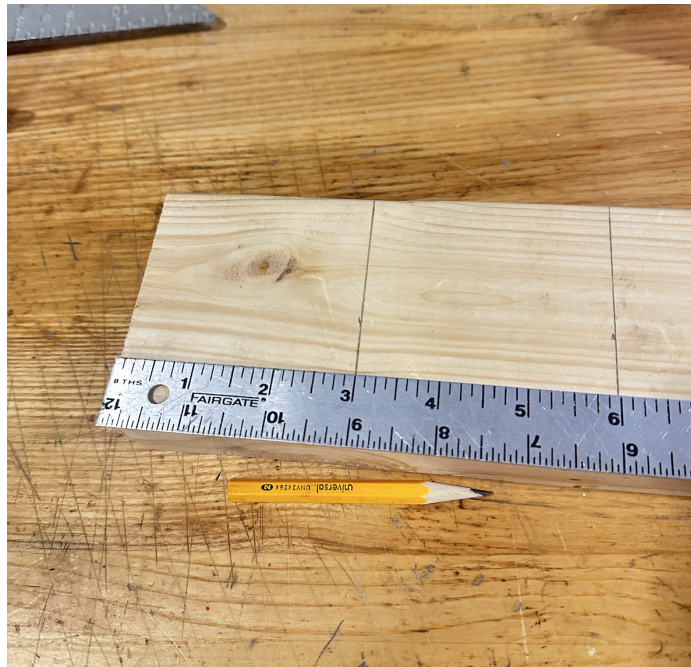
- 2x4 inch wooden planks
- Wood glue
- Wood stain
- Ruler

## Machines used for stool:

- Bandsaw
- Planar
- Jigsaw
- Belt Sander
- Hand-held sander
- Miter Saw
- Router

## Steps:

1. From the wooden stockpile, select about 6 pieces of 2x4 wooden planks. Make sure there are no nails, staples, or any other metal in the wood that you select.
2. On each piece of wood, measure and mark lines to create 3-inch blocks. These will be used to create a large sheet of wood that will be used as the top of the stool.



3. Using the bandsaw, cut the wood at the markings you made. You can use the metal tool (push stick) to slide the wood through for a more even and straighter cut.



4. Once you have cut about 19 3-inch blocks set them up so that they are arranged in a circular manner similar to the photo below:



5. Next use wood glue to attach all of the pieces together.



6. Optional step: If there are any gaps in between each wood piece you can take wood glue and mix it with sawdust to create a paste to fill the gaps. Use a popsicle stick to apply the mixture into the gaps if needed.
7. Clamp your wood together to keep it in place while you wait for the wood glue to dry. Leave it overnight to dry for best results.
8. Next, you will use the planar to smooth out the glued blocks so you might need to cut off some excess parts of the wood to ensure it will fit through the planar. The material should be longer than the two metal bars at the top of the machine and the width should be narrower than the metal bars. You can use the bandsaw machine to cut off any excess wood from both sides to make it fit.



9. Once your material is completely dry and sized correctly, use the planar to smooth out the surface of your wood. Use the lever on the side of the planar to adjust the machine to the height of your wood (do not cut more than 1/32th of an inch at a time). Make sure to turn over your material and use the planar on both sides so the top and bottom can both be smooth.



10. Once you have a flat surface from the planar, use a compass to draw a circle in the center of the wood.



11. Next, you will cut out the circle using the jigsaw tool. To do this, make sure to have your wood clamped down on a table with a little hanging off the side in order to keep your material stable while you are cutting. Take the jigsaw and start cutting around the wood in the shape of the circle you just drew.



12. Use the hand-held sanding tool to sand the top, bottom, and sides of the wood



13. Clamp your wood onto the table and use the router tool to make the edges rounded. I used the bit pictured below:



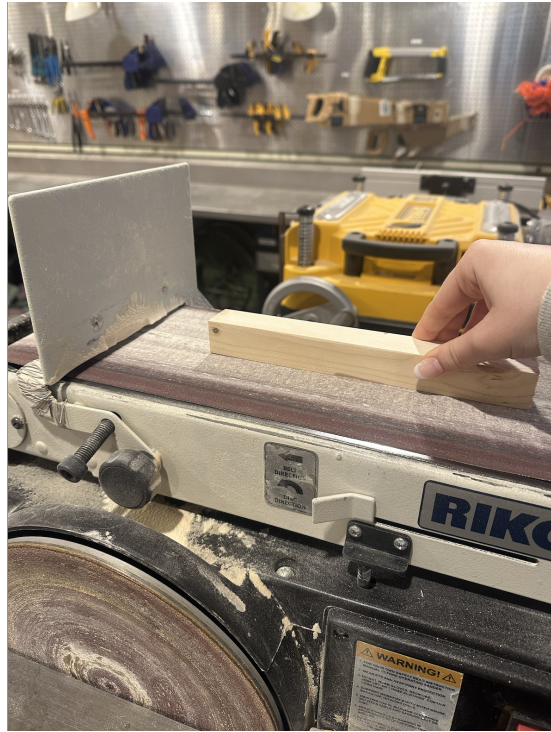
14. Use the hand-held sanding tool one more time to smooth the edges

15. Now that the top part of the stool is complete, you can begin to work on the cross supports for the legs.

16. Take a 2x4 piece of wood and start to measure out the pieces. The longer piece in the middle should be about 1 inch wide and 8 inches long. The two shorter pieces should be about 1 inch wide and 3 ½ inches long.



17. Once you have cut these pieces you can also use the sander to smooth out the sides before gluing them onto your stool.



18. Use wood glue to place your cut pieces similar to how they have been placed in the image below:



19. Next, get 4 pieces of longer wood from the stockpile. These will be the legs of the stool. Measure their length to be approximately 9 ½ inches and use the bandsaw again to cut them to this length.
20. Next, use a ruler to draw a line at an angle for the legs of the stool. The angle I measured while cutting was approximately 40 degrees.

21. Use the miter saw to cut the pieces at an angle. Make sure to cut both sides of the wood similar to the picture below:



22. Apply more wood glue to one of the angled sides of the wood and glue it to the top of the stool. Leave it overnight to allow the glue to completely dry.
23. Once the wood glue is completely dried it should look similar to the photo below:



24. For a more finished look, you can also use wood stain on the stool. If you choose to do this make sure to get the blue tarp and take your wood stain outside to paint the stool. Due to the fumes from the wood stain, it is safer to do this step outside.
25. Stir the wood stain with a scrap piece of wood and when you are ready grab a rag and dip it in the wood stain. Start to spread the stain around all over the stool and make sure to cover all areas.

26. Leave the stool outside to dry for about 15-20 minutes and then you can bring it inside to let it dry overnight. Once completely dried your stool should look similar to the photo below:



27. You have now finished building your stool! If you would like to, you can create your own seat cushion for your newly built stool follow the instructions below to learn how.



## Seat Cushion

### Tools required for seat cushion:

- Fabric
- Chalk
- Fabric cutter
- Stuffing

### Machines used for seat cushion:

- Sewing machine

### Steps:

1. Choose which fabric you would like to use. I chose to use the colored panels of fabric that are already pre-cut into a square.
2. I chose 4 shades of fabric that I liked and laid them out like a larger square. Then using the sewing machine, sew all 4 panels together and the result should look similar to the photo:



3. Repeat this process on 4 more squares of fabric.



4. Now that you have 2 large pieces of fabric, take some fabric chalk and sketch out a circle on each piece that is slightly larger than the size of the top of your stool. Sketch it out on the side that you do not want to show.
5. Next, you can cut off any excess fabric. This does not have to be perfect as the sewing will cover up any edges.
6. Next lay the two pieces of fabric on top of each other so that they are inside out, meaning that you can see the sides that you do not want to show. This is because once you sew the pieces together you will flip them inside out.
7. Use the sewing machine to sew around the circle that you drew but leave a small opening at the end that is about 2 inches long.
8. Once you have sewed around, use the small opening you left to flip the cushion inside out.
9. Next, grab the stuffing and stuff the cushion to your desired amount.
10. Finally, use the sewing machine to sew shut the small opening you made earlier.
11. This is what your final result should look similar to:



12. Congratulations, now you have fully completed your wooden stool and seat cushion!

