

# WYRKSHOP MOBILE MAKERSPACE

## Tiny Town



**ESTIMATED TIME: 50 MINUTES**

### LEARNING OBJECTIVES

- Learn more about the life skills and how they can be used in the mobile makerspaces
- Explore the mobile makerspace woodshop tools and how to use them
- Create a miniature town

### LIFE SKILLS LEARNED:



### LESSON PLAN VIDEO:

<https://youtu.be/n-OA-JwXPSs>  
or scan this

**LEVEL: 1**



### MATERIALS NEEDED:



Mobile makerspace



Scrape Wood 1/4 inch  
or thinner



Measuring tape



Colored paper



Markers and a pencil

# ACTIVITY OUTLINE:

## STEP 1:

We need to make sure we are being as safe as possible while using woodshop tools. Your first step in making your tiny town is to take WOOD101 in the Maker Access Pass, if you want to use a drill to secure objects in your tiny town, you will also need to take Wood102.

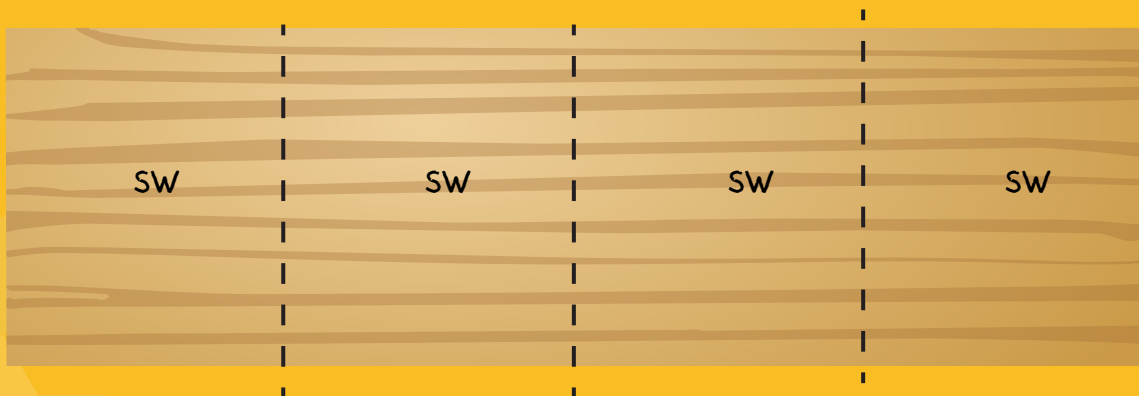


## STEP 2:

Now that we know the basics of woodshop safety let's practice our newfound skills by making a tiny town. You will need to first plan out what you want your town to look like, you can just do this with a pencil on a sheet of paper. For a place to be considered a town, we will need to have a post office, let's start there!

## STEP 3:

A building usually has 4 sides. Find a flat board and measure it into four equal squares, remember this is a tiny town, so don't make your pieces too large! Label four of the pieces with an SW. Now, use the hand saw to cut out your pieces. \*Let's start and end the day with all the fingers you came to school with. Remember to keep your fingers clear of the blade! The teeth are very sharp and can cut into your fingers. For your first cuts, have a teacher or adult supervising you.



# ACTIVITY OUTLINE:

## STEP 4:

Great! Now you have the post office walls cut! Now that you have some cutting time under your belt, let's move on to making a roof! Cut two pieces of wood that are slightly wider and longer than one of your sides, around  $\frac{1}{2}$  or  $\frac{1}{4}$  inch larger. These will be used to make an A shaped roof. Cut your first piece of the roof and label it R. Now, let's do some very simple math. Measure the width of the board labeled R and mark that on a scrap piece of wood, now measure the length of the board and write that on the same scrap piece. Now add  $\frac{1}{2}$  to  $\frac{1}{4}$  inch to the width. Measure the thickness of the board labeled R and write it on the scrap board. Take the length measurement and minus the thickness measurement. Now take all that math that you just did and draw out a square piece of board with those measurements and cut. Label this board R2.



## STEP 5:

Now, you have the option to use a hammer and nails provided in the mobile makerspace woodshop tools, or wood glue.

## WOOD GLUE INSTRUCTIONS:

1. Remember the saying just a dot not a lot? Well, that saying applies to wood glue. Take the wood glue bottle and put a small dot on your pointer finger on your dominant hand. Swipe the glue dot over the edge of one of the wall pieces labeled SW of wood until the whole edge of the board has an even light layer of glue. Great! Now repeat this process on one of the other wall side pieces of wood.



# ACTIVITY OUTLINE:

2. Take a side piece of wood that doesn't have glue on it and place the end on top of the wood glue lines you just made, the wood should create a 90 degree angle.

3. Use a clamp to secure the wood, if you feel really skilled try to wood glue and clamp down the last wall.



## NAIL INSTRUCTIONS:

1. Choose a thin finishing nail from the woodshop tool bag that is about  $\frac{1}{2}$  to  $\frac{3}{4}$  inch longer than one of your boards thicknesses. Found one that works? Great, let's grab 6 of those and the hammer.

2. Now, a hammer's head and fingers are not great friends, so let's make sure they don't meet! It may be easier to keep the piece of wood you are hammering in a clamp.

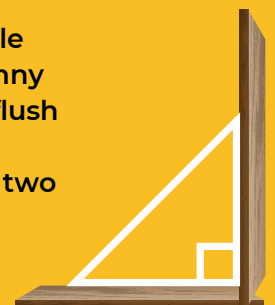
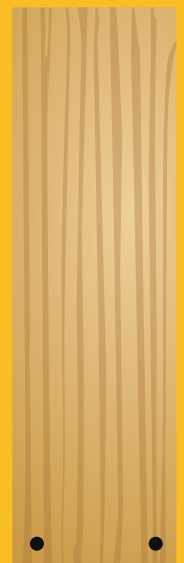
3. Take a side wall piece of wood (labeled SW) and measure the thickness of the wood. Now take that measurement and measure from the side edge piece of wood up. Now do the same thing on the top of the piece of wood, you should have two dots in a line.

4. Take a scrap piece of wood (a piece that you are not using) and put it below the piece you just made the dots on. Now take a nail and line it up with one of the dots. Introduce the hammer head with the head of the nail, hammer in this nail until it is just barely poking out the back. \*Do not hammer the nail fully into the scrap board! Repeat this process for the other dot.



5. Now take another side wall and line it up at a 90 degree angle from the board with nails so that the nails are meeting the skinny side of the side wall. Safely hammer in the nails until they are flush with the wood.

6. Repeat steps 3. to 5. By the end of this step you should have two halves of a box. Secure the halves together using the same methods as above.



## STEP 6:

Now let's connect pieces of the roof. Meet the two pieces of wood labeled R and R2 like we did the walls. This should make a 90 degree angle and the length of both sides should be equal. Repeat one of the methods above in a or b to join the wall together.

# ACTIVITY OUTLINE:

## STEP 7:

Now, you may simply place the roof on top of the box (sides pieces) you made, or you can glue it down.

## STEP 8:

Lastly, we need to decorate this post office! Use the markers and crafting paper. Now you know how to make a simple structure! Use the skills we just learned to create other buildings for the town!