

MINIATURE TREEHOUSE

final project

by Elaina Comia



For my final project, I built a miniature tree house using mainly items I found in nature in combination with laser cut pieces of plywood. Before settling on my concept, I knew I wanted to incorporate natural objects, such as tree branches, leaves, or flowers, but I wasn't sure how. I also realized that I had enjoyed working with laser cut wood during the semester, so I decided to combine the two interests.

research

INSPIRATION

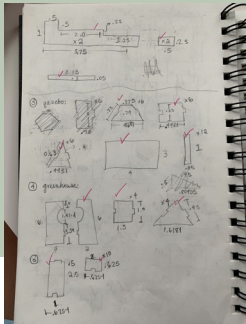
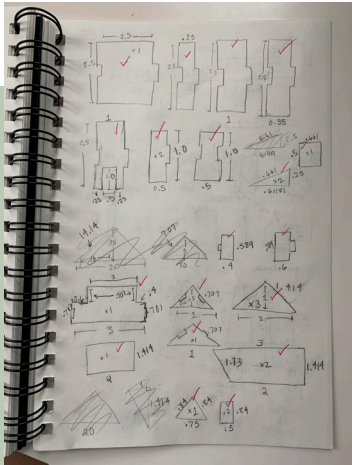
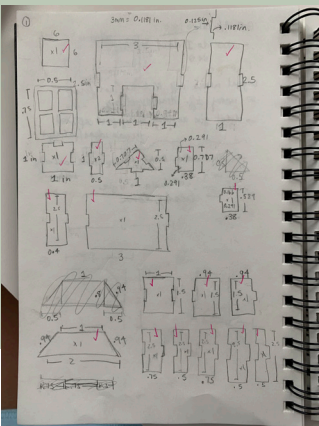
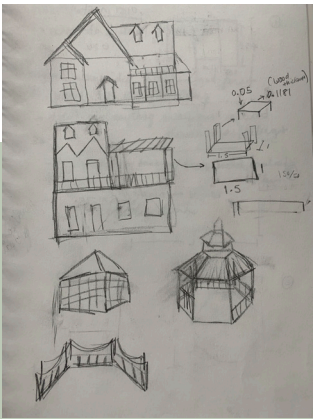
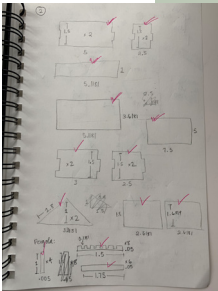
Upon research, I found that there were already some miniature treehouses that existed. I also found that creating miniature houses was actually quite a popular hobby and the examples I found of these houses both impressed me and helped me in deciding the design of my own houses.



planning

SKETCHING

I began the planning process by making sketches of what I wanted the houses to look like. After settling on a few designs, I figured out the measurements for each individual laser cut piece.



prototypes

BRISTOL BOARD MODEL

In order to make a prototype, I needed to figure out which branches I would use as the “tree trunk” for the treehouse.

The process involved scraping the bark off of the tree branches and burning them to give them a darker tone and to dry them out.

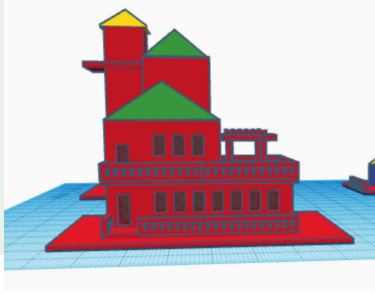
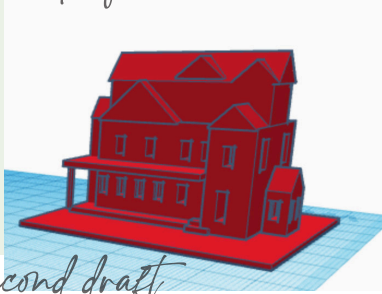
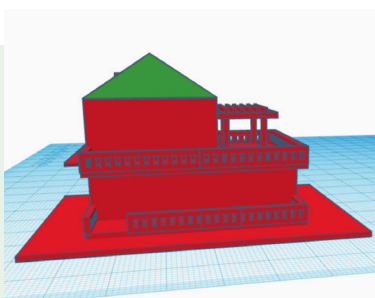
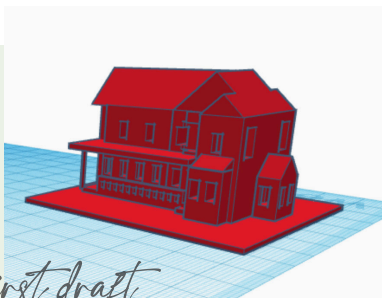


TINKERCAD MODELS

Throughout the process of creating the treehouse, I went through several versions of CAD models.

I made the first model based off of the dimensions of the bristol board prototypes I had created.

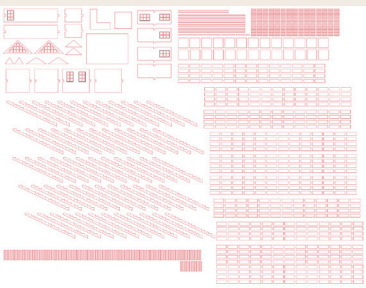
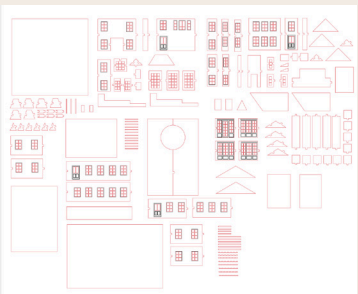
After the initial drafts, I decided to add another “floor” to the houses.



process

LASERCUTTING

After lasercutting and building what I thought would be my final design of my house, I felt that it was not interesting enough. I then went back and edited my initial design and returned to the makerspace to lasercut pieces for additions to my houses.



ADDITIONAL DETAILS

I combined baking soda with paint to make the paint thicker and add texture to the houses. I also used a thin layer of blue paint on the “shutters” in an attempt to make them look worn out. The moss used was a combination of moss found in my backyard and real moss that I purchased. Lastly, I used broken pieces of an egg carton to create stone paths and a stone wall.

OVERVIEW



FIRST HOUSE



SECOND HOUSE

GAZEBO &
GREENHOUSE