

EDSGN100

Section004

Instructor: Elizabeth Kisenwether

Multi-Purpose Desk



Samantha Fuentes: Team Manager/Webmaster

Karla Chuljak: Designer/Roll Assignment

William MacCallum: Building Manager

Sachet Arbol: Product Marketer



Problem Statement:

We came up with the idea of the Multi-purpose Desk taking into consideration the lack of space in most college student's living spaces/apartments. Many students found it very costly to buy three or more separate pieces of furniture instead of one. It was designed for students who need more space for studying and also for storage. The Multipurpose Desk is a multi-piece of furniture that offers enough space for a student's college appliances and even for their TV. Unlike prior desks, our product offers the advantage of having sufficient capacity to hold a computer, TV, printer and even books all in one.

Concept Development:

Karla, one of the team members came to Penn State as a transfer student. She had to immediately move into an unfurnished apartment and found it very costly and space consuming to buy multiple pieces of furniture. She had to spend more than \$400.00 to furnish the apartment. With this in mind, she created the blueprint of our design. With the design, we created a survey with a sketch and two other designs in mind. Our feedback was that our main design, the multi-purpose piece of furniture, was more useful for many college students, especially with apartments. It was also the least costly for many students. They were impressed with our features such as our extra shelving space, TV stand, and corner stand



Testing:

For our testing we were assigned to build a triangle column with dimensions 8" x 9". Our outcome was that it was able to sustain a weight of about 162 lbs. It was a great idea for a design, but we still chose to use the square column to support our desk because we wanted to have many layers for support, and with a triangle column it would have been a little more complicated. We chose this design based on group 5's 8" x 9" square column.



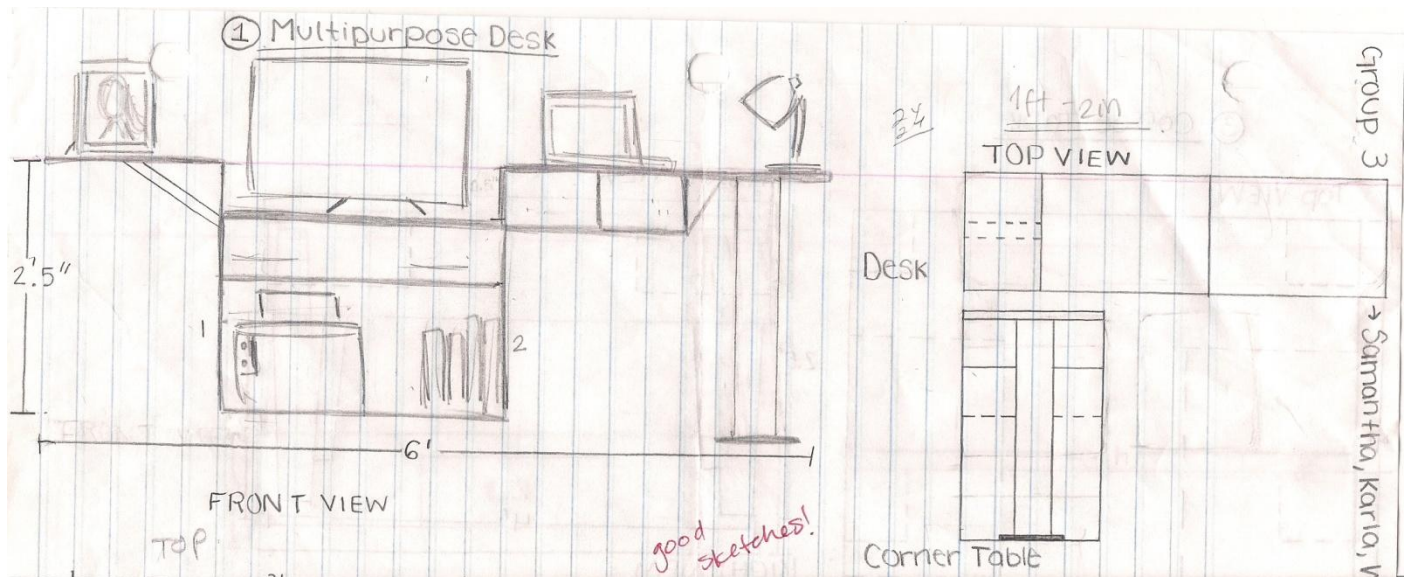
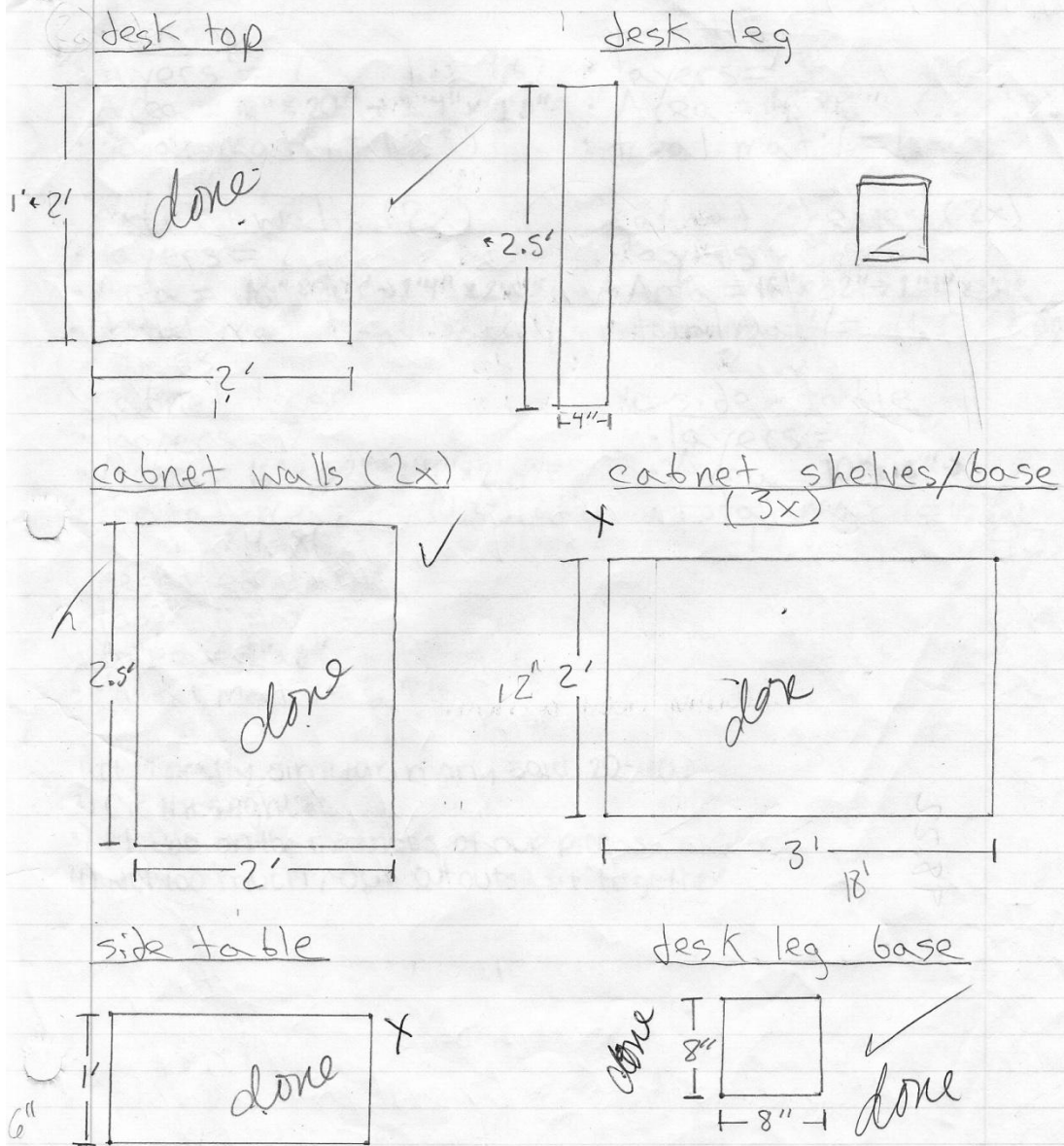
Final Design:

In our prototype, our desk included a working space, for students to work at or study at, a middle storage space with shelves that can hold a TV on top and a printer in the lower space, and a night stand on the side that would hold a lamp or a picture frame.

Full Size		
Parts	ft.	in.
Desktop	1.33x3.33	16x40
Cabinet Shelves (X2)	1.33x2.67	16x32
TV Stand	1.33x2.67	16x32
Side Table	1.33x0.83	16x10
Desk Leg	0.33x0.33x2.5	4x4x30
Desk Leg base	0.67x0.67	8x8
Half Size		
Parts	in.	
Desktop	8x20	
Cabinet Shelves (X2)	8x16	
TV Stand	8x16	
Side Table	8x5	
Desk Leg	2x2x15	
Desk leg base	4x4	

Full size

team 3
9/22/10

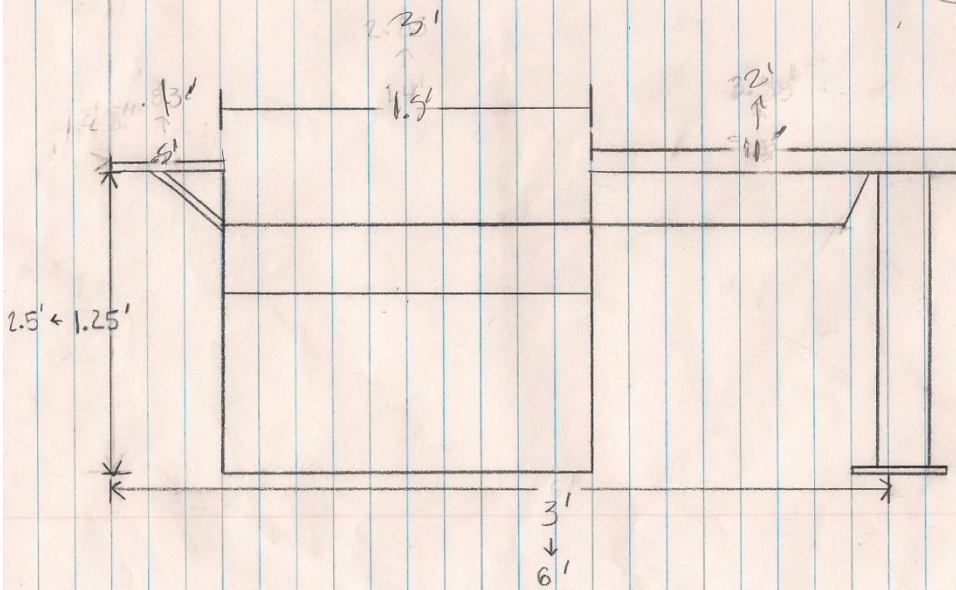


1/2 Scale

Multi-Purpose Table

Product Name?

Amount of Cardboard needed?



Group 3 → Samantha F., Karla, Will, Sachet



Estimated selling price for the Multi-Purpose Desk: \$195.75

Cardboard Cost: \$ 13.06

Total Cost for Glue: \$20.24

Labor Time: \$97.20

Total Cost of Manufacture: \$130.50

Lesson Learned:

After building our model, the group decided that if given more time we would have added more layers to our shelving area and TV stand, as well as thought of a better way to actually connect the parts of our model together. Although it was not put together in the most efficient way, it still worked for us and we were successful at keeping everything together. If given the extra time to work on our project, we would have included the drawer we originally drew out on our sketch, but due to lack of time we decided to leave it out of our final product. We should have also used our time more wisely, and we should have premeditated and discussed our goals and roles for everything.