Step 3: Plan

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**Step by step Plan**

**Materials that I need**

1. Floor &Wall: Ply wood
2. Ladder: rope, Match stick
3. Door: Cloth
4. Ceiling holder: 20 mm diameter wide wood.
5. Windows: Plastic sheets
6. Ceiling: blue high density foam board glued to a plastic sheet.
7. Flap: foam board.

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| Steps | Numbered list of jobs and tools to use |
|  | Create scale model. |
| 1.
 | Find different materials. |
|  | Ask Mr. Thorburn how to use the tools.  |
|  | Get out three strips of rope. |
|  | Cut them and tie them to some match sticks so that they can form a 200 mm ladder. |
|  | Cut out the floor out of ply wood each side of the hexagon. The sides are all 200 mm long. Cut it out using a coping saw. |
|  | Trim up the floor so that the sides are smooth using a file.  |
|  | Cut out the thick cloth material and cut it out in an equivalent size as the floor plywood. In the center of the hexagon shape, to cut out a circle the diameter of 20 mm. |
|  | Get the glue gun and glue the thick cloth material to the plywood hexagon with a glue gun.  |
|  | Cut out the 5 walls in the estimated measure that are used out of plywood using a copping saw. |
|  | Out of the 5 walls that you cut out take 4 and cut out a rectangle that is 200mm by 40 mm. Use a coping saw for the process. |
|  | Get out the plastic sheet material. |
|  | Cut out 4 plastic sheets that is 210mm by 50 mm with scissors. |
|  | Glue the plastic sheet on the space that was cut in the 4 walls. |
|  | Stick the 4 walls in to the floor with a glue gun. |
|  | Stick the 4 walls one by one together. |
|  | At the back blank space, stick the leftover wooden piece and also glue gun it to the floor and the other walls besides it.  |
|  | Take out the 20 mm diameter cylinder. To make the ceiling holder. |
|  | Cut it out with a copping saw so that the height is 80 mm. |
|  | Fit the cylinder in to the hole and glue gun it in to the floor of the emergency shelter. |
|  | Get out the blue high density foam board. |
|  | Cut out a hexagon out of the high density foam board with a hacksaw so that the lengths of each of the sides are 200mm each to make the ceiling. |
|  | Glue the ceiling on to the ceiling holder and the other five walls. |
|  | Cut out some thin cloth material in to a 200mm by 80mm rectangle. |
|  | Now cut the thin cloth material right down the middle so that each piece is 100mm by 80mm. |
|  | Glue gun the cloth material on to the spot that is left from building that walls up on front. |
|  | Sew buttons and a string in to the cloth so that it can create a “lock” for the door. |
|  | Glue the ladder that you already made on to the center of the entrance of the emergency shelter. |
|  | Get out a plastic sheet and glue the plastic sheet on to the ceiling of the emergency shelter cut it like the shape of the ceiling. |
|  | Get out the white foam board and cut with a craft knife it out in a parallelogram. The height has to be 200mm by 80mm. |
|  | Glue gun on the while foam board on the back of the hexagonal prism.  |

1. **Evaluation of Plan**
2. Create scale model.
* Remember to put all the measurements in mm.
* Double check all of the measurements to check if all of the measurements are right.
* Using a scale model will be efficient because I will know the measurements that I will have to use before even building my model.
* This will be easy to do because I already have measurements in meters and all I have to do is change them so that it will be a 300mm by 300mm by 300mm model.
1. Find different materials.
* I need to find all the different materials and double check in the previous class that I have all the materials that I need in my hands.
* I would have to gather the different materials before I even start my create stage so that I am sure that the different materials are there.
* This will be hard because some of the materials that I need are not in the DT room, and I have to find it myself.
1. Ask Mr. Thorburn how to use the tools.
* I would have to make sure that I take notes on how to sure the tools.
* I have to remember to use these tools carefully and remember that safety is first.
* This will be easy because I know the names of the tools; I only need to know how to use them correctly.
1. Get out three strips of rope.
* Make sure that the three strips of rope is thick enough and that it is sturdy enough.
* Make sure to cut the three strips of rope at the length it is supposed to be 200 millimeters each.
* This will be hard because it is hard to measure the three strips and cut it exactly the same.
1. Cut them and tie them to some match sticks so that they can form a 200 mm ladder.
* Cut the third piece of rope in to 10 parts which is 20 mm each.
* Tie them on so that the distance between each strip is 20 mm each.
* This will be a hard process because the knot has to be right the first time or else the ladder could be not that organized.
1. Cut out the floor out of ply wood each side of the hexagon. The sides are all 200 mm long. Cut it out using a coping saw.
* Make sure to measure twice and cut once.
* Remember the safety tips for the tools that I am using especially because this tool is a coping saw which can be dangerous.
* This will be hard because I have never used a coping saw before.
1. Trim up the floor so that the sides are smooth using a file.
* Don’t trim it so that it decreases in size just trim it so that it is smooth in the side.
* Double check at this point that the size if the floor is right.
* This will be easy because filing the wood is easier than using other tools.
1. Cut out the thick cloth material and cut it out in an equivalent size as the floor plywood. In the center of the hexagon shape, to cut out a circle the diameter of 20 mm.
* Double check so that the thick cloth material is the same size as the floor.
* And make sure that the circle in the middle of the thick cloth material is not uneven.
1. Get the glue gun and glue the thick cloth material to the plywood hexagon with a glue gun.
* Be careful not to burn your hand with the glue.
* Don’t put a lot of glue on one spot because it is going to cause the floor to be bumpy.
1. Cut out the 5 walls in the estimated measure that are used out of plywood using a copping saw.
* Be careful when using the coping saw because it might be dangerous.
* Don’t cut exactly in the same length because this is an estimate.
1. Out of the 5 walls that you cut out take 4 and cut out a rectangle that is 200mm by 40 mm. Use a coping saw for the process.
* When using a coping saw be careful and watch out for your fingers.
* Measure twice and cut once.
1. Get out the plastic sheet material.
* When getting out the plastic sheet material ask Mr. Thorburn.
* Cut out little to not waste the plastic sheet material.
1. Cut out 4 plastic sheets that is 210mm by 50 mm with scissors.
* Again. Make sure to measure once and cut twice.
* The plastic sheets are easy to cut and I think this is one of the easiest steps in my plan.
1. Glue the plastic sheet on the space that was cut in the 4 walls.
* While glue gunning the plastic sheet, I will be careful to not burn my fingers.
* I will also not put a lot of glue because it will create an uneven surface.
1. Stick the 4 walls in to the floor with a glue gun.
* When glue gunning the walls to the floor, be careful to not put a lot of glue because it would not create an even wall.
* Be careful not to make a mess of the glue.
1. Stick the 4 walls in to the floor with a glue gun.
* When sticking the walls together, I will make sure that there are no gaps in the middle of the walls.
* I will put a little glue because if I didn’t it will cause there to be a big blob of glue in between the walls.
1. At the back blank space, stick the leftover wooden piece and also glue gun it to the floor and the other walls besides it.
* Be careful to not stick the wooden piece unevenly and stick it exactly where it is supposed to be.
* Make sure that the walls are sturdy at this point.
1. Take out the 20 mm diameter cylinder. To make the ceiling holder.
* When taking the cylinder out, be careful not to hit my fingers on it because it is a heavy piece of wood.
1. Cut it out with a copping saw so that the height is 80 mm.
* When you are cutting the cylinder out with a copping saw, be careful so that the ends are smoothly cut and not rigid.
* Don’t cut your finger while cutting the cylinder.
1. Fit the cylinder in to the hole and glue gun it in to the floor of the emergency shelter.
* When glue gunning the cylinder in to the hole, double check before that it actually fits inside the hole.
* Make sure that there is no space in between the cylinder and the hole because this is the ceiling holder and it needs to be even or else the model would not be even.
1. Get out the blue high density foam board.
* When getting out the blue high density foam board, make sure to cut it in to smaller pieces so that unnecessary pieces wouldn’t be wasted.
* When getting the foam board out ask permission from Mr. Thorburn.
1. Cut out a hexagon out of the high density foam board with a hacksaw so that the lengths of each of the sides are 200mm each to make the ceiling.
* Make sure that the size of the ceiling is equivalent to the floor because it has to be even.
* Make sure to put something under the foam board so that the table doesn’t get scratched.
1. Glue the ceiling on to the ceiling holder and the other five walls.
* This is the most delicate step because this is when you have to see if the model holds up. Don’t rush the process and keep it slow and accurate.
* When glue gunning the ceiling keep it so that the layer of glue is not thick.
1. Cut out some thin cloth material in to a 200mm by 80mm rectangle.
* When cutting the cloth material, remember to make the edges straight and not zigzagged.
* Remember to not lose the thin cloth material.
1. Now cut the thin cloth material right down the middle so that each piece is 100mm by 80mm.
* When cutting the thin material make sure that it is right in the middle.
* Make sure to make the cut light straight and not zigzagged.
1. Glue gun the cloth material on to the spot that is left from building that walls up on front.
* When you are glue gunning the cloth material, use only a little because it is going to ruin the cloth.
* Be careful of your fingers because you may burn them.
1. Sew buttons and a string in to the cloth so that it can create a “lock” for the door.
* When sewing, don’t prick your finger in the needle.
* Remember to not lose the strings and buttons before we make the door.
1. Glue the ladder that you already made on to the center of the entrance of the emergency shelter.
* When gluing your ladder, remember to put it right in the middle of the entrance.
* Just put a little glue on either side of the strings because if you put a lot it is going to create a huge blob of glue.
1. Get out a plastic sheet and glue the plastic sheet on to the ceiling of the emergency shelter cut it like the shape of the ceiling.
* This is for the waterproof protection and it is very important so this must be done accurately.
* When gluing the plastic sheet on the ceiling, remember to just put little glue on the sides of the shape.
1. Get out the white foam board and cut with a craft knife it out in a parallelogram. The height has to be 200mm by 80mm.
* This white foam board is easy to cut but you need a thing under the foam board because the craft knife can damage the table.
* Remember that the sides have to be smooth.
1. Glue gun on the while foam board on the back of the hexagonal prism.
* This is the finishing touch of the model and it will have to be done carefully and slowly.
* When glue gunning it to the back, we will need to put a thin layer of glue.