

RECORD OF PROJECT ACTIVITIES

Week 3) During the third week of term 4 2000 after we had returned from our yearly exams, I had mostly spent them researching and looking around stores and internet websites for hints and ideas of what I should build. I visited many stores such as Knots Pine, Harvey Norman, Ikea and also Fantastic Furniture. By the end of the week it had become clear to me what I wanted to build. I wanted to build an Entertainment wall unit.

Week 4) Throughout week four was designing my project by drawing a few sketches/drawings of an entertainment unit. I came up with many ideas and designs. During each lesson in the week I had come up with different designs but wasn't really comfortable with what I had come up with until the end of the week.

Week 5) In week five I was basically finalising my exact drawings. I had decided to go along with my final drawing as it was the only one that I realised that I liked and that helped create a solution for my needs. From then on I began to create a project plan of what I was going to do for the rest of the term and also in the year to come. During the period left which I think was three days I came up with a plan which was very similar in the steps that I used to construct my design, as I practically followed it mostly.

Week 6) During this week I had to discover what external materials were required to be considered, as I had to find out measurements and details of the equipment that I was going to insert into the unit on completion. I had to go around measuring the things in which I was going to use, such things were a stereo system, a television, a VCR, and also the size of a Subwoofer which was part of my design and was going to be built into the unit.

Week 7) As week seven went past I had to look through a few websites and brochures to determine what kind of materials in which I was planning to use in my project. During this process I came across a Tasmanian Oak Veneered Particle board, as I looked through a brochure from Mister Ply & Wood. I had also looked at a few examples of what the teacher had given me (off cuts). He would bring us a few pieces of different materials and I would look and decide whether or not I wanted to use them. I decided to use a veneer particleboard with the frame covered with Tasmanian Oak trimmings and that's pretty much the only choice of wood. I also used plywood for my back to keep it steady and also hide the wall behind the unit when in place.

Week 8) During this week I began my marketing research, as I began to investigate different locations for materials. First I visited a Danias timber which was a local hardware yard in Marrickville. Then I went to the hardware house in Mascot but the prices there were very expensive so I decided not to purchase from there. Finally I found a location where the prices were extremely cheap, it was so cheap that we got a \$20 dollar discount off the commercial price because we bought it through the school which gave me a saving on \$60 dollars

- as I required three sheets of the veneered particleboard giving me the cost of \$211.50 as each sheet cost \$70.50 after being reduced from \$93.65 per sheet.
- Week 9) As the last week of the term approached I had come to a stage where during the whole week I was only dependant on calculating and correcting all measurements required as I was basically just double checking the measurements and calculating them properly if they were incorrect. I did encounter some incorrect measurements but during this week it gave me time to correct the sizes and make a good copy of all the correct measurements to ensure that I wouldn't get confused with the wrong details.
- Week 10) In the last term of the year 2000 I began to order my materials such as the Veneered particle board as I decided to buy it from Mister Ply & Wood as they offered us a great deal compared to their prices on the brochure. Basically in that week we just ordered our materials. Because it was the last week and it was going to be holidays for 6 weeks, we spent the time cleaning up and organising the tools/machinery/components and materials as we were preparing to lock them up in case of a burglary, as we wanted to take precautions so that when we came back we had all our tools and materials straight away ready to begin. We didn't want to come back to school and find out that our tools were stolen meaning we had to spend money buying tools and also wasting time when we could well use it towards constructing our design/project.
- HOLIDAYS) During the holidays I didn't do much but I did start on my portfolio as I covered one section of it, which was the statement of intent. I knew it was a bit late to do it but I decided to do it then or never.
- Week 1) First week back at school in the Year 2001 had started off to a great start as we spent most of our time that week following up on our materials as we finally received our materials on the first Friday back, after a considerable amount of chasing up.
- Week 2) During week two I began to plan out the layout of where each piece was going to go on the sheet, and to see how I was going to cut the pieces out wasting a little as possible. I had to plan a layout of how each individual piece of the unit was going to be cut out according to the measurements of the pieces. This took a while before I could get the perfect layout. It was like putting together a jig saw puzzle together as it created a challenge for me in how I was going to set it out. Finally I had done that by the end of the week.
- Week 3) Once the planning was done on paper, we decided to pull out the sheets of veneer from the store room and carry them into our work place (wood work rooms). It wasn't easy getting them in as they were very heavy and plus it was hard to get them through the door. That was what took up most of the period on Monday and from Tuesday to Thursday I spent most of my time drawing the layout of each piece of the unit onto the sheet as it took me one day per sheet. On Friday I was basically going over all the sheets making sure that the pieces marked out according to the measurements were correct, as it was the last thing that I would have wanted to cut out a piece and find out that it was useless and that I couldn't use it because it was incorrectly cut.

Week 4) This was the first stages of the construction. It was time when finally I started to cut out each individual pieces. On the Monday of that week, My teacher Mr Rytmeister was showing me how to use the Circular saw as it was very important to be trained in that area to prevent any injuries or destruction of the materials. On Tuesday I was a little nervous because it was the first time I was going to use the circular saw but as soon as I got a hold to the machine my nerves went away. I cut the sheet in half according to the lines and markings. I felt great about it. During that week I be cut one sheet out of the three sheets as I was totally comfortable with the tool. When I was cutting along the grain I just simply cut it, but when I was going against the grain I had to use the knife which was really sharp to cut on the line so that when I was cutting along the grain that it wouldn't splinter the wood up and chip my corners leaving them ruined. During that week I had only managed to cut one which made me pretty disappointed because it just meant that I had to pick up the pace but yet be careful.



Week 5) During this week I had been doing the same as the week before. Simple cutting all the sheets to sizes roughly giving a 8mm gap between the line and where I was cutting as I didn't want to mistakenly cut the sheet wrongly. Throughout this week I was basically cutting the other two remaining sheets of Tasmanian Oak Veneered Particle Board as shown in the images below.



Week 6) Here is where I started to finalise my pieces (panels) as I had I to get my edges on the panels correct and accurate. Using the large router (one of the tools used) I had to measure mark the line using a knife to prevent the chipping of the edges. Once the line had been marked out I had to get a straight piece of wood and clamp it down 72mm away from the mark line and then clamp it down to the bench in preparation of routing. Once everything was put down together and secure I began to router as I slowly cleaned out the excess materials from left to right. This was a long process of the development of my design as it took a while to put set up each individual pieces for routing. By the end of the week I had completed one of the three sheets.

Week 7) In this week I basically had to do the same as the week before as I was continuing the job I had started, the only difference was that I was working on the second sheet. By the end of this week once again I had completed those pieces.



Week 8) And in this week I was simple doing once again the same jobs as the past weeks. Simple rourtering the inaccurate cuts according to the measurements marked out by the lines. Here are some of the Images taken whilst in progress.



Week 9) Weeks nine was the a disadvantage towards me as I had exams for industrial technology and other subjects. This is a disadvantage to me because I had no real time to work on my construction as I had to study for my exams to achieve the highest possible marks to my ability.

Week 10) In this week it was the same deal as in week nine because I had still had exams and had no real time to go and work on my job.

HOLIDAYS) During the holidays I didn't do any thing except go over my plans for my construction. And think of ideas that my suit my design.

Week 1) During the first week back I was very excited to return as it was the first of the assembling. I was ready to start joining the individual pieces together. Firstly I had to begin to assemble the knockdown fittings which the teacher had bought for me over the weekend as it was right next to his house. Using the knockdown fittings I had to assert the locations of the knockdown fittings, double check it and then finally screw them down using a cordless drill. This mostly took up the week as there were many things to do in that period.



Week 2) Once the knockdown fittings were in place I began to put the pieces together. I began to assemble the unit by joining the outside panels left and right with the bottom. These panels should of were absolutely parallel and identical. Once that was done I began to join the top panel to the outside panels. I then inserted the two identical panels which are cut to fit in side in between the bottom and top, as I screwed these panels down to the top and bottom. Just before I screwed them down I put a little piece of ply wood on the corners and nailed them into the sides through the back to keep them square and to prevent the whole frame from collapsing. I then screwed the top securely down. After this I inserted the selves that are going to be joined in between the outside and inside panels, at equal height and distance from the bottom. Once that was done I inserted the top centre shelf (designed for the television), before the one below because it will be hard to screw the top screws in such little space. For this shelf I decided to place 4 knockdown fittings on each side because I wanted to make sure that the shelf will hold the weight of the television. Once that was done I then had to insert the centre middle shelf in to place just below the top shelf.



This piece should and was identical to the above shelf. At this stage I was up to creating the back access panel for the speaker box, I had to cut a panel to fit to size in between the middle shelf and the bottom. This panel extended in all directions, from one vertical inside panel to the other and fitted in between the middle shelf and bottom perfectly.

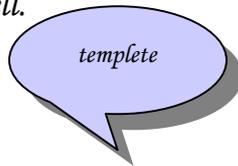




Week 3) During week three of term 2 I had to begin to cut the framing trims that were gonna cover up the edges of the veneered particle board. I had to estimate roughly by using a ruler and giving extra wood if necessary. I had to measure all edges of the panels to calculate how much timber strips was required for trimming to cover. During that same week I had to go down to danias timber were is which I was going to buy my trims, and give the details and get my trims to cut to size according to my correct measurements. When I went down there I specifically asked for 19mm as the person in charge of my situation acknowledged it. He there fore cut it to that size but because I didn't have a ruler to check it on the spot I said ok, thank you and left, but in fact when he cut it, he cut a millimetre too short and that is why now there is a gap in on of the edges of the trims therefore leaving me with the view of the veneers particles. There was nothing I could do about it as I realised when I actually had glued one of the many pieces on. As I got them I began to cut the trimmings according to there measurements to fit their location. As I cut the pieces I went along gluing and nailing them in, I did so for all individual pieces. There was a stage were I had to cut angled trims to fit into a 45° area as shown in the photos below.



Week 4) In week four I to create the front to fit in between the middle shelf and the bottom base and also between the two vertical inside panels. Once they were cut to fit according to measurements, I used to the router to router the edges at a 45° angle so that when it was upright it would sit inside the box hiding all visible veneer. Before joining the two angles to the centre piece I had to measure the centre distance in between the two angled cuts to find the distance using this little template displayed below. Once that was found I had to cut the speaker hole using a jig saw at a diameter of 28mm. Once all that was done I finally completely joined all three pieces together therefore making the front piece. Before going on, I placed the front piece in its location and screwed it down into the base securing its location and position. Once done I placed a back stop so that it would be easy to relocate its position again. This was down for the above bit aswell.



Week 5) During this week there was little to do as I ordered the necessary materials for the top trims. In this period the teacher had got the trims for me on his way home from work and brought it in the next day. He had bought for me Tasmanian oak timber Dressed all round, 2 pieces of 1.8m x 68mm x 19mm (3" x 1"). Once I received it the next day, I started cutting it. I cut the timber to length and then the edges using a mitre join to combine the sides with the front trims. I quickly glued and nailed them in place. On the inside of the top trimmings I cut the other piece of timber to fit inside from edge to edge, once again glue and nailed using G-clamps to hold it down and together ensuring maximum strength. And let to dry over night. Once that was done the next morning using off cuts from the sheet of Tasmanian Oak, I cut and fit a piece go inside between the outside vertical panel and the side trimmings which hangs over the edge. Using the small router, I ran the router along the edge from left to right, cutting any excess timber leaving the timber trims flush with the top as I therefore did the same for the bottom. After all of that was done I used to big router using a round edge profile, I cut in a clock wise motion and trimmed off the top leave a beautiful round edge which absolutely looks good.



Week 6) Week six I took off to do my half yearly exams. During this period I had no time what so ever to complete any task of the portfolio or construction.

Week 7) Once again I had no time what so ever, due to studying for other exams.

Week 8) This week was a bit of a hassle has ordering glass can be such a pain. I had to prepare the exactly measurements of the glass during this week and then go down to associated glass and glazing in Marrickville, and order the glass. It took me two days waiting time to get them. After two days I went to pick them up and on return I got stuck into it straight away as I drilled the holes for the glass hinges to sit on for movement. We used a 11/32 drill bit to drill the hole. Once that was done we aligned the glass in the hinges to square up the glass to sit in the frame perfectly. So all was well by the end of the week.



Week 9) Through out this week and the week after I spent most of my time getting the doors routered down to accurate sizes to add on the trims along the framing of the door to hide and give a sense in variation of timber. I glued and then clamped the door in the big compressor clamps and joined the door and trims together with simply glue only. I was extremely happy with the finished outcome, although im very disappointed because the digital camera was unavailable at the time which meant I couldn't take any photos of that process which was one of my most important processes.



Week 10) Same as above.

HOLIDAYS) During the holidays I basically only worked on my Portfolio.

Week 1) Week one of term 3 is were I was the final week of my construction as I completed any necessary construction such as puttying up gaps as I then began to finalise my job by sanding down all roughs spots and putty and left it very smooth. I left it smooth as a babies bottom (expression). I spent most the week

simply getting the smoothest sides possible using the orbital sander, which was extremely helpful.



Week 2) Weeks two and three I had My Hsc Trial examinations and had no time to spare on my project.

Week 4) On completion of sanding my job down using a cloth and a brush I had to discard all the dust of my project. Any excess dust had to be removed so that it does not stick to my job when lacquering. Once that was down I had to pull some of my parts off such my doors, top, and glass off for separate lacquering (except glass) as I didn't want the pieces to get stuck to each other. During this week I had to use a Satin Polyurathane Lacquer to lacquer my job. It took 2 days. One coat per day was required. It took me up to 3 hours to lacquer everything per day. I did so for two days. Once that was done I was so happy to be finished. I was complete. On Thursday of that week we moved my job with the assistance of a friend, we moved it into the workplace were we completely assembled it. We inserted the speaker and its grill and put the glass and doors back in ans also the top and back on back on (Plywood back).once they were on I

also put on the speaker brackets on the side at the correct and comfortable position as some in one of the pictures below. The following day when we returned, I was very disappointed as I found a crack in my top left glass right on the hinge, as it seems that a student had ruined the glass by pushing the glass back beyond its limit causing it to crack, otherwise I am completely happy and proud of my self for completing such a magnificent major hsc project.





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|--|---------------|--------------------|
| <i>Exams</i> | <i>Week 1</i> | <i>TERM 4 2000</i> |
| <i>Exams</i> | <i>Week 2</i> | |
| <i>Look around for some examples of what to build</i> | <i>Week 3</i> | |
| <i>Draw a few Sketches or Drawings</i> | <i>Week 4</i> | |
| <i>Finalise exact Drawings, Create project plan.</i> | <i>Week 5</i> | |
| <i>Determine roughly what external materials are to be considered eg: Tv, Vcr.</i> | <i>Week 6</i> | |
| <i>Determine what sort of materials you would like to use in your project.</i> | <i>Week 7</i> | |
| <i>Market Research, Investigate different locations for Materials</i> | <i>Week 8</i> | |
| <i>Calculate and Correct all Measurements.</i> | <i>Week 9</i> | |
| <i>Order Materials, including timber and other necessary materials.</i> | <i>Week 0</i> | |
| <i>Holidays</i> | | |

PROJECT TIMELINE

| | | |
|---|---------------|--------------------|
| <i>Receive Timber/Materials</i> | <i>Week 1</i> | <i>TERM 1 2001</i> |
| <i>Plan the layout of the measurements on paper</i> | <i>Week 2</i> | |
| <i>Draw planned layout on the timber/materials used</i> | <i>Week 3</i> | |
| <i>Cut each pieces according to measurements marked on the sheet (roughly 8mm)</i> | <i>Week 4</i> | |
| | <i>Week 5</i> | |
| <i>Router all individual pieces accurately according to markings. Take off the excess 8mm that was given when cut roughly to size, and cut exactly with the router to size.</i> | <i>Week 6</i> | |
| | <i>Week 7</i> | |
| | <i>Week 8</i> | |
| <i>Exams</i> | <i>Week 9</i> | |
| <i>Exams</i> | <i>Week 0</i> | |
| <i>Holidays</i> | | |

| | | | | | | | |
|--|------------|-------------|--------------------|---|-------------|-------------|--------------------|
| <i>Complete any necessary construction and begin finalizing by Sanding job</i> | <i>ek1</i> | <i>1We</i> | <i>TERM 3 2001</i> | <i>Begin to assemble Basic frame to assert steadiness</i> | <i>ek1</i> | <i>1We</i> | <i>TERM 2 2001</i> |
| <i>Exams</i> | <i>ek2</i> | <i>1We</i> | | <i>Cut Trimmings to fit the front of there locations.</i> | <i>ek3</i> | <i>1We</i> | |
| <i>Exams</i> | <i>ek3</i> | <i>1We</i> | | <i>Create front of the the project, build to fit in its planned</i> | <i>k4</i> | <i>1Wee</i> | |
| <i>On completion of sanding dust any excess dust and begin to lacquer</i> | <i>ek4</i> | <i>1We</i> | | <i>If necessary research and buy any materials which maybe</i> | <i>k5</i> | <i>1Wee</i> | |
| <i>Finalize Portfolio</i> | <i>ek5</i> | <i>1We</i> | | <i>Exams</i> | <i>k6</i> | <i>1Wee</i> | |
| <i>- DUE -</i> | <i>ek6</i> | <i>1We</i> | | <i>Exams</i> | <i>k7</i> | <i>1Wee</i> | |
| | <i>ek7</i> | <i>1We</i> | | <i>Prepare measurements for ordering glass necessary for</i> | <i>k8</i> | <i>1Wee</i> | |
| | <i>ek8</i> | <i>1We</i> | | <i>Measure the sizes for the doors, and mark down all measurements and create the doors to fit in there located</i> | <i>k9</i> | <i>1Wee</i> | |
| | <i>ek9</i> | <i>1We</i> | | | <i>ek10</i> | <i>1We</i> | |
| | <i>10</i> | <i>Week</i> | | | | | |
| <i>Holidays</i> | | | <i>Holidays</i> | | | | |

PROJECT FINANCE PLAN (BUDGET)

| RESOURCE/MATERIALS | SUPPLIER | QUANTITY NEEDED | ESTIMATED COST | ACTUAL COST | DI |
|---|------------------------------|---------------------------|-----------------|-----------------|----|
| Tasmanian Oak Particle board 2.4m x 1.2m x 19mm | Mister Ply&Wood | 3 @ \$70.50 | \$240 | \$211.50 | |
| Tasmanian Oak 1.8m x 19mm x 19mm | Danias Timber | 6 @ \$4.16 | \$40 | \$25 | |
| Glass 300mm x 518mm | Associated glass and glazing | 2 @ \$25 | \$52 | \$50 | |
| Door hinges (half overlay 110° screw on, with Mounting plate 3mm) | Furnware Trading | 4 @ \$1.05 | \$15 | \$4.20 | |
| Glass Door hinge (pair) to suit 5mm Glass | Furnware Trading | 2 @ \$0.60 | \$5 | \$1.20 | |
| Single Magnetic Push Catch | Furnware Trading | 2 @ \$0.78 | \$3 | \$1.56 | |
| Strike Plate – No handle – black | Furnware Trading | 2 @ \$0.45 | \$1 | \$0.90 | |
| Tasmanian Oak Mushroom knob | Hardware house | 2 @ \$0.60 | \$6 | \$1.20 | |
| Speaker Mountings (pair) | Reverse Garbage | \$5 (pair) | \$12 | \$5 | |
| Needle Point wafer head screws (8g x 15mm) | Hardware house | Pack of 100 / @ \$4 | \$3 | \$4 | |
| Particle Board Screws 1000pcs (# 6 x 5/8) | Furnware Trading | Box of 1000 / @ \$7.85 | \$12 | \$7.85 | |
| Particle Board Screws 1000pcs (# 8 x 1") | Furnware Trading | Box of 1000 / @ \$12.70 | \$15 | \$12.70 | |
| Tasmanian Oak (Bottom Trims) 1.8m x 75mm x 19mm | Hardware house | 3.6m @ \$5.70/m | \$22.50 | \$20.52 | |
| Tasmanian Oak (Top Trims) 2.1m x 45mm x 19mm + 1.8m x 45mm x 19mm | Hardware house | 3.9m @ \$3.40/m | \$18 | \$13.26 | |
| 12" Tornado Subwoofer | Strathfield Car Radios | \$30 each | \$35 | \$30 | |
| 12" sub Grill | Jay-Car | \$10.50 each | \$12.50 | \$10.50 | |
| Speaker Spring Terminal Connector | Jay-Car | \$2.35 each | \$4 | \$2.35 | |
| Estapol Polyurethane Lacquer (satin) | Furnware Trading | 1 Litre @ \$12.35/L | \$9.80 | \$12.35 | |
| Timber Mate Wood Filer (Putty) | Furnware Trading | 100gms @ \$7.50/500gms | \$4.30 | \$1.50 | |
| Plywood 2.4m x 1.2 x 4mm | Mister Ply&Wood | 1 sheet @ \$11/Sheet | \$13.50 | \$11 | |
| Knock Down Fittings – 2 piece | Furnware Trading | Box Qty 100 @ \$0.24 each | \$26.50 | \$24 | |
| TOTAL | | | \$550.10 | \$450.59 | |

PROJECT ACTIVITIES / ANALYSIS

In order to complete my design I must investigate the following areas:

- *Sizes:*
 - *Space available for the project*
 - *Stereo System*
 - *Video*
 - *Television*
 - *Speakers*
 - *Sized to fit a specific location*
 - *Suits a particular style of décor (matches with the bed, bedside table)*

- *Materials*
 - *For Carcase*
 - *Hinges*
 - *Glass*
 - *Shelves*
 - *Trim*
 - *Back*
 - *Adhesives*
 - *Finishes (wood filler, lacquer)*
 - *Knockdown fittings – 2 piece*
 -

- *Appearance*
 - *type/colour of timber*
 - *Style of other furniture in room*
 - *Layout of materials*
 - *The techniques used to communicate the various features*
 - *The variation in Materials*

DESIGN RESEARCH

Market Research

During the early stages of my planning schedule, I did a bit of market research. During this period I managed to get a few ideas of what I could build and what would suit me. Ever since the beginning I had also had an idea in my mind to build an entertainment wall unit to suit my needs. During this stage I did a lot of research of what I could consider as I came across a wide range of furniture in advertisements such as a knots pine booklet that I received in the mail. I also managed to visit a lot of local stores which had given me a huge range of furniture to consider. It was so convincing that I almost changed my mind and build a pool table, but because of many reasons I decided not to. These reasons include the cost involved as it would have been too expensive for me to pay for, the size of the actual project as it would have been very large as I have no space for this to occupy. Many of the furniture that were on sale at the stores helped give me an idea of how I wanted to communicate my design and also help create a solution to my needs. As I went through the stores I realized that I wanted something that will help create a solution to my needs. Such needs include : the ability to sustain my Home stereo system(28.27mm x 35.98 x 39.51mm), Television (43.69mm x 35.98mm x 42.12mm), Vcr (43.15mm x 10.28 mm x 34mm), and also to hide all the cables that were lying around on the floor. Through the market research I also visited a few websites on the internet to get an example on what I could do to create a solution for my needs. One of the websites that I visited was www.southcoast.com.au/davidherring. This website help convey my ideas into a design which I had created. Some other inspiration were furniture from brescia furniture, Harvey Norman, ikea, and also fantastic furniture. I found many styles of furniture which gave me an idea to match the style of décor that I have in my bedroom (where the project will be placed on completion). The most useful hint was the little booklet that I had received in the mail from knots pine. It gave me an excellent idea on what I wanted to create. It was a perfect example of what I

wanted, although I didn't wish to make it exactly the same so I changed a few features of it.

Materials

As I was planning my project I decided to use a colour coordinated technique to help communicate the look that I was looking for. I decided to use a Tasmanian Oak Veneer particle board with Tasmanian Oak Trimmings to give a colour variation and also to cover up the edges of the veneer. This veneer is considerably strong and also durable and not to mention cheaper than 100% timber. Tasmanian Oak Veneer Particle board has to be one of my main properties as it is combined by the use of small trimmings to go on the side of the veneer. The advantage of using particle board is that it is available in large accurate sheets which are thick, stable and which does not distort and is always flat. The fact that it has no grain direction gives it a uniform in

strength but yet easy to work on. The veneer can also be used for carcass

construction. The doors on my project is a combination of the same timber (Tasmanian Oak) only from different trees. This is shown how the colour difference is noticed as one is more red and the other is darker but more tanned. This sheet is a very popular method of construction as it is cheap and convenient for entertainment units, bookshelves and desks. This veneer is has a high availability and can be found in most timber yards such as Danias Timber in marrickville or Mister Ply & Wood which is were I found to be the cheapest location that I could find. It was atleast 20 dollars cheaper then most hardware timber yards. Other materials such as hinges, framing trims, back, Adhesives,

finishes (wood filler, lacquer), and knockdown fittings which can all be found in such places as Hardware house and also in Furnware Trading, as they are one of the cheapest stores that I could find. The use of some of these materials may not be considered as a bad environmental impact, but really it has a considerable amount of impact within its issue for example, people sometimes think that, because of the relationship between trees and carbon dioxide, the harvesting of timber contributes significantly to the accelerated greenhouse effect. However : at the time when trees are harvested as saw logs, their capacity to absorb carbon dioxide is lower; thus, their ability to contribute to slowing the greenhouse effect is diminishing. Also another point is that by using saw logs for long life products, such as buildings, ensures that the carbon dioxide

remains fixed for long periods;
and continually replacing felled
trees with actively growing trees
ensures that the sequestration of
the carbon dioxide continues.

The materials used in my entertainment wall unit are absolutely fine with me as it helps contribute to the perspective of the layout of the unit. It is greatly used and it helps give a great perspective towards my bedrooms décor. This is also supported by the use of Various materials and components to give a variation in features. For my design it does not require any cultural appropriateness, as it has nothing to do with the purpose of me building it (no cultural reason for construction).

This project is design to sustain the weight off many electrical appliances and also to sustain cables in a less obvious location.

Technologies

During the creation of my entertainment wall unit I used many technology such as a digital camera to capture all the steps of the creation of my project, as we took photos during the process and then using a hardware peripheral device to connect the digital camera to a specific camera which had the specific software that was compatible making it possible to upload photos on to a computer. During the year we used a computer many times to work on our a Portfolio in such areas as the marketing research, how we looked on the internet for ideas of what we planned to create, we also used the computer for computer aided designing as It helped create images using such software as Microsoft paint. Other software we used were Word Processing software such as Microsoft Word. The internet was used in great depth in order to locate cheap hardware yards for us to find places where we can go for products/materials/or components.

Processes

During the construction of my design, there were many techniques used to create the project. I used a router to cut accurately to the measurements marked out on the sheet. It is very important to cut accurately as it is dependant on the accuracy of the cut as it is what keeps all the joints squared and inline in there proper position. Theses procedures must be done properly and carefully as the materials used can be considered useless and wasted if inaccurate.

The tools and machines used in the process and construction of my entertainment unit was the property of the school.

All tools used were up to the Australian standards and were very safe to use if used properly and safely. All the equipment were kept well maintained and were repaired to excellent working order/condition if damaged. All machines and tools were sharp and well maintained. During the use of theses machines/tools we were required to use safety protective equipment to prevent severe injury. All the safety equipment were also well maintained. We were properly trained to use such equipments to prevent us from getting injured. Machines are very dangerous if misused or not used as a toy. Tools are not games and will not control what it does, it is the person who controls its actions so be careful. Here are a list of the Machines/Tools used in the process of my creation:



Large Router



Orbital Sander



Small Router



Drop Saw



Circular Saw



Drill Press



Disk Sander



Band Saw



Eye Shield & Ear Muffs

Other Machinery/tools and equipment include:

- *Try Square*
- *Steele Ruler*
- *Marking gauge*
- *Plane*
- *Pence*

When the construction of my project was finally finished I began to sand down my job using the orbital sander to make it as smooth as possible ensuring a nice finish. After this I began to fill the gaps using a wood filler (putty) called timber mate to help cover the holes were most visible, after this had been down I left it to dry for about roughly 30minutes as I there fore quickly sanded the rest of the dried putty off leaving an excellent finish

Once everything had been completely sanded and left with a smooth finish I had to dust my project to remove all dust that will get stuck in the lacquer once a coat was added. Once dusted, the project was moved into a sealed room were dust would be hard to find as it kept floating particles of dust from sticking onto our jobs when lacquering. As so we then gave the 2 coats of lacquer. One per day. I used a litre of Satin Estapol Polyurethane Lacquer. After 2 days when the lacquer was dried, it left a beautiful protective finish which I was extremely happy with.

Occupational Health and Safety played a major role in ensuring a safe environment. Our main motto was "if you can't do it safely – DON'T DO IT".

It is extremely important that all safety procedures a followed correctly and ensured/obeyed during the operation of any machinery/equipment/tools. During the creation of my project mostly used eye shields to protect my eyes and also earmuffs to ensure sound reduction so that the noise doesn't disturb my hearing. We also had to keep our work environment clean, as we followed the procedure clean as you go preventing pieces of rubbish getting in the way of the power tools whilst in use. General rules that we followed were:

- *Always walk in the room. DO NOT RUN!*
- *Clean as you go*
 - *If you cant do it safely. DON'T DO IT!*
 - *Use eye shield and earmuffs.*
 - *Remove loose clothing*
 - *Tie up long hair back & up.*

O&S is a really important factor and should be considered before entering the work place and using machinery which may be damaged or cause injury to a personel.

Associated Products

Other products in which I used were Concealed hinges (half overlay 110° screw on, with 3mm mounting plate). I used these type of hinges because they have an advantage against other hinges, this advantage is that they can be adjusted to suit the location. For example just say that in between 2 panels you put the door in using concealed hinges, this will give u the ability to center the door in between the hinges. Other materials that I used were knockdown fittings to

hold my project together. I used these knockdown fittings because as the name say "knockdown" I wish to be able to pull all pieces apart for transport. For example when moving I wish to pull it apart to use less space in the truck when moving houses or always for when I cant get it through a door in one piece I can pull a few pieces apart to get it into the room. Another product I used was a protective 12inch speaker grill for the purpose of protecting the speaker as it can be easily damaged if little kids or others were to play around with the sub woofer. I didn't want anyone to damage it so I decided to protect it by covering the speaker with a grill. The purpose of me using the brackets attached on the outside of each panel was to sustain the speakers from my stereo system in the air. I choose to use these because of the variation that it gives to my design, it shows a modern perspective of the design and all creates a solution of were my speakers shall go once the unit is in my room and is connected to the system which will be placed inside the unit. I also used a speaker terminal located at the back of the middle self so that I wouldn't have to keep pulling out the speaker when connecting the sub woofer to other devices. So now I only have to just connect it into the easy spring slots for fast and effective connections.

Collect Brochures

On the following page are some of the brochures that gave me ideas of what to build and also of what materials to use as well.

Visits, Phone calls to companies

During the construction of my design (entertainment wall unit) I had made a few enquires to timber yards such as Danias timber in Marrickville. I had rang them to enquire about timber that I required for my trimmings. Another visit I made was to hardware house in mascot as I was looking for the knockdown fittings which was hard to find until I visited the furnware trading industry in Sutherland were I found the knockdown fittings which I need to combine my pieces and panels together.

| <u>No.</u> | <u>Description</u> | <u>Qty</u> | <u>L</u> | <u>W</u> | <u>T</u> | <u>Material</u> |
|------------|--|------------|----------|----------|----------|-------------------------|
| 1 | Top | 1 | 1892mm | 540mm | 19mm | Veneered Particle Board |
| 2 | Base | 1 | 1372mm | 650mm | 19mm | Veneered Particle Board |
| 3 | Outside panels | 2 | 1157mm | 500mm | 19mm | Veneered Particle Board |
| 4 | Inside panels | 2 | 1138mm | 500mm | 19mm | Veneered Particle Board |
| 5 | End shelf(between Inside & Outside panels) | 2 | 500mm | 300mm | 19mm | Veneered Particle Board |
| 6 | Centre shelf (between inside panels) | 2 | 660mm | 650mm | 19mm | Veneered Particle Board |
| 7 | Doors | 2 | 400mm | 294mm | 19mm | Veneered Particle Board |
| 8 | Back left | 1 | 1128mm | 327mm | 4mm | Plywood |
| 9 | Back Right | 1 | 1128 | 1006mm | 4mm | Plywood |
| 10 | Speaker baffle center | 1 | 400mm | 400mm | 19mm | Veneered Particle Board |
| 11 | Speaker baffle sides | 2 | 212mm | 400mm | 19mm | Veneered Particle Board |

FINAL EVALUATION

- *ARE YOU HAPPY WITH YOUR FINISHED DESIGN?*

I am extremely happy with my design and the outcomes in which I have received. This Design is the best thing that I have ever done and I am proud to say that I have completed it myself. Over all I am very pleased with my design and finished product.

- *WHAT ASPECTS COULD BE IMPROVED?*

I believe that that if I were to do it again I would buy the trimmings a little bigger because it was too small and I would like it to cover the whole side of the veneered particle board. I would also like to continue the top thick trimmings right around instead of stopping at the back. Another aspect I would change is that I would install shelves inside glass doors and also below in the wooden doors. Instead of buying the trims I would of cut my own strips at school.

- *WHAT PROBLEMS DID YOU HAVE AND HOW DID YOU SOLVE THEM ?*

My main problem was how when I had purchased the trimmings from Danias timber, the person incharge of my job cut the trimmings a millimeter too short. That was my only real problem.

- * *DOES YOUR DESIGN ANSWER YOUR STATEMENT OF INTENT ?*

Yes it does because it completely suits my need as it create a solution for my all my needs including the organization of my electrical appliances. Its design technique and décor completely matches my room which gives a great and comfortable perspective of the layout of my bedroom which has made me extremely happy with it.

- * *HOW HAVE YOU ADDRESSED ETHICS, SUSTAINABILITY, CULTURAL APPROPRIATENESS AND O&S ISSUES ?*

The project was designed to suit the enduser's cultural needs. O&S was addressed in all aspects of the construction and the safety of the final design was appropriate for the intended users. The project used mainly timber products which are a renewable resource and avoided such products as MDF which can produce harmful dust.

- * *HOW WELL DID YOU FOLLOW YOUR TIMELINE AND FINANCE PLANS ?*

During the construction of my design I had a well planned timeline which was extremely useful and handy. I followed the timeline reasonably closely. Some variation occurred when some materials were not available when required. My actual cost were less the anticipated as I discovered cheaper suppliers for many of the materials. It gave of approximately \$100 dollars