

INDUSTRIAL TECHNOLOGY FOLIO

Industrial Technology

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Statement of Intent

I intend to construct a slim boy which will suit my needs and will be compatible with my furniture in my bedroom in my house. This will be very handy and useful to everyone in my home. My goal is to make it perfect and to design it making it look good and eventually be pleased with my finished project. My project will be made of Tasmanian Oak timber which I personally like. To me Tasmanian Oak is an excellent timber that I found suitable for my major project. I will be using different types of tools that will make me go through the completion of my project. I will be using drawing techniques and also have photos of me working on my project using different tools.

Through the process of making my project, I will be adding and using various types of tools, wood and glue that will best suit my project. My aim is to finish it in time and to catch the eye of any person. I will be using various types of nails, screws and joints that will put my project together. The glue that I will be using is poly vinyl acetate (PVA) that s best used for various timbers and suitable for my type of timber.

My finished project will be put in the bedroom which will match with the other furniture around it. There will be various things that I will be putting in my slim boy for example books, games, clothes, mainly stationary things. My project will be fairly solid and will hold the stationary things that I will be putting in it. Even the things that don't have places to go will be put in this small boy, that way it will be neater and better for everyone.



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PROJECT FINANCE PLAN (BUDGET)

To construct my project and to have a good finished project, a lot of things count. Example the cost and the type of materials that I will be using. The cost is a major aspect that needs to be met. Designing a project involves purchasing wood and other needed materials that I will be using. The limit of how much I will be paying is \$300 so I will have to consider what materials I will be purchasing and using. Not only the cost is important but how my finished project looks like. Using expensive timber doesn't really count to using cheap timber. Its how the finished project looks like and how it was designed.

The cost that I had in mind was maximum is \$300. Because of the amount that I have, I will be looking for suitable timber that will be good for me. Buying chipboard and hardwood was all in mind for my project.

List of resources/materials

- Power drill
- PVA glue
- Routers
- Orbital sander
- Belt sander
- Plane
- Steel rule
- Pen/Pencil
- Hammer
- Marking Gauge
- Tri square
- Drilling machine
- Saw machine
- Marking knife
- Chisel
- Paper
- Timber
- Knock down fittings
- Handles
- Legs
- Lacquer

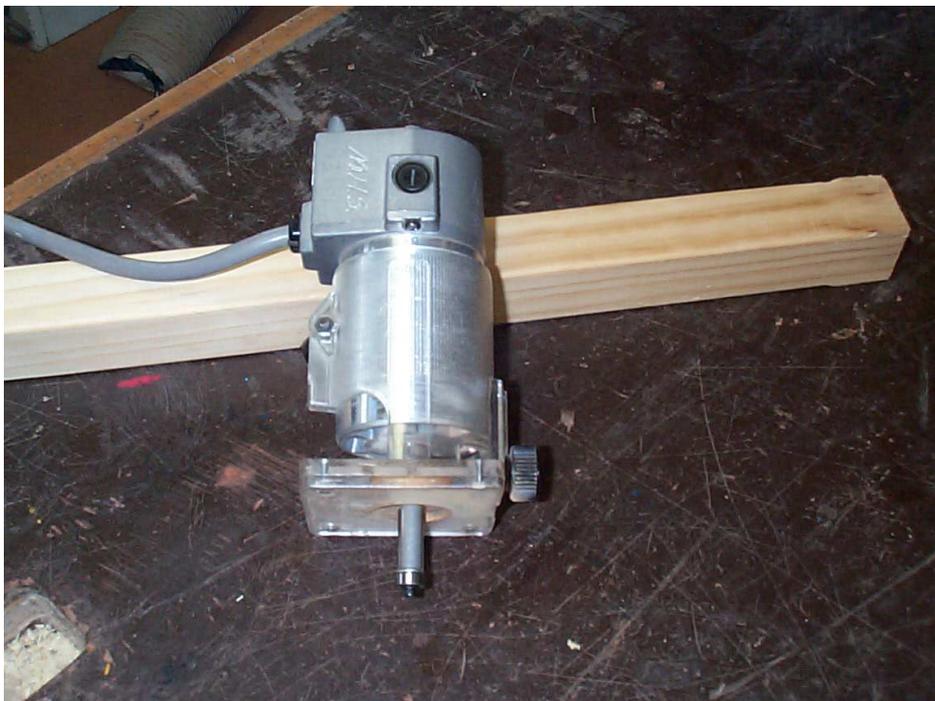
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Finance Budget

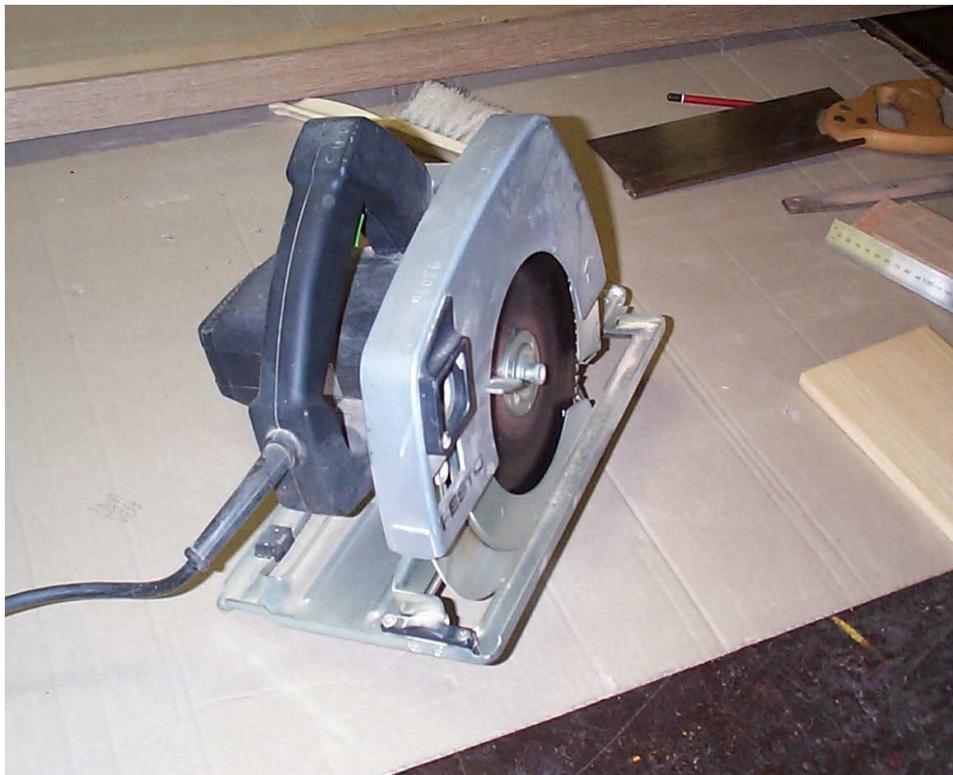
NAME	ESTIMATED PRICE	PRICE
Handles	\$1.60 each	\$1.30 each
One Tasmanian Oak sheet (chip board)	\$95.00	\$72.50
Timber for fronts	\$70.00	\$68.70
Knock down fittings	\$1.00 each	28c each
Legs	\$5.60	\$4.20
Radiata pine	\$55.00	\$43.65
Orbital sander	\$3.00 a disk	\$1.00 a disk
Belt sander	\$265	\$350
Paper	\$5.00	\$2.00
Lacquer	\$15.00 a tin	\$29.95 a tin

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Pictures of the tools and machines I used



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Here is the

Protection that I required and used through out the process of building my project in the above picture

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PROJECT ACTIVITIES / ANALYSIS

My limitations are that my finished project will have safety features. It will suit a particular style of décor, must include some specific features, must perform various functions, must fit a certain sized space, should be a certain colour.

My project will have safety features for example no loose items, nothing that can break easily or be swallowed. My project is fairly solid and with a certain height that people will enjoy and desire. It is high enough from the ground to sweep under or to grab what has fallen under. On my design there is no danger at all for anyone.

My finished project must suit a particular style of décor for the looks and use of the project. My project will be put in the lounge with the other furniture which will match well. It will be put on a particular angle to give the project a better look and use. If the project does not suit the particular style of décor it will not fit with the other furniture and will not look good.

My project has specific features that function well and look good. I have put six draws and included two doors at the bottom that give it a different nicer look. I have used Knock down fittings that allows me to take my project apart and put it back easily when ever I want. I have used specific handles that have the same colour as the legs that give the project more style.



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My project performs various functions for example it has two doors at the bottom that open out ways, and six draws that come in and out smoothly. My project can be put against any wall and is fairly solid. On top of my project, there is a stop at the back so if I put anything on top from paper or a marble it will not fall behind the project.



Fitting my project in a certain space is important. This gives my room a better look and improves the design of my lounge. There should be the correct amount of space for my project to fit into. If there is no space I could always move the other furniture around until I am satisfied with how everything looks.

The colour is important, because the colour reflects on where I put my project and how it will blend in with the other furniture and the surroundings. The colour of my project will suit my lounge beautifully and will give my lounge a better look.

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DESIGN RESEARCH

I have done a lot of research to make my project. I have got my ideas from furniture shops, magazines and the commercials that are being advertised on television. Visiting different kinds of furniture stores give me a good idea on how tall I should make my project and what designs there are. Looking and searching around really gave me good ideas on how I should construct my project and what it should look like at the end. I have also used the Internet to search for pictures, similar design to my project. Surfing the Internet gave me a lot of ideas and solutions to problems.

As I was searching around, I also looked at the prices of the finished product so I can get a general idea of how much my project will be worth. Another important feature that I have realized is what kind of finish they apply to the job. Lacquer is applied or stain that makes the finished project better looking. By applying the lacquer on the finished job it will be protected from all the harsh elements for example, dust and moisture.

I have used various tools and materials to put my project together. Tools from pencils to all sorts of machines.



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Occupational Health and Safety**OH&S**

Occupational health and safety is very important and must be followed at all times. The tools and machines that I use are potentially dangerous. When using these tools or machines I must wear safety glasses and earmuffs that prevent you from getting harmed. These safety aspects are very important to every worker in the workplace. There is no running around or holding sharp tools whilst walking. The correct clothing must be worn and long hair to be tied back. No loose clothing or pieces of jewelry are to be hanging out, because these little things cause accidents to happen. When using any kind of machine I must wear the safety equipment. No tools to be lying around when not in use. Do not leave tools lying on the floor. The floor must be clear of danger.

Do not

- Run around
- Hold tools freely and walk around
- Leave equipment lying around the floor
- Use machines without safety equipment
- Cause stress on other workers
- Rush your project at the last second
- Play with tools
- Cut with your hand in front of tool
- Wear loose clothing
- Wear loose jewellery
- Leave machines on

Must always turn of the machines when not in use. Never gather around close to a particular machine. Always follow the safety rules. Injuries happen very easily and could happen to you when you least expect it to. Workers injure them selves every day in the work place because there is lack of responsibilities and not covering the occupational health and safety aspects.

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ASSOCIATED PRODUCTS

In the process of designing my project I have used knockdown fittings to join my pieces together and they can be easily dismantled. On my project I didn't use draw runners because of cost restrictions. I wanted to make and add everything out of wood so it looks original. I had a choice of putting plastic draw runners or make my own out of wood, I chose the wood runners. I have searched for what type of hinges I should use and best came up with the concealed hinges. Searching through magazines helped me by giving me an idea of what I should make, and what it will look like. I searched through the magazines and found a lot of furniture designs that I wanted to get ideas from.



I have found this Chest of Drawers picture above from the Internet that gave me ideas on what to make and how it should look. Gathering ideas like this is good; it really helped me to figure out what to design for my major project. These designs are similar to mine but different in many ways. They all serve the same purpose by having draws. I have also visited Industries to see how they make the furniture, what joints they use and what kind of wood and equipment are used.

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Here is a sample of the letter I sent to Industries to ask for information, technical assistance and support to help me with my project.

Furnware trading
16 yalgar rd
Kirranee

Dear Sir / Madam,

I am a Year 12 Industrial Technology student at M.H.S and I require some information to help with the design of my Major Work for the HSC.

I am designing a ..Slim boy.....

.....
and would greatly appreciate any product information, technical assistance or brochures you could send me that could assist me with my project.

Thank you for your time and attention to this matter and please feel free to contact me if you would like to discuss any details.

Yours faithfully,

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SELECTION & JUSTIFICATION

My selection was choosing what kind of wood for me to use. I chose Tasmanian Oak for a number of reasons. The cost I had bared in mind and what and where I am going to purchase my wood from Because of my limitations in money. Choosing Tasmanian Oak was good because I worked out how much I will be paying and how much wood I will be using. Also I selected special hinges (Concealed hinges), Handles and legs that will match with my project. I chose a particular silver colour for the legs and handles that will suit my major project. I have used various types of equipment, materials and tools that helped me complete my project.

Designing my project required different tools and machines. Here is the process of me completing my project and pictures of me working on my job.

- Knowing what measurements and sizes of wood I need
- Choosing what wood to use
- Purchasing the wood
- Marking out the wood
- Cutting to correct size
- Sanding
- Joining pieces together
- Gluing
- Nailing
- Making joints
- Putting the wood together



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“From my research, my design will include the following

1. **Legs**, which will hold my project up high enough from the ground allowing space to sweep under and clean. Also it gives my project a better look and a good height. I also to put legs on so we cant keep accidentally kicking the bottom and eventually ruining it.
2. **Handles** that will suit my design and improve its look. I will be using the same colour as the legs that will give my project a nicer view. I chose a particular handle that is easy to grab and is very stylish. Handles are very important because they do change the look of my project, so I chose handles that suit my project.
3. **Runners** made out of wood. I particularly chose this type of runner because I want my project to be really original. I hand made the runners using radiata pine which fit beautifully with the Tasmanian Oak. Wood runners are fairly solid and make the job look original. I marked out the same distance for each draw and nailed the wood runners in.
4. **Draws** that can contain and hold anything stationary. My draws are fairly wide so that I can fit various things. I have six draws so that I can put almost anything that does not have a good spot in the house. My draws are mainly for fitting stationary things like papers, documents, magazines and small gadgets. The base of my draw is fairly solid and capable of holding a certain weight. Nothing too heavy will be put in the draws.
5. **Hinges** that will join my wood together. I have used knock down fittings on my project that joins my wood well. I particularly chose this kind of hinge so that I can very easily take my project apart. These hinges can be easily dismantled so that I can fit my finished project any door without any problems. These types of hinges are well known and are excellent for any job.
6. **Top** that is fairly solid and will hold almost anything. I have designed my top so that nothing can fall to the back. I have put a stop on the sides and back. Even a marble wont fall to the back.
7. **Back** that will give my project a better look and also prevent from anything going in from the back for example moths. My back is solid and nailed well blocking any insect or dust entering from the back.

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Record of project activities

Term 4 year 2000 was mostly planning, researching and sketches of what my major project will look like. The drawings give me an idea on how to design it and what to design. Sketches really help me decide on how I am going to construct my project. I have done several sketches to give me an idea of what my project will look like. Week 7 term four was where selection and costing took place. The selection and costing is very important. Week eight to week ten I was doing my drawings. This is where I had a good idea of what I was making.

Term one 2001 I ordered my timber in the first week. I knew what timber I needed for my project. Week two I went to purchase fittings for my job. Week three my timber arrived ready to use. Week four to week six I marked out and cut out measurements that I needed. I was in the process of cutting my wood. On week seven I joined my pieces of wood by using knock down fittings.

Term two 2001 I calculated my drawer spacing, installed runners and constructed drawer frames/boxes. This was a bit of a tricky process to do. This was from week one to week three. In week four and five I attached my drawer fronts and assembled doors. Week six I put in the base of my drawers. Week seven and week eight I attached the hinges and doors to carcass. During week nine and ten I was filling and sanding.

Term three 2001 the first three weeks I was lacquering my project to give it the shiny look. Week four to the end of week six was my spare time.

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FINAL EVALUATION**ARE YOU HAPPY WITH YOUR FINISHED DESIGN?**

I am pleased with my finished design and very impressed with my work. My finished design looks good and catches the person's eye. I have finally completed my project and am very impressed on how it turned out.

WHAT ASPECTS COULD BE IMPROVED?

Aspects that could be improved are alignment and accuracy of my project. Also the first drawer hasn't got a runner.

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

The problems that I had were not bad. Problems like short on wood and dents in the wood. To solve my problem I used the wood available to a suitable joint and for the dents I either cut the wood or I used putty to cover them up.

DOES YOUR DESIGN ANSWER YOUR STATEMENT OF INTENT?

Yes my design answers my statement of intent.

HOW HAVE YOU ADDRESSED ETHICS, SUSTAINABILITY, CULTURAL APPROPRIATENESS AND OH&S ISSUES

I have addressed these issues by doing what was needed of me. These issues are important and I coped with them. OH&S is a major issue that I always cover. These issues are very important and must be followed.

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

I followed my time line pretty good and my finance plan.

CHANGES I HAVE MADE COMPARED TO MY FIRST PROJECT

On my top I have put stops on the sides and back so nothing would fall back. Also I have decided to put legs instead of using a kickboard.