BUS Designs

HSC Industrial Technology

A recipe for success …

A booklet that has be developed to aid student success for undertaking the New South Wales Higher School Certificate course in Industrial Technology (Timber Products and Furniture Industries) that has been derived from the 2009 Board of Studies teaching syllabi documents.

Timber Products and Furniture Industries

HSC Industrial Technology: A recipe for success (Timber Products and Furniture Industries)

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Content within this book is based around the NSW Board of Studies syllabus, Industrial Technology published in 2009. For the most up to date version of this syllabus, you should check on http://www.boardofstudies.nsw.edu.au/

Image on cover from Colia, B (2009) http://www.flickr.com/photos/bibbit/3318956587/ [Accessed 16/10/11]

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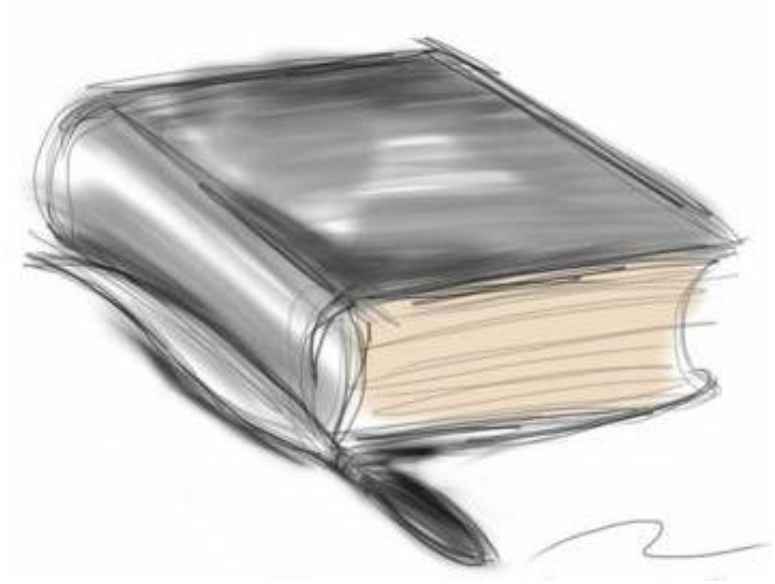


Introduction

Me and Mrs B argue about this stuff all the time. What is in a Statement of Intent? What should be done for research? Even in writing this "Recipe for Success…" she is arguing about whether or not her name should be on it, just in case she disagrees with some of the content, or how the project should be done, or even how to best prepare for an exam.

So that is how this text came about. If two very passionate teachers who have a lot of knowledge (well we think so anyway), and a love for what they do argue daily about best practice and how to get students to maximise their own potential, what hope would a kid have if they were doing it on their own? Best part about this situation, and don't tell her this, but I will use her best stuff in this text, anyway whether she likes it or not, if I believe that it is best practice! Now don't take this the wrong way, there are a lot of great teachers out there, and many I personally know that are better than me, but all of them, if you dig deep enough, are using a recipe for success that continually gets their students results that maximise the individual's learning potential. No secret formula, you just need to know the game, and the rules of the game, to be able to be the best that you can be.

So here is how this book works. We … sorry, let me start again. I have looked at the course and student results, and continually find situations where advice is being taken that really does not link to marking criteria's or course content. Even in my own classroom, students take information published on some websites and texts as gospel rather than living by the rule books of the Higher School Certificate … the teaching syllabus. What's that saying … "I can open the door to knowledge, but you have to walk through" … well here is the door. Come in or stay outside, the choice is yours as it is your HSC.

This text has three main sections; Project, Folio and Written Examination. In these section you will get what I believe is the inside goss on how to approach each of these components that are needed to successfully complete the course. All work within this text will be referenced against the current syllabus, but it will also be your responsibility to cross check my work to ensure that you have got your learning right.

In my best endeavours, I hope that you find HSC success. But as with any major project subject you need to remember that "you will only get out of it what you put in" … OK… I will try not to use any more corny old sayings in this text.

Don't Take My Advice!

This book has been created to help people achieve success when undertaking the New South Wales (NSW) Higher School Certificate (HSC) course in Industrial Technology. But here is the first problem that you will have regarding these words of wisdom and advise … It is your HSC, and not ours, and you should not blindly believe advice given to you in this text!

So, are you a sucker that just spent $20 on this book or are you going to be the person that takes my advice? Hmmmm … let the games begin!

So here is what I am trying to say. When it comes to appeals, taking the wrong advice is not a ground for appeal. In the ***Rules and Procedure for 2011 Higher School Certificate Candidates*** it clearly states:

> *The illness/misadventure appeals process is designed for cases where, because of illness or misadventure, your performance in an examination is not a good measure of your achievement. It does not cover:*
>
> • *Alleged deficiencies in teaching*
>
> (NSW Board of Studies 2011 p.18)

What this means is that even though I can sit here and develop this document and spruik my credentials as having a Master's Degree, checked all the necessary boxes in my career path through University Bachelor Degree's with extension courses, and on top of that have 30 year Industry experience and ran my own business … you should **NOT** believe a word that I say. If it happens that I have gotten it wrong, or the syllabus changes and you are still using this book, then the NSW Board of Studies (BOS) will not consider these facts to be a grounds for appeal.

Furthermore, there is evidence that what I am saying is true. Michaels (2003) wrote once about English Cribs that promise exam success, were found to *"misrepresent the syllabus"* and *"many involved in marking and setting the (HSC) papers believed the cribs are seriously flawed"* .

So here we have a situation where you may have your classroom teacher in your final years of schooling telling you that you need to buy this text to maximise your chances. The text itself is saying that you should not believe instantaneously what is being said. Even evidence is being provided to clearly state that your appeals about the text if it is wrong will not be heard. And for some reason this Author is labouring the point and has not yet given me any confidence that your money has been well spent! Who can you believe? How can HSC

success come your way? All the answers that you need to obtain the best result possible can be found in the one spot … The New South Wales Board of Studies.

The NSW BOS is the place that teachers get their information to develop the teaching programs needed to educate you. Furthermore, all the answers that you need can be found within the documents that the BOS has developed. Regardless of what is being written here … regardless of what your teacher says … regardless of what your brother and sister did last year in their HSC, you need to get hold of the official documents that relate directly to the courses that you are studying this year. Just look at what happened from 2010 – 2011. Industrial Technology went from being a Category B course to Category A. This move alone signals that changes were afoot in the way that the course needed to be taught and that it was likely that content has been changed and raised in standard to meet the course's higher level of academic rigor. Then there were changes to the folio layout, headings being used and the overall directions for creating a folio that meant restrictions on size, layout and the information required to maximise marks. While no specific cases can be sited here, the fact is that the students in possession of the information pertaining to these changes would have achieved higher levels of success than those without.

One of the documents that you should trust are the Assessment Certification and Examination Manual (ACE Manual), NSW BOS Syllabi and other documents developed by the BOS.

The ACE Manual is a monster of a document that can be found at http://www.boardofstudies.nsw.edu.au/manuals/pdf_doc/ace_manual.pdf. This document explains in depth the procedures used to assess a student's learning for the HSC course as well as other courses of study like the School Certificate. Hmmm … I wonder if this document will change now that the School Certificate is being thrown out next year? While I would not say that every student has to read this document that is freely downloadable from the net, I would say that you need to scroll through it and find everything you can that could alter the way that you project is marked. For example, did you know that you cannot start on your Major Project until you have completed the Preliminary Course (NSW Board of Studies 2006), or "any HSC project that might be considered dangerous to health or safety may not be marked" (Ibid.). If you make the mistake of going against these procedures, and the BOS finds out, then you may be placing your whole HSC in jeopardy.

Journal Exercise 1

Here is your first exercise for your journal, download a copy of the ACE Manual and discover what it is that you need to do to have a successful project marked in your HSC course and what are the things that you need to avoid.

Another document that you need to live by is your syllabus. While this booklet is specifically about Industrial Technology, the same advice can be given for any subject. Within your syllabus you can find every answer in your HSC exam and the not so secrets for success. The Industrial Technology document can be found at http://www.boardofstudies.nsw.edu.au/syllabus_hsc/industrial-technology.html. As well as the syllabus you will find things like:

- HSC major Project Marking Guidelines
- Links to past HSC examination papers
- Performance Band descriptors.

If you do not have these documents and understand them, you will not be able to get into a Band 6 range for this course unless you are some sort of brainiac freak.

Journal Exercise 2

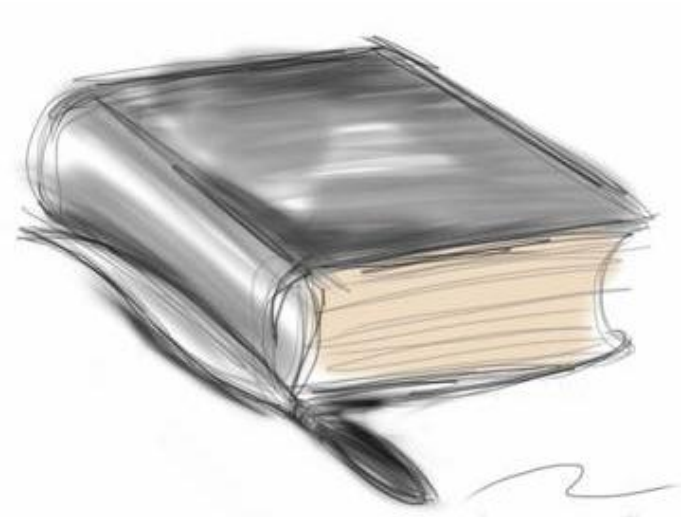
Jump on the net and download the syllabus. Pull it apart to find the pages that specifically link to learning outcomes and Timber Products and Furniture Industries. Cut these out and stick them in your journal. Furthermore, while you are on this page, grab any document that you can that will help your projects development. I for one would grab straight away the Practical Marking Guidelines and highlight the highest mark box. You should not be aiming for anything less than the highest mark bracket.

The final document that you must live by is All My Own Work. The NSW BOS states that "detected malpractice will limit a student's marks and jeopardise their HSC" where the culprit will be awarded zero marks for part or all of the examination or the loss of one or more courses towards the HSC award (NSW Board of Studies 2011). It is simply not worth the risk. Imagine if you are only carrying 10 units into your HSC year, and if you did not reference properly, and the external markers find that you are claiming the work of others as your own … the loss of the course means that you will not be eligible for the HSC. Twelve years of education gone in the blink of an eye.

Journal Exercise 3

Re-visit "All Your Own Work" and work out how you need to reference books, magazines and websites to be able to avoid any accusations of plagiarism. This is really important for Industrial Technology if you are planning to have components outsourced. For example, if you are getting a glass table top cut, you must reference correctly the work completed by the glazier to avoid getting into trouble.

Hopefully, if you have worked through this section of the book properly you will now understand that this is **YOUR** HSC and you must take responsibility for your own work. You will have jumped onto the Board of Studies website and have armed yourself with all the necessary documentation needed for HSC success. While the intention of this text is to reference each aspect of suggested ways forward, you are encouraged not to take the Authors or your teacher's word for what is the right or wrong way to progress in the development of your Major Project. While 99.99% of teachers always strive to give the best and latest advice to students, and the fact is that we always have your best intentions in mind, courses change and sometime we get it wrong. It is your HSC … the teacher in front of you in most cases will be back next year to do it all again with the following cohort, but it is you who may lose that one mark needed for the ultimate university ATAR that could affect your next steps in life or tertiary education.



Project Selection

Problem Number one with this course … students not sticking to their original choice of project. Man, I can tell you the one thing that will make the veins start to throb and the head to explode on a teacher is the student that constantly changes their mind about the project that they want to make for their Major Project. Nothing worse than completing Term 4 and having all of this folio work completed to find the student come back to school the following year to say "I have got a better idea to do for my major!" Then in their best efforts, the student so they do not have to re-do the whole folio will try and squash in their original research into their new idea that just does not or will not fit. Just think of the HSC as a race … you are supposed to run this race for 80 hours, which is percentage weighting of work to be completed on a project, and you give everyone else a 20 hour head start, do you think that you will be able to catch them? Imagine all the extra hours that you will now have to put in and how this new dimension will affect the rest of your studies. On this act alone you may be kissing your ideas of attending university away! So here are some guides for choosing a successful project.

Rule Number 1

Choose something that you would like to do. If you are enjoying what you are doing it will not seem to be like work and you will naturally work harder at being a success.

Rule Number 2

Choose something that you will keep. There is nothing more heart breaking than after a year's worth of work you drive past a student's house during clean up week and see their project on top of the heap. Actually there is … I lied … when a student works for a year and they don't even take their project home from school. If you need a cabinet at home somewhere, rather than getting your parents to go and buy a new one, how about you make it for them. This may also help with your finances if they can kick in and pay for a project that they know you will keep.

Rule Number 3

Keep within your ability and finances, and be able to fit with the school resources. Everyone wants to build a pool table! But to do it properly it would cost a fortune and it is a huge job. Then think about the school … you are supposed to make this job in the school's workshop and also store it there in-between classes. I wish that I had a dollar for every time a student "clicked it" when their project got accidentally scratched. The funniest thing in this whole situation is that the perfectly made billiard table will attract the same amount of marks as the perfectly made jewellery box … size does not matter; it is your skills that count. And on a different front, reclaiming old timber for a project is a skill in itself. Therefore, the recycled

timber project that will cost you a whole lot less, just may give you the edge you need over the person that has the ability to spent thousands of dollars on rare timber from old growth forests.

Rule Number 4

If you are going to add changes, improve your original design rather than starting again.

Rule Number 5

Multiple skills with increasing difficulty and professional finish. That is what this course is about … multiple difficult skills and professional finish. Sorry … did I tell you that this course is about multiple difficult skills and professional finish? Do not leave that pencil mark on the timber! Sand those lines out of the grain! Make the joints tight! Did you realise that if you made six chairs to a satisfactory to good standard, more than likely will get a higher mark for one of the same chairs professionally finished? Do I need to say this again? Multiple difficult skills and professional finish … I suppose that I should say too that they need to be your skills. Work that is outsourced and referenced correctly will only get you marks if you justify why you are doing it in your folio. However, you will still get no marks for the work complete on your project by others.

Rule Number 6

If you are doing a coffee table, *make it different.* I have been to a few days where that markers talk where they have described the traditional coffee table as a box … or a box with drawers … or a box with drawer and 4 legs. What they are really saying is that students are not pushing themselves enough. If you are looking at a project like the common variety coffee table, then you need to stand out from the crowd to attract the better marks. Make the table round instead of square … do some inlay features … add a carved component. Try to be different as by staying within safe boundaries for commonly made projects will not get you the higher marks.

Rule Number 7 – the biggest and badest rule of them all!

Play by the HSC rules!

The BOS states that "the student and school need to be cognisant of their audience and purpose in the creation and exhibition of their work" (NSW Board of Studies 2005). Furthermore, while the following is specific for show case event, the following issues need to be adhered to in general for project ideas

"Works may not be considered suitable … if they contain the following elements:

- *offensive language, that is, language likely to cause outrage or disgust;*
- *violence, either real or perceived;*
- *references to the use of illegal drugs;*
- *sexual references or nudity;*
- *themes considered inappropriate for a general audience."*

(NSW Board of Studies 2005)

On another front, the ***ACE Manual*** (NSW Board of Studies 2006) specifically says that projects must also be relational to other laws and legislation like OHS to ensure that the project is safe for all. Copyright laws must also be abided by as stipulated in ***All My Own Work*** (NSW Board of Studies 2011).

If you work outside these BOS rules, the first thing that will occur is that the School Principal will be notified about your negative efforts and it may offend or harm the people marking your project. And you definitely don't wish that to happen while your project is being marked!

On another front the BOS says …
"The physical size of the Major Project needs to be carefully considered. Teachers and students should be mindful of:

- *the cost of materials*
- *the complexity and physical size of projects. High marks are regularly achieved by students who have projects that are of modest cost, use minimal materials and do not require an excessive student time commitment."*

(NSW Board of Studies 2010 p.9)

You see … they are encouraging you not to do big projects. So why do them? There is nothing worse for the markers than a bundle of sticks to assess. And remember, a professionally finished product goes a long way in this course and over extending yourself will just lead to disaster in this subject and have a knock on effect to your others courses being studied.

Journal Exercise 4

Start gathering your ideas. Get photos of timber projects that you like and see if there is a new piece of furniture needed at home. Do some preliminary research into each of the rules above to help you determine the type of project that you want to make for your HSC. If you are stuck and can't move forward, then you must realise that you are now coming last in this race against the rest of the State of NSW. Make a decision, make it now, and keep to it!

So what should you make? I thought that you would never ask!

DOORS, DRAWERS AND FRAMES

This is your entry level project that will get you competing with the rest of the State.

How you would do this project will determine how well you will go. There is one school that legend has it, always gets "Band 6" projects, and the rumour is that the trick that they use is to throw out all of their set squares. Hard to imagine how it works, but just think about it … what is harder to make; a square table with drawers or a round table with drawers? Rectangular top or oval top? Straight sticks of decorative timber features of carved components within your design.

If you are thinking square designs then the HSC Markers will see a box with legs. Or a box with legs and drawers. Or if it is really special, a box with legs, drawers and doors. Either way you look at it, it is still a box and relatively easy to do. To get into the higher mark bracket you need some shape that is not square.

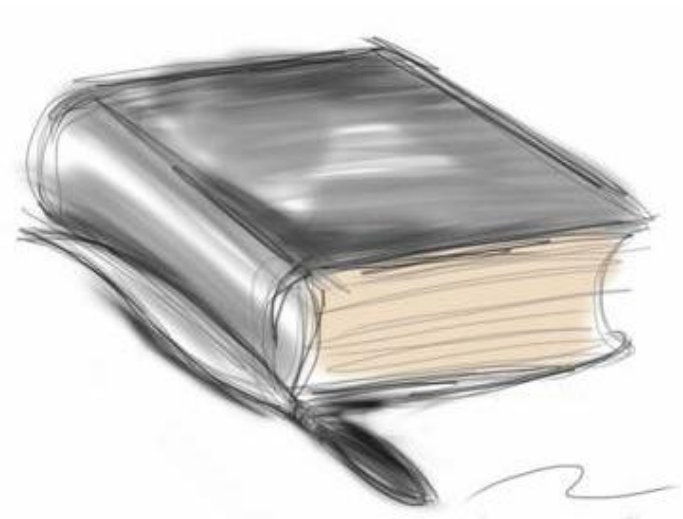
Now for a final decision on your project I need you to put yourself in the shoes of the HSC Markers. Firstly, you will have a team come in and they will all mark all of the projects. While these people are highly skilled professionals across many different technologies, you will find that they usually specialise in one particular field of teaching. So you will have Timber Teachers at sometime marking Electronics, and you will have Multimedia Teachers looking at Timber projects. Secondly, these people in a lot of cases will mark for two weeks solid and possibly be away from their loved ones. They will be seeing products that can easily be found at any large retail store, and if you are at the end of the two week marking time period, a lot of boxes with drawers, doors and legs would have been marked.

YOUR PROJECT NEEDS TO STAND OUT.

It doesn't take much to do a little inlay … have a carved feature somewhere … and whatever you do, show that you care about what you have made by sanding off every little bit of pencil off and spell "drawers" correctly. You need to stand above the crowd, and doing something a little bit different and being highly professional in your approach will move you up the marks scale.

Why be ordinary when you have the ability to be extraordinary … do not settle for less. And if you intention is to have a cruisy life in Industrial Technology, get out now before you waste your time and money. If I can speak from personal experience as an employer in a past life, who would want to hire an apprentice that did a crap project for the HSC?

Now for the folio!



Folio … but I just want to make stuff!

This is where the game starts.

I am sure that you have noticed that I have been asking you to do journal exercises. I strongly believe that they are as important as the folio themselves. I am certain that there will be teachers and students out there that will argue with me about doing them. Actually, Mrs B is one of them. She doesn't really like the idea of extra work. Well let's go to the only source of information that we need to turn to when we are confused … the facts from the Board of Studies.

The ***"HSC Practical Marking Guidelines - Major Project:"*** seem to reject the need for a journal as it says that there is a need for succinct documentation of work that is to occur in the folio (NSW Board of Studies 2010). A journal is a collection of thought that can at times be seen as random and all over the place rather than a controlled process or explanation.

In the ***HSC Performances and Submitted Works Advice to Schools Regarding Content*** … well there is nothing there at all (NSW Board of Studies 2005)… I can hear Mrs B saying I told you so already …

So the individual teacher or the course internal assessment process may insist on a journal through the ***Assessment and Reporting in Industrial Technology Stage 6*** (NSW Board of Studies 2010). However, it is still not a requirement of the external marking process.

FAQ's (NSW Board of Studies 2011) - here we go …

"16. Is 80 pages sufficient space to demonstrate to markers that a project is all a student's own work?

It is expected that teachers will meet regularly with students undertaking a project, and keep a record of the student's progress.

Principals and teachers are required to certify that:

- *work on the major project was done under a teacher's supervision*
- *the work is consistent with drafts and other samples of the student's work*
- *the work was completed by the due date.*

If markers require more information, they can request to see the supervising teacher's record of the student's progress."

AND

22. Should a journal, diary or internet blog be included in the folio?

No. Journals, diaries and/or internet blogs should not be required to assess a major project. They are more useful as part of the internal assessment process (for instance, they help teachers validate the authenticity of projects). Students are requested to have their journals or diaries (if one has been kept) available in the rare case that a marker wishes to see further evidence of authenticity.

Journals or diaries are important to help keep track of progress on the project or production difficulties. Some of this information is relevant to the examination criteria and should be included in the folio.

If all or parts of a journal, diary or blog are included in the folio, they will be included in the page parameters.

So there you have it! The journal is not necessary for the external marking process of the HSC industrial Technology Course! My Wife is right and she won't let me live that down!

Let's just pull back a little bit here and listen to the world according to Bauer.

Bauer says …

… you need to do your planning anyway. Why not have all your ideas contained in one place like a journal? That way, those drawings that you scratched onto a napkin at a restaurant can be easily found when you wish to include them in your formal documentation.

… that your teacher needs to have proof that you have done your work and if asked the student must be able to offer evidence supporting the works completion. I know that not one student in NSW would not even think of falsifying survey results by generating bogus graphs or tables in Excel. But if you were every accused by your teacher, the principal or even the HSC External Marker, you would had the actual surveys that you collected in your journals and all suspicions would just go away.

… that if you are ever going to lose your folio it will happen on the night before it is due just as you are printing it out. Imagine if you lost everything … and this would not be a point that could be appealed in the final examination process. Here you would be able to submit the journal as your folio, and while it would not be the best case scenario, at least you will be attracting some marks for your effort. Any mark at all would be better than a big fat "0" for non-submission. And, in my experience that HAS happened.

… as soon as you have completed your work in your journal, go home, type it up and format your work as an insert for your folio. Make sure that you keep on top of this otherwise it will kill you at the later stage of the course or you will rush it and hand in second grade work for the external assessment.

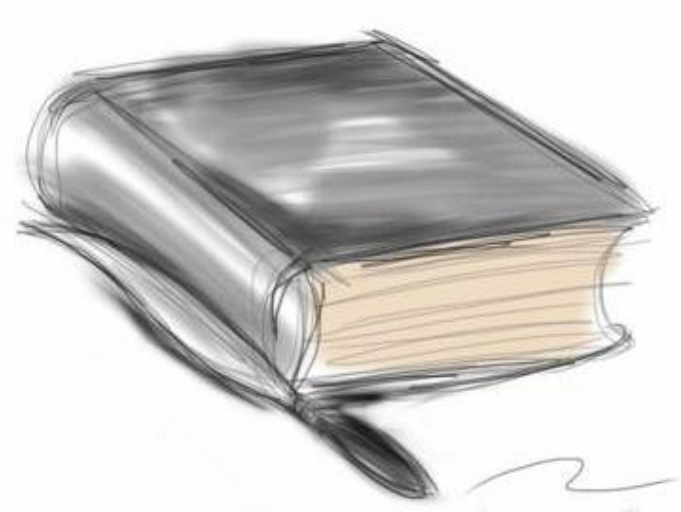
I know that at my school I will make the journal a part of the internal marking process to force students to have backup records of what they are doing. While it may never happen to you, just imagine if you lost everything on your computer … Bye bye university dreams …

Journal Exercise 5

If you don't have a journal, stop your whinging and go and get one! (unless of course you are one of my wife's student's … do as she says as she is too scary to argue with!)

So after 11 pages of orientation to starting this project, let's start earning some marks! As you will see in the following section, I am only going to look at the top marking criterion as if you are aiming below this you are wasting yours and your teacher's time.

On another front you need to realise now that I estimate that a folio equals about 40 hours' worth of work. You need to understand that this cannot be done overnight and it is extremely noticeable to the train eye who tried to cram the work in. Pace yourself and keep chipping away at this document to maximise you success.



Title Page

HSC Marking Criteria (17 – 20 marks range)

"Demonstrates a wide range of presentation skills and techniques, including ICT skills, appropriate to the development of the major project"

(NSW Board of Studies 2010)

There is no doubt about it, first impressions count. You need to want people to read your portfolio. Think about it, if you were going into the local newsagency to buy a magazine, you are automatically drawn to the one that looks the best. If it was just all words in a standard Arial Font, you just would not even look at it. Sure there is some information that needs to be on the cover like your student number but do something that is attractive to entice people to read.

Here are some tips:

1. Your name is not to appear anywhere in the folio, especially not on the front cover. There is nothing worse or unprofessional than a printed document with white out everywhere to cover the student's name.
2. Your folio front cover "*must have*" your student number, the name of your project, the fact that it is a HSC Industrial Technology Major Work, a short blurb about what your project is about and images associated with what you have made to jazz it up a bit. Oh…there is something worse than white out…students writing their student numbers and page numbers on in red pen at the last minute because not only did they forget to put their student numbers on their folio, they also left it until 8.55am on the due date to get the teacher to check it.
3. Do not use clipart downloaded from the net, word art or templates of any kind … look at the marking criteria. It is your *skills and techniques* being marked … not the work of others! If you have ability in drawing, scan those images in and use them rather than grabbing cartoons with © symbols on them off the net. If it comes down to a choice between "Word Art" in "Comic Sans" font, or a template, use the word art. Although my wife will probably kill me for the Comic Sans reference.

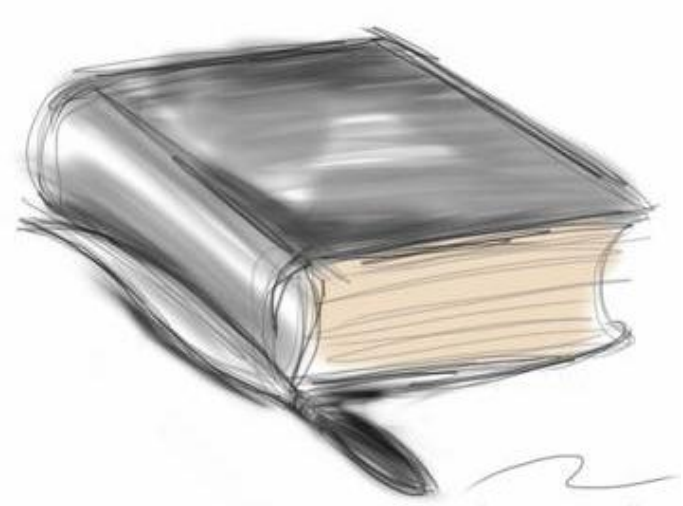
From the start to finish of the folio you are being examined on your ability. Be professional all the way through.

Journal Exercise 5

Go and grab some magazines and look at how they do their front covers. Now I do not mean the gossip style magazines, look to the magazines that are priced over $10. These sell themselves as being quality and stylish and this is the image that you need to give for the latest designs in timber furnishing. Use multiple magazines and collect the ideas that you really like and can use.

From here, and using the "must have" information for the cover of a folio, start sketching what your front cover will look like.

Jump on the computer and now create your work digitally. Insert a page break for the start of the next section.



Contents Page

HSC Marking Criteria (17 – 20 marks range)

"Demonstrates a wide range of presentation skills and techniques, including ICT skills, appropriate to the development of the major project"

(NSW Board of Studies 2010)

The following is a suggestion around page limits…it's not a hard and fast rule, but will give you an idea of much to include in each section and to stay within 80 pages.

SECTION	PAGE GUIDE
Statement of Intent	2
Research	12
Sketching and Idea Generation	15
Prototyping	4
Production and working drawings	6
Selection and Justification	12
Project Production Record	4
Timeline	4
Finance Plan	2
Evidence of OHS	6
Design Modifications	4
Evaluation	5
Referencing	3

Hand up who hates doing contents pages! (insert picture of Bauer with hand held high)

There is nothing worse than spending hours creating your document then just when you think you are finished you have to fill in all the blanks for the page numbers. It absolutely drives me bananas!

Timber Products and Furniture Industries students, you need to get smarter in what you do. The fact of the matter is that you are competing against the Multimedia Industries students who are forever and a day using a computer and know tricks that can make your life easier. And you are being compared to them in your ability to use a computer! I just spoke about inserting a Page Break … if you do not know what I am talking about, go and find your teacher or a friend who can explain what to do. Better still, go and marry a computer expert … that's what I did, and on second thoughts maybe you are too young to do this. But I am getting off track here and you do not need to know my master plans for conquering the education world. Let me introduce Mrs B here, so that she can give you some inside goss of formatting those pain in the butt contents pages.

Setting up your Contents Page

There are little tricks in every program that you use that will save you time in processing information. One of the most valuable of these is Styles. Styles will help you to set up different ways that you can format your document. For example, in this document, the Board of Studies Marking Criteria is set up as a style, so that you don't have to keep formatting those sections to be bordered, grey background, size 14 Times New Roman font. Not only that, but if you decide later you want to change that style, you can then change it and it will automatically update every instance where you have used it.

Another benefit of styles is that you can then add a contents page where the contents will automatically be generated for you, and the page numbers added also.

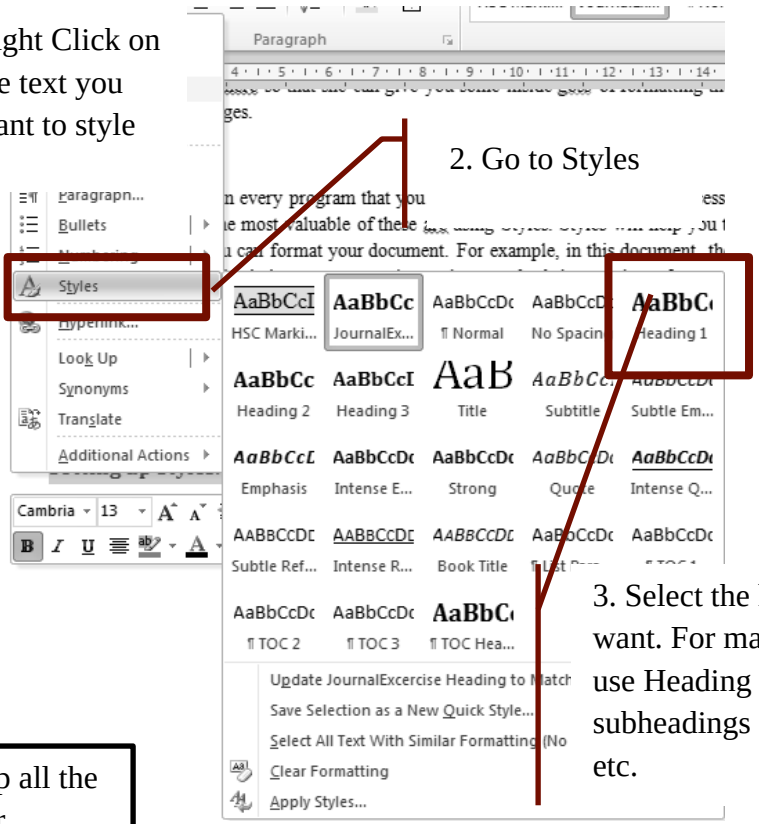
Setting up Styles:

This section shows how to set up styles and contents in Microsoft Word. Since I'm doing this on the husband's computer, we'll use the latest version of MS Word for Windows. If, like me you are a Mac user, you can also do this in Word for Mac, Pages, or Adobe InDesign (which is what I make my students use). Just Google "Setting up Contents pages in" and add the program that you use. Or, you can look at the following playlist on YouTube for some added technical information for folio management: http://tinyurl.com/foliomanagement

Firstly, you need to go through your document and change all the headings that you want in your folio contents page to Heading 1 Style.

My Heading

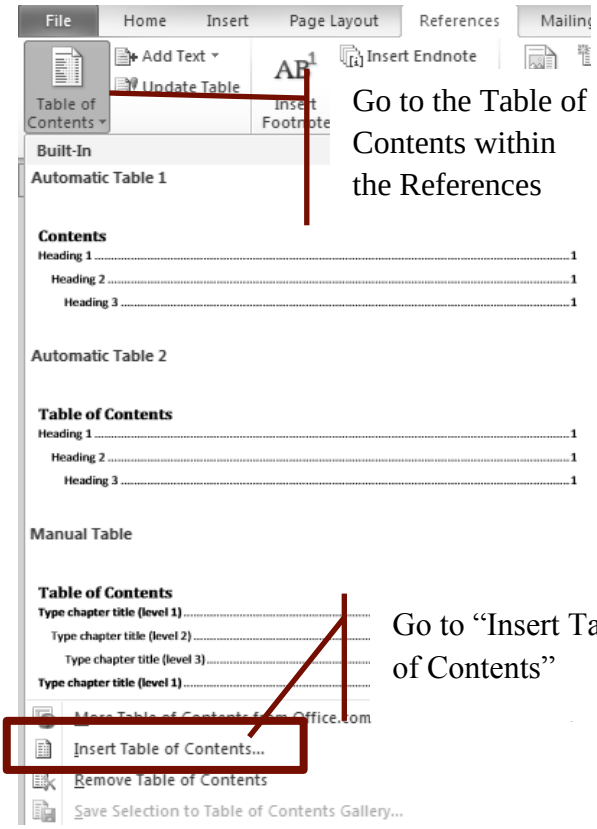
1. Right Click on the text you want to style



2. Go to Styles

3. Select the heading you want. For major headings use Heading 1, for subheadings Heading 2, etc.

Once you have set up all the headings within your document, you are ready to insert your table of contents.


File
Home
Insert
Page Layout
References
Add Text
Update Table
Insert Endnote
Table of Contents
Built-In
Automatic Table 1
Contents
Heading 1 1
Heading 2 1
Heading 3 1
Automatic Table 2
Table of Contents
Heading 1 1
Heading 2 1
Heading 3 1
Manual Table
Table of Contents
Type chapter title (level 1)
Type chapter title (level 2)
Type chapter title (level 3)
Type chapter title (level 1)
Insert Table of Contents...
Remove Table of Contents
Save Selection to Table of Contents Gallery...
Go to the Table of Contents within the References
Go to "Insert Table of Contents"

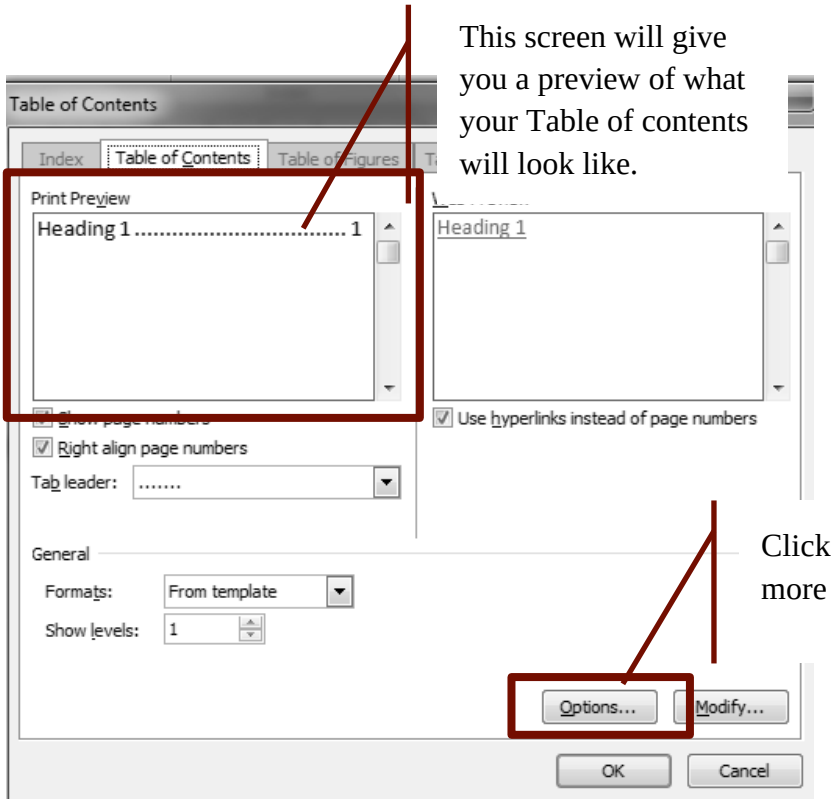
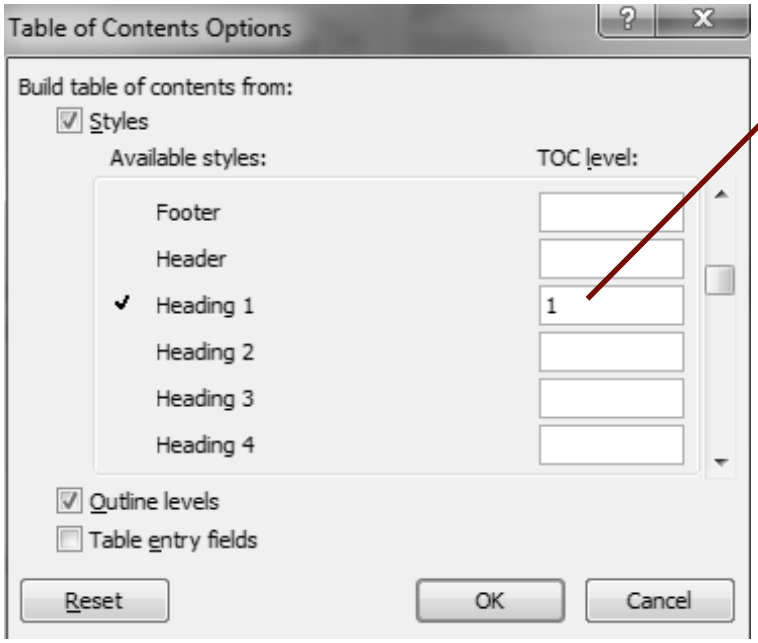


Table of Contents
Index
Table of Contents
Table of Figures
Print Preview
Heading 1 1
Heading 1
Use hyperlinks instead of page numbers
Right align page numbers
Tab leader: .....
General
Formats: From template
Show levels: 1
Options...
Modify...
OK
Cancel
This screen will give you a preview of what your Table of contents will look like.
Click on options for more control

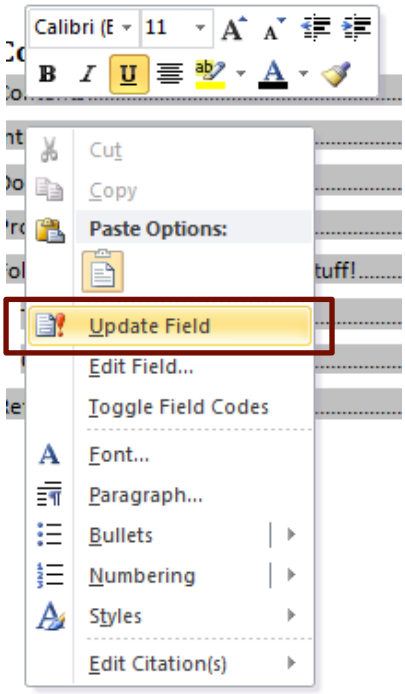


You can then renumber the levels under each style. If you only want those things styled as Heading 1, delete everything except that.

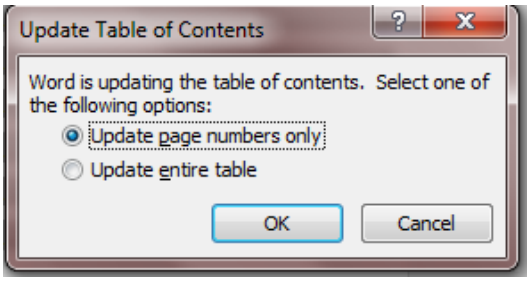
If you would like Heading 2s listed as subheadings under your Heading 1s, label these as level 2.

Okay, so I've set up my beautiful contents page (if you want to look at a sample of how they look like, this book's contents page was created this way) and I've decided that I then want to add another section on OHS within my folio. When I used to do this, or even if I added another page to my document within a section, this would mean that every page would have to be renumbered within my contents page. By doing your contents page this way, all you need to do is update your table of contents automatically.

Just go up to your contents page, right click on the contents and select "Update Fields"



You then get the following message: Use Update page numbers only if you have added pages within sections, but not new sections. **Select update entire table** if you have added new sections, or if in doubt about which one you



Contents page done! Without printing out, numbering each page and then rechecking this against the contents page. Remember to update the fields just before you print, just to make sure that you have a correct page. One last word of warning…never, ever use Comic Sans within a style and you should be right.

Bauer's back …

See! I told you these multimedia people are tricksy and Mrs B is the trickiest! Look it may take you a couple of lessons to set your document up properly, but trust me, it will be worth it!

So what goes into this contents page? Well nothing now! If it has been set up right it will generate automatically for you.

Journal Exercise 6

So a couple of things here...

Go back in your journal to the page where you saved the "***HSC Industrial Technology Marking Guidelines — Major Project"*** and look for all the different sections of the folio. The image below is a screen capture of the information that you need. Here you must use your logic. If these heading are in the marking criteria, what heading do you think need to be in your folio? Starting to see a pattern? These are the only documents that speak the truth, and I expect by now that you do not believe me … check it out yourself!

The next thing that you need to check out is Assessment and Reporting in Industrial Technology Stage 6 (NSW Board of Studies 2010) and find out the parameter that the folio has to be developed in. Again, as with the setting of styles for the contents page, now is also the time to know the layout or desktop publishing style of your folio so that you do not double up on work.

Heading to be included in folio

Assessment criteria

Documentation of the major project from concept to completion, including:

- statement of intent
- research
- sketching and idea generation
- prototyping, modelling and testing
- production and working drawings
- selection and justification of appropriate materials, processes and resources
- evidence of project management including a record of the production of the project
- timeline plan – projected order of production including estimation and evaluation of time allocation
- finance plan – projected cost and an analysis of actual costs of materials and services (if applicable)
- evidence of OHS and safe working practices
- appropriateness of design and/or design modification
- evidence of a range of presentation skills and techniques
- evidence of a range of ICT skills
- ongoing evaluation of the major project and its relationship to the statement of intent, research and planning.

(NSW Board of Studies 2010 p.2)

Style constraints of the folio …

> ***Folio parameters***
> *The folio will be limited to 80 written A4 pages OR 40 written A3 pages printed on ONE side only. Note that the page limit includes the title page, index, bibliography, design ideas, concept sketches and detailed drawings, as well as information presented on displays or noticeboards.*
>
> *Students who need to use a combination of A3 and A4 pages to display their work to best effect in their folios must keep to the overall page limit, using 1 × A3 page = 2 × A4 pages as a guide.*

Other media-based or multimedia-based materials used in a student's folio should not exceed six minutes viewing time in total.

Folio format

- *The folio should be presented in an A4 or A3 folder.*
- *A clear and easily read font equivalent in size to 12-point Times New Roman should be used for text.*
- *Folio pages should be numbered.*

(NSW Board of Studies 2010 p.9)

Journal Exercise 7

Using the information contained within your folio, design the page layout of your document. You now know the font styles that have to be used, but what will the page look like. Are you going to have a header and footer? Pages must be numbered, but what style are you going to use? Water marks … headings … drawings … decision boxes? What will it all look like? Again, go back to the magazines for inspiration and ideas on how to best layout your document. And if you don't know how to do all these things, go and get another friend interested in ICT to explain them to you! They know all the tricks.

Once you know how to do it, set your page up on your computer so that the information in your journal can be transferred right away.

Now at about this time I am guessing that you are say that you brought this rotten book and he has not given us any examples. Well your right! And I am deliberately not doing it! Here is what the BOS said about the 2010 group:

Folios that reflected the syllabus, and set out the information clearly and logically, scored substantially better marks than those that were irregularly and inconsistently presented. Candidates and teachers should be made aware that if some sort of teacher-based or textbook-based template is used, the candidate's contribution must be clearly explained. In many folios that used these templates, examiners could not readily identify the candidate's input to the work.

(NSW Board of Studies 2010)

Lookie here! Students that reflected the syllabus and were logical in their portfolio scored **SUBSTANTIALLY** better marks. You need to play the game! But on the bigger point, is the fact that the markers could not tell the difference between the students' and the teacher's work if everyone used the same template. You will be better off if you are not given a folio template, or if a teacher tries to give you a digital one to work with, reject it. It needs to be your own work. So in this text, you will be getting nothing from me in the way of samples. Could you imagine if this text is a success and everyone copied my style? It would be great for my ego but trash for the States results!

New Folio Heading

Introduction

HSC Marking Criteria (17 – 20 marks range)

"Analyses and evaluates the relationships between design and modifications (if applicable), materials, components and processes in the development of the major project"

"Demonstrates a wide range of presentation skills and techniques, including ICT skills, appropriate to the development of the major project".

(NSW Board of Studies 2010)

OK, before you all start whinging about the loss of a page or the extra work that is not being marked, you need in any professional document to orientate the reader. You need to tell them what it is about to wet their appetite and also explain what it is that you will be doing in your folio.

Here is what needs to be said in an introduction:

1. Tell them what it is that you intend to make. Look at the speech here … "what you ***intend*** to make". You have not made it yet so you need to use future tense.
2. A brief outline of the folio format and its links to the project.
3. Keys or legends to reading your document.

Mrs B arced up about this page being in here as it is one of 80 pages that is lost. To my mind, the reader needs to know how to read your document. So if you go over the 80 pages, I suppose that you can get rid of it, but keep the introduction if you can.

Journal Exercise 7

Lots to do here. Like I said earlier, you need to be doing drafts of your work so why not keep them in your journal. It acts as a record of your efforts, and if lost, you are not needing to re-invent the wheel.

A brief outline of the folio. If you have just finished the Preliminary Course and you cannot do this, then you are in trouble. Look over the steps mentioned previously as to the headings in the folio and try to summarise what it is that you are wanting to do.

Now the key or legend is really important. You are being specifically being marked throughout your whole folio on the formative evaluation process that you use. You need to make these decisions stand out. You may decide to use the one icon all the way through, or you may decide to use a different style for a different situation. For example, if you have a great idea you could use a light bulb or if a disaster has occurred that is making you totally change the direction of your project you might use a stop sign. Whatever you do, you must make these important points of thinking stand out and you need to explain them to the reader.

Go home, Desktop Publish your work and insert this section into your folio.

In this guide you will constantly see this symbol. Every time that you see it I would expect that you would be making some form of decision that will change what you are doing in your project. These changes are worth marks.

HSC Marking Criteria (17 – 20 marks range)

"Ongoing evaluation of the major project and its relationship to the statement of intent, research and planning."

(NSW Board of Studies 2010)

Notice the "Ongoing" statement … you must keep doing this right throughout the process. This is also why the key or legend to your iconography needs to be mentioned in your introduction. It is like putting up a great big arrow that says "Hey! Look here! I am thinking and I want some marks for my effort!"

Look for the section on SEEEK to see one formula that you can use to write an analysis or an evaluation, which is what you have to do every time you make a decision and chuck one of your icons in.

Finally, we can now start on the writing the Statement of Intent and get your project on the way!

New Folio Heading

Statement of Intent (SOI)

> HSC Marking Criteria (17 – 20 marks range)
>
> "Clarifies the intent of the major project by explaining clearly what is to be achieved and why "
>
> (NSW Board of Studies 2010)

Why do you need a Statement of Intent?

Well, it is the first dot point in the marking criteria …

But seriously, this "statement" sets the whole tone for your project. For example, if you say that you are going to be making post-modernistic furniture inspired by the BAUHAUS artistic German design school, your whole project would be assessed on your ability to reach this goal.

However, do not take my word for it, let's tease apart what the BOS marking criteria documents that says …

> "Clarifies the intent of the major project by explaining clearly what is to be achieved and why" (Ibid.).

Journal Exercise 8

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

If you missed it, please note that the key word here is “explain”, which means that you need to have lots of “cause and effect” statements and show “interrelationships” between components. What you intend to do for your project must be clear and there must be a purpose for doing it. This will be the foundation of your research and planning over the entire duration of the projects development. The notes from the Marking Centre said “what the examiner sees should be the same as, or at least similar to, what was intended” (NSW Board of Studies 2010).

What, where, why, how and their interrelationships between project components is what you need to do in a Statement of Intent. So here is what you have to do …

Statement of Intent Narrative Scaffold

A minimum of 4 paragraphs explaining what you intend to make. This should also include some form of criteria that will demonstrate that you are successful in your project. For example, a well-designed and functional piece of furniture that is required to fit in an intended space in your home. This should be a SMART goal; Specific, measurable, attainable, realistic and timely. The idea of this is that you should be able to evaluate what you have done throughout the project and once the product has been completed. You must explain why you have undertaken this project and why it is important.

A suggested structure for SOI narrative is:

Paragraph 1 Orientation:

Explain what it is that you intend to make for your HSC project.

Explain where the project is to go after you have completed it. Remember, “a picture says a 1000 words”. So go home, use masking tape to indicate the place where your final project will live after the HSC and take a photograph of your efforts for your folio. Also, you need to number the photo and comment on it for the image to have any real value to the markers.

Explain why the project is needed.

Explain target audience and suggest why it should appeal or what you wish to achieve.

Explain the extent of the project, listing the main topics or issues you plan to address.

Explain what you currently have that will help you complete this project.

FIGURE 1 - LOCATION FOR FINAL PROJECT

Complications:
Explain limitations and technical constraints – what will limit your progress in this project.
Resolutions:
Linked to the previous complications, explain what you will do to resolve the problems that you will be facing.

Please note … you may have multiple complications that need resolving. These need to be stated as they are extra challenges that you will be facing and have real value in completing your project. This may transfer into extra mark when it comes time for assessment, so tell the world what it is that makes your project harder than a standard piece of furniture!

Conclusion:
Explain possible opportunities to extend your project
Explain what you hope to get out of the project when it has been completed.

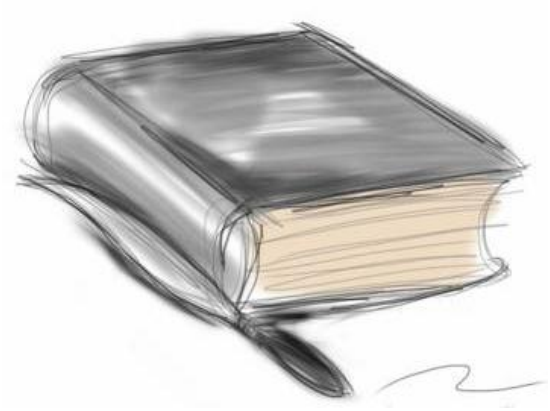
The SOI should be brief, clears and succinct, 1-2 pages in length and written in future tense as you have not started it as of yet! If you make significant changes to your project, or you are one of those psychos that think you can just start again, you should rewrite the SOI intent to reflect your current intentions. All changes in the design of the project should be documented in the design and development section and with ongoing evaluation. This statement provides the criteria to assess the quality and success of your project in the final evaluation.

Journal Exercise 9

In your journal, use the scaffold above to write a narrative that can be used as your Statement of Intent for your project. Remember that this is a draft and it will be required to be continually refined to gain the best product possible.

Go home, Desktop Publish your work and insert this section into your folio.

Now the Statement of Intent is complete, time to move onto Research.



New Folio Heading

Research

HSC Marking Criteria (17 – 20 marks range)
"Conducts and explains a wide range of relevant research, justifying the selection of appropriate materials, processes, technologies and resources"
(NSW Board of Studies 2010)

RELEVANT …

People, this is one of the reasons why the folio sizes have been limited to 80 pages. For years now, markers have been coming in and were faced with 200 page plus folios that were chock full of articles and junk downloaded from the internet. It drove people bananas looking at stuff that was common knowledge and had no real bearing on how the individual's project was to be constructed. For example, there were past students that did research on every possible hammer in the world … even a sledge hammer. Now as you know, and if you don't know then maybe you should quit this course now, sledge hammers are not used in building fine furniture. So why mention them at all as it is just wasting yours and the HSC Markers time.

With your research, you must link it back to the statement of intent. For example, if you are going to be making post-modernistic furniture inspired by the BAUHAUS artistic German design school, then there are definite things that you would need to research under the headings specified by the BOS; Materials, Processes, Technologies and Resources.

Materials

Using the "Bauhaus" SOI, here you would be looking at furniture using man made materials like laminated boards with plastic coverings. This material is specific to this era. Therefore, do not waste your time searching for information regarding the types of timber that come from the tree in old growth forests. You need to know about the plastic laminated boards and issues surrounding them like safe us and storage. Explain what the materials are and how they will affect your projects development.

MAKE A DECISION HERE ABOUT THE MATERIALS THAT YOU WILL USE.

Processes

This needs to link to that … explain what the processes are that can be used to work with plastic laminated board materials so that it can be made into "furniture inspired by the BAUHAUS artistic German design school".

MAKE A DECISION HERE ABOUT THE PROCESSES THAT YOU WILL USE.

Technologies

This needs to link to that … explain what the tools and machines are that you will need use to do the processes required to work with plastic laminated board materials so that it can be made into "furniture inspired by the BAUHAUS artistic German design school".

Does your school have these technologies and what are you going to do about it? Remember here, all work that you choose to outsource must be recognised and is worth zero marks.

MAKE A DECISION HERE ABOUT THE TECHNOLOGIES THAT YOU WILL USE.

Resources

This needs to link to that … explain what other resources are that you will need use along with the technologies to do the processes required to work with plastic laminated board materials so that it can be made into "furniture inspired by the BAUHAUS artistic German design school". Here you are looking at things like glue, screws and fittings. With Bauhaus furniture specifically, I would be thinking along the lines of knock-down fittings, handles and other forms of timber product furnishings.

MAKE A DECISION HERE ABOUT THE RESOURCES THAT YOU WILL USE.

Journal Exercise 10

Go and do some research.

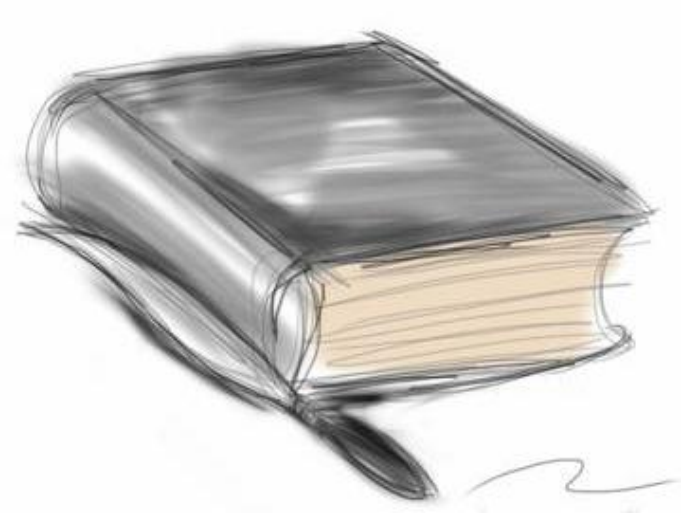
While your folio is a refinement of specific information regarding your specific projects development, your journal is where you put those 200 pages of downloaded fluff. Don't get me wrong, fluff is good as sometimes when it is needed it turns into a really useful piece of information that you luckily have stored in your journal.

Furthermore, look to your glossary for the correct syllabus terms that need to be used.

Go home a take all the gems out of your journal that relate specifically to your project and condense it into RELEVANT facts for your folio.

Desktop Publish your work and insert this section into your folio

Now that the Research is finished, it is now time to move onto Sketching and Idea Generation.



New Folio Heading

Sketching and Idea Generation

HSC Marking Criteria (17 – 20 marks range)

"Demonstrates very high level skills in sketching and idea generation (as appropriate to the nature of the project)"

(NSW Board of Studies 2010)

Now the HSC Markers are pretty smart people, but sometimes they would get this far in the folio and still have no idea about what you are talking about. For example, I have been saying that the piece that I want to make is "furniture inspired by the BAUHAUS artistic German design school". Seriously, what the hell does this mean? Well, this is the section where you get to give lots of details so that the HSC Markers will know exactly what it is that you are going to make and also have a series of images that they can compare your final project to.

Journal Exercise 11

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

This is where your journal really kicks in. The HSC Markers really want to see how your ideas are developing. Are you reading this … DEVELOPING!

Those students that have the one idea and do not try to improve on it are the ones that are just not bothering to collect marks. As a side note, you must remember that these dudes and dudettes are also directly affecting your marks but not making an effort … but that is moderation and is a whole different story to be told. Anyway, tell them to stop mucking around and do some work as they are pulling your marks down.

"furniture inspired by the BAUHAUS artistic German design school". Back to the folio … As I am claiming that I am going to make "furniture inspired by the BAUHAUS artistic German design school", I need to show the markers what I mean. Here is where you can go

out and collect images of works by other designer to show where you are getting your inspiration from.

New Folio Sub-Heading

IDEA INSPIRATION

Notice first up that I have referenced the images. This is a must do and relates to *All My Own Work*. The HSC Markers will know that you did not take these images, so to avoid getting in trouble just state that fact.

FIGURE 3 - BAUSHAUS TABLE (KSUYIN 2009)

FIGURE 3 - WASSILY CHAIR (BELMONTE 2006)

While these are beautiful picture, currently they are worth no marks. You really need to talk about them either in text or through annotations to collect marks. If we look at the marking criteria … "high level skills in …" I would be expecting that you analyse this images to be able to maximise your marks. For example;

"As you can see in Figure 3, the 'Bauhaus Table', has very clean and crisp lines and it is very geometrically shaped. While the example here is a product made in metal, it is intended that the original style will influence developing ideas only for the timber product. The effect will be a clash of Bauhaus style with traditional timber furniture techniques. For example, the squareness will remain, but the metal components will be manufactured out of timber. This will be a great look but challenging to do as one aspect of beauty in this product is all the highly reflective surfaces. The finishing of a table of this nature will need to be thoroughly researched to ensure that correct finishing techniques are used to match the intended design.

The Wassily Chair in Figure 2 …"

MAKE A DECISION ALL THE WAY THROUGH THIS SECTION ABOUT ISSUES THAT WILL AFFECT YOUR FINAL DESIGN IDEAS.

Firstly, if you use an image you need to comment on it by referring to it in your written words.

Secondly, you should always look at the highest marking criteria to maximise success. That is why I have used the "SEEEK" formula to analyse the work. What is "SEEEK"? Good question … look in the contents page of this book, find the page reference and read the information regarding this acronym.

Thirdly, these should only be the best images that you have found through your research conducted. I am guessing that if you are like me you would be 'Frankenstein'ing' all sorts of ideas trying to get the project just right. "I like this turned leg with this form of decorative table top". All of this stuff and fluff needs to be kept in your journal and only the important part make it through to you folio.

Journal Exercise 12

Collect all ideas that inspire your ideas of perfection in furniture in your journal. Annotate them, draw over them and even create a collage from different pieces of what your project could look like.

Do not be afraid to take a photo of your work in your journal and insert this picture into the folio. That is what the markers are looking for … a refinement and development of your ideas. Star rough and ready and keep moving forward until you reach a high academic standard.

Go home, decide on what is really useful, Desktop Publish your work and insert this section into your folio.

New Folio Sub-Heading

ROUGH SKETCHES

Now we can start having some fun.

Hopefully, if you have been playing the game right you have been doing sketch after sketch in your journal of what it is that you wish to make, Again, you only want to include your best work for the HSC Markers in your folio, but every time that you put a pen to paper you are earning marks. In this section, I personally like to mix it up a little. I would do some sketches directly into my folio. However, to do this you need to have your folio printed and up-to-date. However, there is nothing wrong with doing the work in your journal, taking a high quality photo or scan of your drawing and then inserting it into your folio documentation.

First drawing, use the space that you intend to put your piece. By using the exact space that you are going to build the table you will be able to communicate so much information. You can show all the dimensions for the table, highlight potential problems that will need to be addressed like the existing power point and you can also show how it is to work in with existing furniture like the modernistic style of painting and the colour of the frame itself. These first drawings do not have to be perfect and the HSC Markers are actually expecting to see lower quality work in the earlier stages. You need to show refinement and development of your skills and ideas.

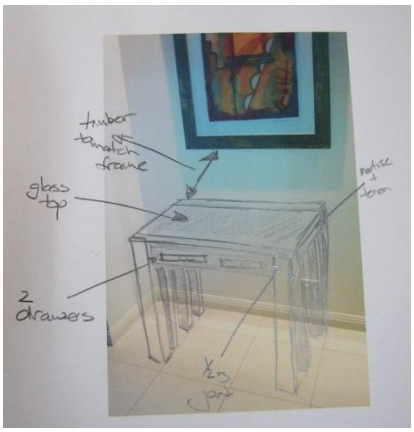
FIGURE 4 - HALL TABLE IDEA

From here, now that the basic ideas have been settled**, WHICH YOU WILL KEEP TO FOR THE WHOLE DURATION OF THE HSC COURSE**, now is the time to start

refining your work. Keep doing drawings in your journal, and when you get it right formalise it in your folio. The drawings that you will need are:

1. Rough sketches … 100's of them till you get your ideas right in your mind. If you are out at dinner and you have sketched your idea on a napkin, bring that home and stick it in your journal. Better still, carry your journal with you everywhere! If your Mum won't let you put it into her handbag, then get yourself a manbag to carry it in … have it with you all the time. By the way, the struggling artist look is ion this year, so just carry that sucker everywhere that you go to look cool with the "in" crowd.

FIGURE 5 - ROUGH SKETCHING



2. Annotate your drawings. Drawings on their own are good, but it does not give us an insight as to what you are thinking. Circle or highlight features that you like or are important and explain their importance to the reader.

FIGURE 6 - ANNOTATED SKETCH

MAKE A DECISION HERE ABOUT THE IMPORTANT COMPONENTS OF YOUR DRAWN IDEAS THAT YOU WILL USING IN YOUR FINAL PRODUCT.

Journal Exercise 13

If you haven't already, start sketching. There is no such thing as a bad drawing, so try and do whatever you can. And for goodness sake, DO NOT tear ANY page out of your journal. Basically, you are throwing away marks. It does not matter how bad you think the drawing is, the markers want to see refinement. You need to be bad before you can be good.

Go home, decide on what is really useful, Desktop Publish your work and insert this section into your folio.

New Folio Heading

Prototype, Modelling and Testing

HSC Marking Criteria (17 – 20 marks range)

"Demonstrates very high level skills in prototyping, modelling and testing (as appropriate to the nature of the project)"

(NSW Board of Studies 2010)

Journal Exercise 14

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

You have your basic ideas from your idea generation and the rough sketches that you have done. Now is the time for you to do some prototypes and testing to see it is all works.

New Folio Sub-Heading

PROTOTYPING

If you are lucky you will have access to one of those new fandangled rapid prototyping machines. You know the one … click on the button and you can print your product in 3D. Brilliant stuff … one easy step once you have your drawing finished. If you do not have one in your school, and let's face it, most schools do not have one yet, there are a few places that do it commercially as well as some school that offer it as a service to others.

But there is nothing wrong with the old hand-made prototype either. Here, if the time permits, you could possible make a sample 1:1 scale item and see how it all works. While this could be in timber, it may also be in cardboard. Take it home, put it in place, photograph it and comment on how this will inform your developing design ideas.

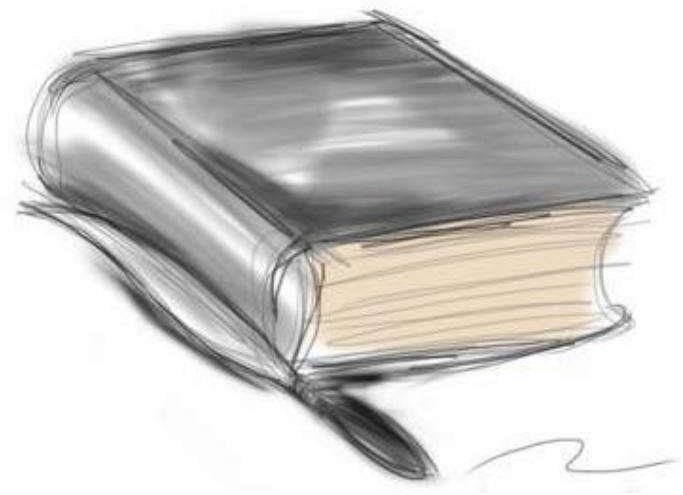
Prototyping does not only mean a fully finished product. You can also make specific joints that you intend doing for your project. All of these help to build a picture of what you have done in your HSC Year and are worth marks if they are relevant to your project. For example, there really is no value in practicing butt joints, so don't waste yours or the HSC Marker's time. Collect all your work and store them for safe keeping for your display.

MAKE A DECISION HERE ABOUT THE SUCCESS OF YOUR PROTOTYPE AND HOW YOU WILL BE USING THE PROTOTYPE TO INFORM THE REST OF YOUR PROJECT.

Journal Exercise 15

So here is where you need to turn into paparazzi! You need to have a camera with you wherever you go. Smarter students will also be taking video of their efforts for the 6 minute moving picture … notice I said "moving picture". If it not moving then they are images that can just be included in your folio. In your journal, put all you happy snappies and make sure that you comment on them. "This is good because … this will affect my project by … these are the changes that I am going to make because …" While the prototype can be and should be a stand-alone item for your GHSC display, they still need to be explained. Take photos of your efforts and include the important stuff in your folio.

Go home, Desktop Publish your work and insert this section into your folio.



New Folio Sub-Heading

TESTING

You have prototype, go and do some surveys … "Excuse me, but do you think that this look good?"

You have joints completed and you desire to put heavy weight on your completed project as you have decided to make a work bench. Test the joint to destruction … see how much weight it can hold before breaking. How does it break? Does it pull apart or the timber breaks? What can you do to stop this happening?

Remember tests are good, but you must have a reason for it and it must be relevant to your specific project. And if the answer is obvious, do not do the test. Who really wants to know the results of hammering a nail in with a Warrington Hammer compared to a Lump Hammer? Sometimes teachers, and I am speaking from personal opinion here, would like to use a lump hammer on a student …

MAKE A DECISION HERE ABOUT THE TEST THAT YOU HAVE CONDUCTED AND HOW THEY HAVE CHANGED OR SHAPED YOUR PROJECT IDEAS.

Journal Exercise 16

Same deal as before … take photos and comment on how your tests will impact your developing product. Lots of cause and affect statements here.

Go home, Desktop Publish your work and insert this section into your folio.

New Folio Heading

Production and Workshop Drawings

HSC Marking Criteria (17 – 20 marks range)

"Demonstrates very high level skills in developing production and working drawings (as appropriate to the nature of the project)"

(NSW Board of Studies 2010)

Journal Exercise 17

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

Time to step it up a bit. Need to get professional. Dust off that old drawing board and start to show your drawing skills.

Put in sub-headings in your folio for each one that you do.

1. Work through a series of oblique, isometric and perspective views of your project. A bit of overkill. However, you are being marked on your ability to display multiple skill and your ability to do it well.

MAKE A DECISION HERE ABOUT THE DRAWINGS THAT YOU HAVE DONE. IN THIS CASE IT MIGHT BE A FEATURE THAT YOU MAY NEED TO SPEND EXTRA TIME ON OR A DELICATE COMPONENT THAT WILL NEED EXTRA CARE.

Journal Exercise 18

Time to step up and do some technical drawings. Work through all the different types before deciding what will be best for your product.

Go home, decide on what is really useful, Desktop Publish your work and insert this section into your folio.

2. Exploded views of important features. Draw the joints that you will use in relation to your project. You need to point out the important features of your work and really sell it to the HSC Markers. Especially as the joints are hidden. If you do not tell them what you have done then no-one will reward you for the level of skills that you have used.

MAKE A DECISION HERE ABOUT THE JOINTS THAT YOU WILL USE. WHY ARE YOU CHOOSING TO USE THEM? WHAT ARE THEIR BENEFITS?

Journal Exercise 19

The markers really want to see a lot of skills in your project. As a minimum you should be looking at Doors, Drawers and Frames. They are specific and different skills that help to demonstrate your diversity. Obviously the next step up form here is incorporating things like carving, inlay and turning, but these are the entry level skills that will help you obtain the higher marks if done well.

In the exploded views you need to show the detail of these points of interest. This will separate the best to the rest, so make sure you show the markers what you can do.

Go home, decide on what is really useful for your project, Desktop Publish your work and insert this section into your folio.

3. CAD ... Now this is hard and to do it really well takes a lot of practice to do well. But the HSC Markers are looking for skills to give you marks. I know that this is not the best answer, but what about “Shapes” in a Microsoft Word or its equivalent? Sure, it is nowhere near as good as Auto CAD or even the free version of Google Sketch-Up,

but if you want to show some skills and then you can really do this quickly and easily.

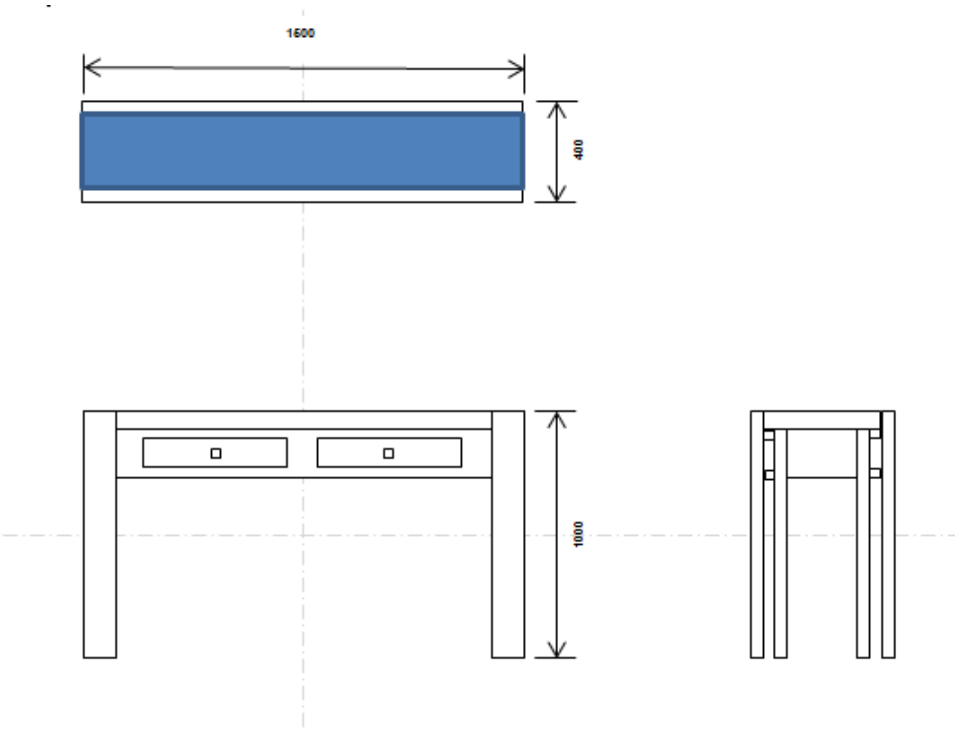


FIGURE 7 - WORD 'SHAPES' CAD DRAWING

MAKE A DECISION HERE ABOUT YOUR OVERALL PROJECT AND TELL US WHY YOU THINK IT WILL BE A SUCCESS AND/OR THE POTENTIAL PROBKEMS THAT YOU MAY FACE WHILE MAKING IT.

Journal Exercise 20

You should attempt to do some CAD drawings. This one here took about 30 minutes juggling some of the shapes in the 2010 Word program. This was really easy to do. Same tools I am sure in other applications, and it is worth marks to you if you do it. Give it a go!

Cut out samples of what you have done and stick them into your journal.

For your folio, decide on what is really useful, Desktop Publish your work and insert this section into your folio.

4. Rendered Drawings. Again, developing and showing another level of skill. In this case I would take a couple of my best 3D Drawings completed earlier and photocopy it a number of times. One these pages I would do my rendering and keep working it until I get it just right.

FIGURE 8 - RENDERED 2 POINT PERSPECTIVE DRAWING

MAKE A DECISION HERE ABOUT THE DIFFERENCES IN TIMBER BEING USED, OR THE EFFECT OF THE CLASS TOP, OR EVEN THE REASON THAT YOU ARE CHOOSING THE HANDLES THAT YOU ARE GOING TO USE (METAL?). YOUR DECISION HERE SHOULD REALLY BE ABOUT THE CONTRAST IN COLOURS AS IT IS A COLOUR DRAWING.

Journal Exercise 21

Again, glue all your work into your folio. However, the better ones you may decide to keep out as part of a pin-board display for the HSC Markers. But keep them safe, clean and crisp as there is nothing worse than looking at drawings that are not cared for.

If you do intend to use these drawings for your display, remember that they are to be numbered and counts as part of your 80 page limit.

Go home, decide on what is really useful, Desktop Publish your work and insert this section into your folio or save the pages safely for your projects' display.

5. Cutting List

There are so many different ways that you can do this. You need to remember in a lot of cases that is not just one way. Check with you teacher here to see what they suggest as they are a practitioner who knows what they are doing, and first hand advise would be better than reading it out of a book. You must make sure that you have the essential components like length, width and thickness of timber, as well as the part that it is going to be used for, and it all should relate back to your final drawing. Also, make your life easy by sticking the information in a table for easy access.

No.	Part	Amount	L	W	T
1	Legs – Front and back	4	1000	40	40
2	Rails – front and Back	2	1500	40	40
3	Legs - side				
etc	Rails – side				

Notice that I have not put what timber that I am planning to use into this cutting list? That is because I have not selected or justified my choice of material yet.

WHERE YOU GOING TO STORE ALL THIS TIMBER? WHAT IF YOU HAVE GOTTEN THE MEASUREMENTS WRONG? LOTS OF WAYS TO MAKE DECISIONS HERE!

Journal Exercise 22

Pull your final workshop drawing apart. In your journal calculate every piece of timber you need. It is also good to work out all the joining materials like dowels, biscuits and screws. Take one step further again … will you need a glass top? How about handles and hinges? Put all of these things in the cutting list so that the markers can see quite clearly that you are thinking about your project.

Go home, decide on what is really useful, Desktop Publish your work and insert this section into your folio or save the pages safely for your projects' display.

New Folio Heading

Selection and Justification of Appropriate Materials, Processes and Resources

HSC Marking Criteria (17 – 20 marks range)

"Analyses and evaluates the relationships between materials, components and processes in the development of the major project"

(NSW Board of Studies 2010)

Journal Exercise 23

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

Look at the key words here first of all. They have jumped to "Analyse" and "Evaluate". You need to use SEEEK to get to these levels … you need to cast judgements on your work and show inter-relationships between your ideas and the project's components. Again, there is no or right answers here, but you need to communicate what your options are, what it is that you have selected to do and evaluate why you have decided to do it. Here I would use a table again. But if you have a better idea, use it to show difference in your work.

New Folio Sub-Heading

MATERIALS

Component	Materials	Selection	Evaluation
Legs & Rails	1. Tasmanian Oak 2. Hoop Pine 3. Jarrah 4. New Guinea Rose Wood	Tasmanian Oak	Tasmanian Oak has been selected as the timber that will be used for the legs of the project. This is because the timber has the potential to glow when finished and it would mimic the reflective look of a lot of Bauhaus pieces and it is moderately priced. For example, the grain structure in selected pieces of Tasmanian

			Oak that I have seen actually reflected light from certain angles when finished, and the same amount of timber required for the project in New Guinea Rose Wood would be triple the price of the Tasmanian Oak. This gives the project the opportunity to have the aesthetic appeal that I am looking for while still keeping a whole lot of cash left over for other bits and pieces. The knock-on effect will be less of a loan that I will have to get from Mum and Dad without the final quality of the piece being jeopardised.
Drawers			
Glass Top			
etc.			

Journal Exercise 24

Draw up this chart in your journal and make sure that you go through all of your options for the materials that you can use.

Go home, decide on what is really useful, Desktop Publish your work and insert this section into your folio or save the pages safely for your projects' display.

LOTS OF PLACES TO MAKE DECISIONS HERE … NOW THAT YOU HAVE THE HANG OF IT, I WILL LEAVE THIS DECISION, AND ALL THE REST OF THEM TO YOU.

New Folio Sub-Heading

PROCESSES

Component	Materials	Selection	Evaluation
Joints for legs and rails	1. Butt 2. Mortise and tenon 3. Dowel 4. Biscuit		
Drawers			
Connecting legs			
etc.			

Journal Exercise 25

Draw up this chart in your journal and make sure that you go through all of your options for the processes that you can use. You may also find that using one of your drawings in this section could be of a benefit. For example, I know where the joints for the legs and rails will go, but maybe the reader will not. Put in a drawing of your project, circle and number the part that you are looking at, and use this as part of the table above.

Go home, decide on what is really useful, Desktop Publish your work and insert this section into your folio or save the pages safely for your projects' display.

LOTS OF PLACES TO MAKE DECISIONS HERE … GO ON AND JUST DO IT!

New Folio Sub-Heading

RESOURSES

Component	Materials	Selection	Evaluation
Glass top	1. Tempered 2. Tinted 3. Perspex 4.		
Handles for drawers			
Trims			
Adhesive			
Etc.			

Journal Exercise 26

Draw up this chart in your journal and make sure that you go through all of your options for the resources that you can use. Same deal as before … drawings or catalogue images may be of more benefit here than words alone. Remember to use ones that are RELEVANT to what you are doing.

Go home, decide on what is really useful, Desktop Publish your work and insert this section into your folio or save the pages safely for your projects' display.

DON'T MAKE ME HURT YOU … JUST MAKE ANOTHER DECISION AND CUT YOUR WHINGING!

Time to move onto the next section of the folio, the construction steps of your project.

New Folio Heading

Production of the Project

HSC Marking Criteria (17 – 20 marks range)

"Clearly describes the management of the project, including a succinct record of the production of the project" and "Demonstrates the use of a wide range of appropriate OHS and safe working practices through suitable documentation and evidence"

(NSW Board of Studies 2010)

Journal Exercise 27

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

This section can turn into pages and pages of work. Documenting every single thing that you do! However, with the introduction of the six minute video, you can cut down the amount of work that you do here by actually showing them in moving pictures.

So before you go any further, you need to commit. To video or not to video … that is the question! The video is also linked to the ICT skills marking criteria, so if you do not do it you will not be granted marks that others will be getting. On the other hand, you will need to be professional in what you do and use all the video editing tools like titles, transitions and filters. Either way you will still have to fill in your journal just in case everything is lost and the production step will be needed in hard copy.

Let's think about this for a second. Firstly, six minutes can be a long time if you are watching something that has the consistency of snail racing. You need to make it interesting. I believe that the video needs to not only be factual but also tell a story. I would suggest that you:

1. Show the place where the project will go pre-installation. If your parents are paying for the whole job, it may be worthwhile asking what their expectations are too.
2. Show of your other skills here. Are you good at drawing? Make one come alive on a piece of paper before the markers eyes.

3. Use the bulk of your video for the construction step. But rather than watching six minutes of routing or screwing components together, double time the speed on the film so that they can see what you have done but do not have to be tortured by every little thing that you did. You don't need to show the skill more than once. If you are turning a total of 40 chair legs, you really only need to show one to prove that you did it and show that you have the skills. Annotate the steps that you are taking using titles to add the extra effect needed for telling the story.
4. Finish with showing the final product in use. If this cannot occur, then maybe get you parents back for an unveiling to gauge their reaction to the work that you have completed.

If you want the perfect model for a film, think about "Backyard Blitz" in six minutes.

Now even though you are doing the video, you must tell the HSC Markers that they can find this component of your folio in your film. However, I would also throw in here some still shots of the more difficult tasks that you have undertaken and explain the problems that you faced in doing these difficult joints or tasks.

So here is the flip-side … you do not wish to do a video.

Firstly, you will have a still camera everywhere that you go. These days you mobiles are the best option, but make sure that you clear this with your teacher so you do not get busted for doing the wrong thing. Remember, a picture says a thousand words, so your job gets easier if you do use photos.

If you are going to this this in hard copy format then I would suggest that you put all your information in a table.

Construction Steps

Step	Process	Materials	Tools	Evaluation
1	What is the name of the process that you will be doing?	What are the materials that you will need to complete this process. That is, what timber will you be using here?	What are the tools that you need for this process?	Here, the first thing that I would do is put in a photo as evidence that you are actually making the project. Next, evaluate your overall efforts.
2				
etc.				

Keep going until you finish describing how you have built your item from the first cut to the final finish.

Journal Exercise 28

Keep your journal and camera close by. You need to constantly be documenting what you are doing and why. List the tools that you are using and reflect on your efforts. The beauty of digital photograph is that it will not cost you a cent … so keep taking photos. You can always delete them later if they are no good. You will be refining this information for your folio, but it is all evidence that you actually made your project.

Depending on how you are presenting this information, go home and add bits to your folio or edit it into your 6 minute video.

Here is a word to the wise and it does not matter if you are do video or still shots.

ALWAYS WEAR YOUR PPE!

It is quite funny … well, it would be if it did not happen to you … but let people know that you are filming or taking photos. We always see the perfect shot of the student wearing their nice, clean and crisp ne apron and funky protective glasses. And then in the back shot of a video or a photo, the same turkey is wearing thongs and an untucked singlet because they do not think that OHS applies to after school hours. Here's the news … You can still get hurt after school and you are not indestructible! Furthermore, you had better hope that the HSC Markers have completed marking your folio and project, as I am sure that they do not take too kindly to be played for a fool!

So as a courtesy to your classmate, who always do the right thing and wear their PPE, please make everyone aware that you are taking photos so that they do not get caught 'planking' in the background, or something just as stupid, they choose to do so at their own HSC peril.

FIGURE 9 – PLANKING IS NOT SAFE WORK PRACTICE
(uvw916a 2011)

New Folio Heading

Time Plan

HSC Marking Criteria (17 – 20 marks range)

> "Develops, applies and evaluates comprehensive and appropriate timeline plans"

(NSW Board of Studies 2010)

Journal Exercise 29

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

Time Plans … you have got to love them! Crazy thing is that they should also be done first, but here they are at the end of the folio … go figure!

If I may offer a personal reflection here, this is the section that students do the worst at. They leave it until after the project is finished … they do not follow them … and students always seem to run out of time. Don't get me wrong, this is a really hard skill that everyone struggles with even when the HSC has been completed.

But in the case of the folio, it is noticeable when a student does it well. Forget about how the data is presented at the moment, it is what you intend to do and how you go about doing it that really counts.

Here is what the markers said about the 2010 HSC student efforts:

> *"Timelines and finance plans were usually presented well and in a variety of ways. Candidates need to be sure to add detail in these plans and not restrict them to a few general headings. Research, for example, needs to include details of type, how and/or where. It is also important to note that these time and finance plans must include both a proposed plan and an actual plan and not be written after the event."*

(NSW Board of Studies 2010)

As you can see here the Markers are big into detail. Just running through the heading of the folio won't cut it. It is a good place to start, but it is not enough. Remember, as mentioned above, your folio should have a predictive time plan and an actual time plan. If you wish to take it even a step further, you will probably do a third time plan, and maybe a forth, as your planning should change to represent the changes in situations that you are facing.

What should you do? Well here is time planning according to Bauer.

First thing you need to realise is that every student doing Industrial Technology in NSW has the same time constraints and the same folio headings. If you only stick to this then your work will be very ordinary indeed. Sure when you do your time plan you should mention that you are stepping through the creative process, but do not waste your time here. The Markers want to see you Just-in-Time plane for your specific product.

Here is an action plan that a lot of student use at the start of their project.

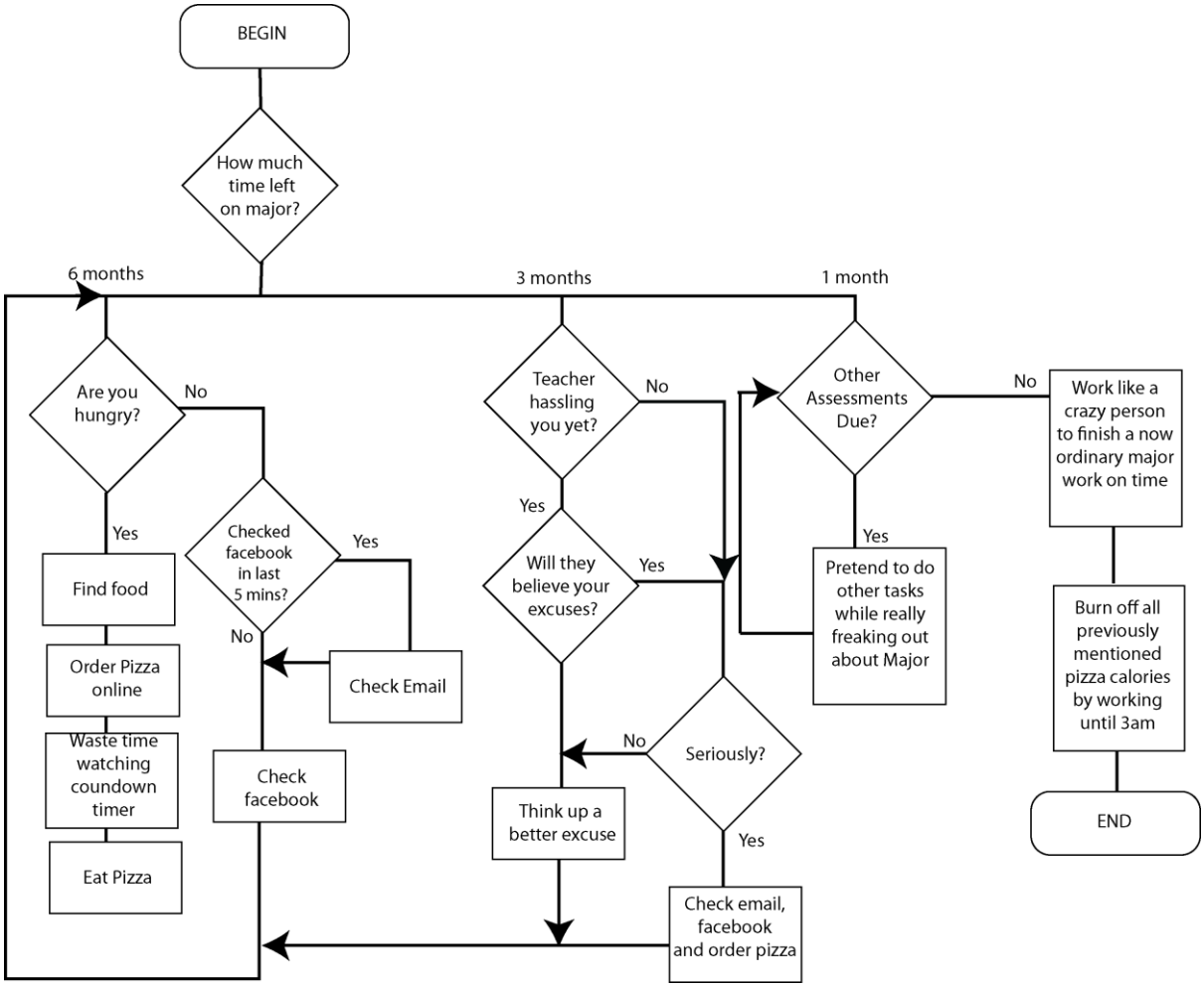


FIGURE 10 - PROCRASTINATION FLOW CHART

Journal Exercise 30

Thinking specifically about your project, draw a flow chart that step by step describes how you will make your project. Think about buying that first bit of timber right to the very end where you are applying a finish to the assembled product and allowing it to dry. Now this is predictive, so right down everything that you believe that is to be done. Also at this stage you need to guess how long you think that each of these steps will take.

Go home, Desktop Publish your work and insert this section into your folio with the heading of "Predictive Action Plan".

Now that you know what you are doing, you need to start to develop a time line of events. Here is a simple one that I developed using a table in Word.

Predictive Time Plan

Action		1	2	3	4	5	6	7	8	9	10	11											32
	Intent																						
	Research																						
	Sketching																						
	Prototyping																						
	Drawing																						
	Justification																						
	Management																						
	Time																						
	Finance																						
	Appropriateness																						
	Evaluation																						
		Time																					

Legend

Action	Description		Time	Date
Intent	**Statement of Intent** used to outline the intended project boundaries for which the product is being made for.		1	11/10/2011
Research			2	
Sketching			3	
Prototyping			4	
			5	
			6	

This is a real simple one. Notice that I have also done what I said that you should not do … I have used the headings directly from the folio. Again, this is not a good practice as it does not go into enough specific details for your project. However, there is no reason why you cannot take this idea and make it work specifically for your project. Key features here are the comparison between the time and your actions. The time should be equal to the entire time that you are spending on your project. In this case I have only nominated the school weeks, but you could also count another 10 weeks of school holidays that will occur over the HSC year. I have also included a legend, so that you are communicating exactly what it is that you are doing.

To make life easier, I would also have a blank one pasted into my journal so that I could colour it in as I go so that I can record the "actual" time that was spent. Now all this great work will get you marks, but it is your reflection on how the task went that will raise you up to the higher echelons of the Student Deities of Industrial Technology.

The simple Gantt Chart is not the only way that you can do this exercise. Here is one that has the terms laid out vertically, which compares and cross references tasks. Now if this was in colour, you would also be able to see that it is colour coded that helps with communication.

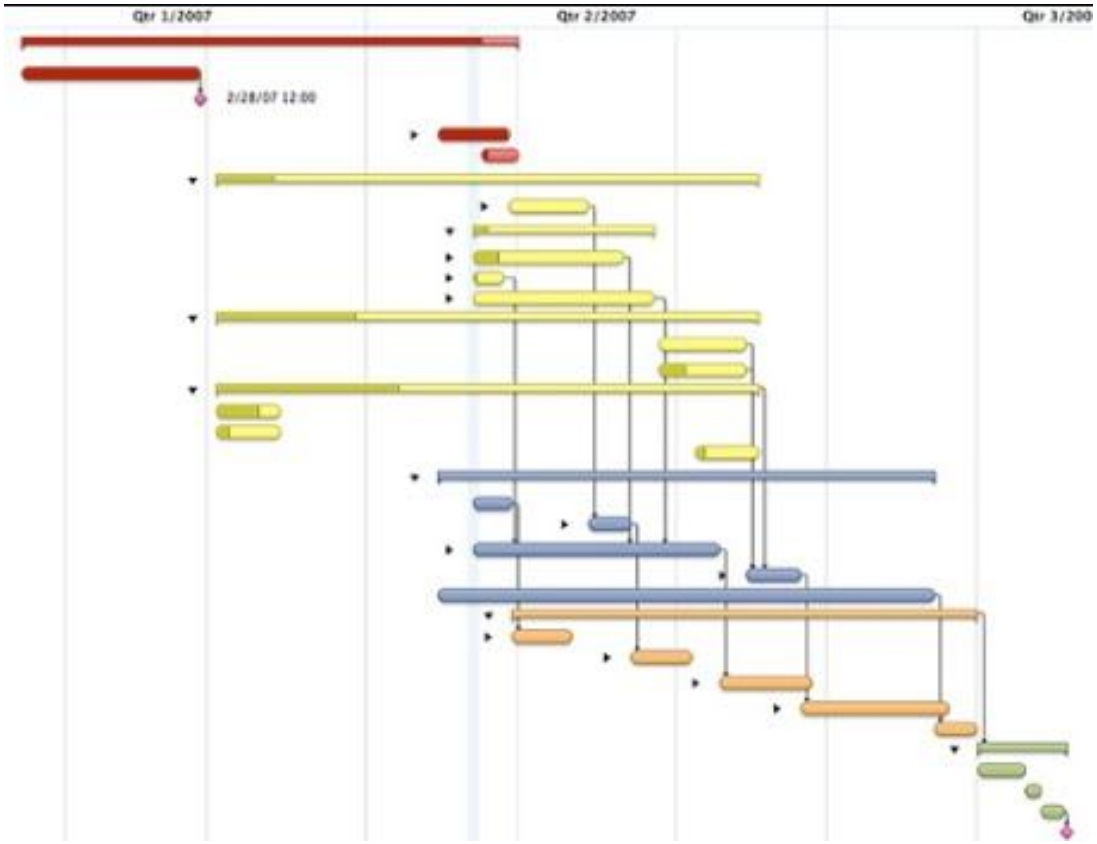


FIGURE 11 - SAMPLE

(Perhapstoopink 2007)

So as for presentation, you can jump on the Internet, type in “free Gantt chart creator” and you will get a host of people trying to give you free trials to their stuff and hundreds of annoying cookies to track your web surfing. If you are not into that and you are worried about your computer crashing as you just down loaded a virus, then you can generate the same thing using a Word or Excel document. Either way, do some research and see what inspires you and develop a time plan in your individual style.

Journal Exercise 31

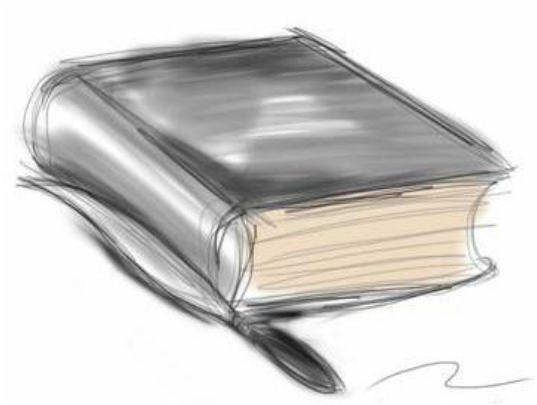
Develop a time plan that represents your style and can accurately communicate the actions and the times needed to complete each components of your project. Make sure that you add in the time when you need to purchase your resources and that you highlight important steps of the project so that following sections can be completed on time.

Go home, Desktop Publish your work and insert this section into your folio with the heading of "Predictive Time/Action Plan".

Keep accurate records of your efforts in your journal, and re-do your time plan at the completion of your project to indicate how things did, or did not, progress as planned.

Go home, Desktop Publish your work and insert this section into your folio with the heading of "Actual Time/Action Plan".

TO GET THE MARKS HERE YOU NEED TO INDICATE WHERE THINGS WORKED WELL AND WHERE YOU HAD PROBLEMS. THIS ONE IS A REFLECTION ON HOW YOU USED YOUR TIME.



New Folio Heading

Finance Plan

HSC Marking Criteria (17 – 20 marks range)

> "Develops, applies and evaluates comprehensive and appropriate finance plans"

(NSW Board of Studies 2010)

Journal Exercise 32

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

A lot like the time planning, needs to be done early and there are many ways to do a budget. Just a quick search on Google will open up a host of options.

As with the time/action plan, the Markers want to get inside your head to work out what it is that you are thinking and how you will be able to afford your project. Furthermore, they want to know where you are getting the money and how you will pay it back. For example, you may be dipping into your savings and using the money that you have earned from your part-time employment… the Markers will want how this is going to affect the rest of your life. I do not know for sure, but I am guessing that if you have been putting away $5 each week into your little piggy bank from the time that you were two years old, I would assume that you had no intention at the time that you were going to spend it on a bundle of sticks that you will eventually turn into a piece of furniture. So by spending the money now, what will you miss out on and/or how do you intend to get the money back?

Now if you are one of the lucky ones where Mum and Dad can chip in a few bucks, you will find that this is not a good enough explanation as to how you are getting the money. Again, this will affect what you do with your project. Here is an example, let's say that you "borrow" $500 buck to buy your timber. Six months later when it is time to take your project home, you decide that you will just throw it out as it is not good enough. Now imagine me as your Daddy … 6" 3' and 140 kilos of pissed off man as you just wasted my $500 bucks. What do you think I will do? I cannot tell you as there are all these child protection laws that are floating around, but let's just say that I would feel that I had a stake in your project and that as your financial lender, I would expect certain returns. This is what the markers want to

know … what is your obligation for taking this money and how are you going to stop a man mountain ripping your head off … did I say that?

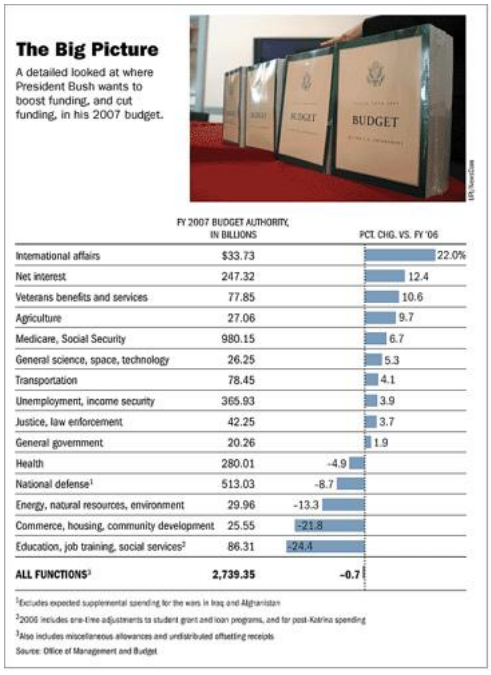
So here is a simple budget sheet again drawn up using tables in Word. Same deal, you will need predictive and actual to reflect upon later.

New Folio Sub-Heading

PREDICTED EXPENDITURE

Item	Description	Cost ($)
Indicate the item that you will need to buy	Describe the item ...	
Fabric	10 metres of eastern Nepalese silk spun by worm fed Bavarian schnitzel to be used for the project's upholstery. @ $10.56 per metre	$105.60
	Total Cost:	
	Personal Budget:	
	Loan:	

	Personal Budget + Mum and Dad:	
	Total Costs:	
	Balance:	



Here is a different version of a budget. As you can see in this image, this one has been created on the United States of America's budget situation. Bigger fish than the NSW HSC Industrial Technology project, but same idea and look at how it has been laid out. The blue highlights could easily be the predictive and actual spending components and links these to percentages over or under budget. I could really change this and make it my own if I wanted … this is what is meant by seeking inspiration on the Internet!

FIGURE 12 - FINANCE PLAN IDEA (BALASUB 2006)

Journal Exercise 32

Develop a finance plan that represents your style and can accurately communicate your monetary needs for your project. Make sure that you indicate where the money is coming from and how you intend to repay the total costs. Thing about everything from timber to glue when calculating the money needed, and if you are getting a loan, what your obligations to the lender are. If you do not know what the obligation is from your parents, go and ask them what they expect from you and get ready for the guilt trip coming if you do not work your backside off to repay them.

Go home, Desktop Publish your work and insert this section into your folio with the heading of "Predictive Finance Plan".

Keep accurate records of your spending in your journal, and re-do your finance plan at the completion of your project to indicate how things did, or did not, progress as planned.

Go home, Desktop Publish your work and insert this section into your folio with the new folio sub-heading of "Actual Finance Plan".

YOU NEED TO REFLECT ON YOUR EFFORTS HERE. WAS THE MONEY WELL SPENT OR HAVE YOU LET PEOPLE DOWN? BE HONEST, AND HAVE SOME PLAN IN PLACE TO MAKE IT RIGHT IF YOU HAVE STUFFED UP.

New Folio Heading

Appropriateness of design and/or design modification

HSC Marking Criteria (17 – 20 marks range)

> "Analyses and evaluates the relationships between design and modifications (if applicable), materials, components and processes in the development of the major project"

(NSW Board of Studies 2010)

Journal Exercise 33

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

Will you just have a look at the key words the BOS is throwing around here! "Evaluate" … "Analyse" … these guys want to see some thinking going on here!

Looks like we will have to **"SEEEK"** the answer here!

Easiest thing to do here is have a picture of your original idea, your final drawings and a photograph of your final project. You need to show why you choose that timber … why you used that component/joint …. why you choose to make it the way that you did.

Here you must also remember your audience and who you are talking too. I should not laugh, but there is nothing funnier to a specialist teacher who is looking at a bundle of sticks instead of a piece of timber furniture to be told by the product's creator that everything went according to plan and that they are happy and proud of what they have done … wake your and smell the roses … it's a bundle of sticks for goodness sakes!

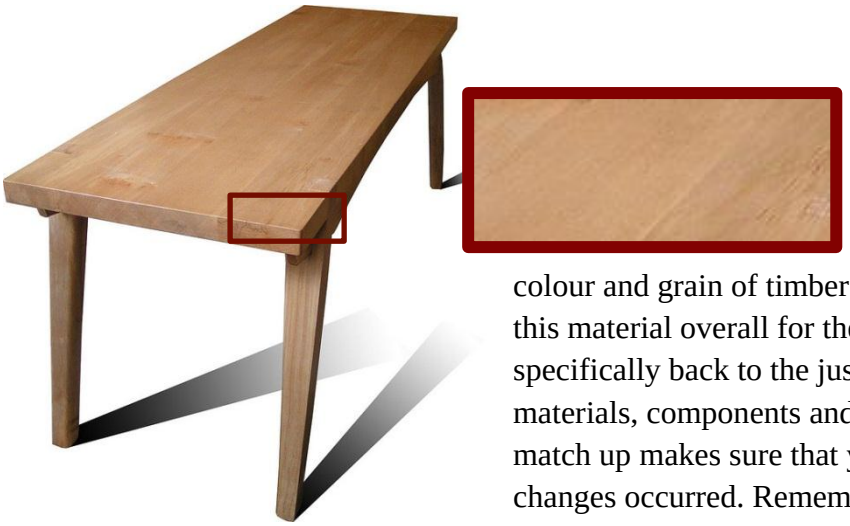
You need to be honest. If things did not go to plan, state this as a fact and evaluate what happened. To finish up your reflection, indicate quite clearly that if you had the time to do it again, this is how you would approach it to get over the original problem that you faced. Let's face it, if things did not go as planned, the markers would have already seen the

problem and in their own experience as teacher could probably predict when it all went pear shaped. So just tell them what happened and get some marks for your efforts!

So here is what you do …

New Folio Sub-Heading

MATERIALS



So here you need to highlight the materials used and discuss them. Why did you choose this colour and grain of timber for the top? Why specifically this material overall for the table? This section relates specifically back to the justification and selection of materials, components and processes, so if it does not match up makes sure that you tell the reader why the changes occurred. Remember to use SEEEK to formulate your answer.

FIGURE 13 - TABLE BENCH (ANGUS 2007)

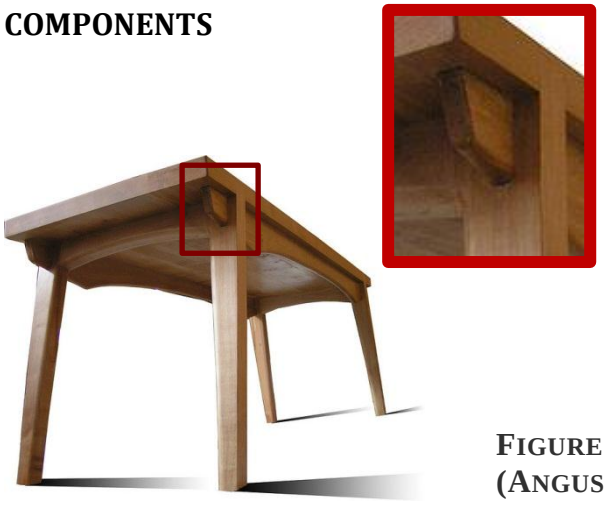
Journal Exercise 34

Keep your notes and photos in your journal. The problem with this section is that the photo that you may need to use could actually have been taken at the beginning of the products creation. Save all your photos and drawings as you may never know when you need to use one of them.

Go home, Desktop Publish your work and insert this section into your folio.

New Folio Sub-Heading

COMPONENTS



Here you do the same as before, but talk specifically about the joint work that you have done and the reason that you have chosen to do it.

FIGURE 14 - TABLE BENCH UNDERSIDE VIEW (ANGUS 2007)

Journal Exercise 35

Same deal as before … just in this case you would be advised to take photos of the joints broken apart too to add greater understanding of what it is that you have done.

Go home, Desktop Publish your work and insert this section into your folio.

New Folio Sub-Heading

PROCESSES

Figure 15 - Prototype Testing (Hunter 2010)

The process that you need to point out here are the different ones used that are specific to your project. For example here, this image describes how a prototype might be used for testing in the the place where the final piece of furniture will final be placed. This technique would be specific to this project. Again, the Markers do not want to know that you used a biscuit joiner as most of the studnets across the State will use this technique at some time. What they are looking for is things that set you and your project apart from others.

Journal Exercise 36

Same sort of stuff. Save all your photos and use the best ones that indicate your difference and special abilities that you used in making your project.

Go home, Desktop Publish your work and insert this section into your folio.

So here I have specifically focussed on the materials, components and processes used that were specific to the actual design. But you must remember that the Markers are also looking for any modifications that you have used. If you want another mark, try going over the process above again, but this time focus on the changes that you have made to another design.

Journal Exercise 37

Just document EVERYTHING! You never know when you can use it … isn't this journal thing starting to become really useful!

Possible New Folio Heading

Evidence of …

… evidence of OHS and safe working practices

… evidence of a range of presentation skills and techniques

… evidence of a range of ICT skills

HSC Marking Criteria (17 – 20 marks range)

> "Demonstrates the use of a wide range of appropriate OHS and safe working practices through suitable documentation and evidence"
>
> "Demonstrates a wide range of presentation skills and techniques, including ICT skills, appropriate to the development of the major project"

(NSW Board of Studies 2010)

Now if you have done this correctly, all of these components should be "evident" in your folio. For example, part of your comment in the production component of the folio should clearly indicate the PPE that you will be taking and the risk assessment completed in order to complete one of the manufacturing processes. However, it is quite possible that minute detail were missed that you feel that you need to explain in more detail to maximise your marks. If so, strike up a new sub-heading in the folio and tell the reader all about it. Let's face it, if you do not do it, then no one will.

So for me, these heading will take up some space if they are compulsory inclusions in the folio. However, if you have pages left over, then definitely use them up.

Journal Exercise 23

Keep documenting all that you have done and include it in the folio where appropriate.

New Folio Heading

Final Evaluation

HSC Marking Criteria (17 – 20 marks range)

> "Provides critical evaluation of the major project, including in relation to the statement of intent, research and planning"

(NSW Board of Studies 2010)

Journal Exercise 38

In your journal, re-write this marking criteria so that it forms a short introduction to this component of the folio. Make sure that you look for the key words to understand what is really being asked for. This will help you as a method of checking your work to the official marking criteria.

Go home, Desktop Publish your work and insert this section into your folio.

So if all is right in the world and you have gotten to this stage of the project, then you are just one step away from finishing.

The Final Evaluation!

Here you need to SEEEK your answer again to each of the points below. Also, add clarification using photos of your job and annotating them to show reason. Include the positives, negatives, concessions and alternatives of your project. Again, this should be linked to your statement of intent, research and the planning undertaken for the overall project. Think about how well you solved the original problem. You could also get other people to evaluate your project - perhaps someone in industry, or someone that is considered "an expert". Alternatively, you could do some primary research (observation, interview) to find out whether your users actually can use your product.

The issues that should be CRITICALLY EVALUATED here include:

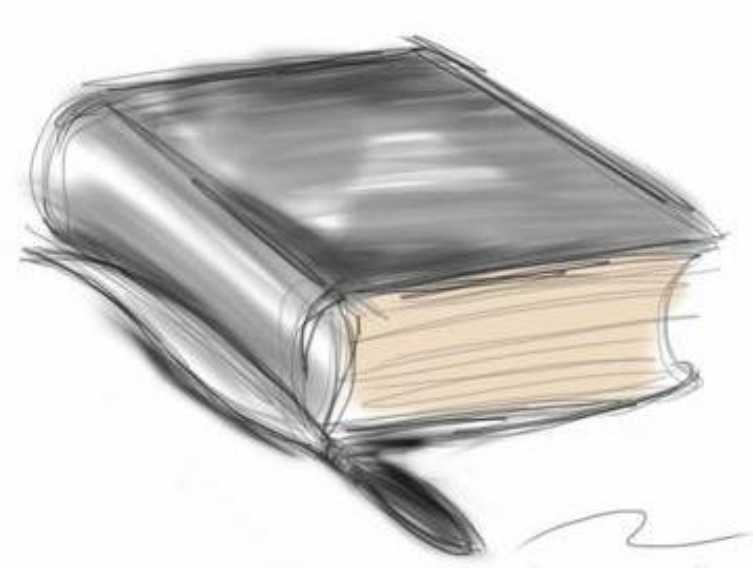
- Statement of Intent
- Research
- Time and Finance planning

Again, to get your message across, do not be afraid to use written words, images, drawing and/or photographs. Use every means of communication possible. The more creative of you may even work this into your six minute video … The main thing here is to show that you are thinking. To "critically evaluate" is one of the highest, if not the highest, key term used by the BOS. Show them your smarts as this is what really needs to come out here.

Journal Exercise 39

You need to write drafts of your work here. They are expecting a real depth of thought here and showing that you understand the relationships between the folio and the final product. Go back and read your Statement of Intent, Research and Planning section and indicate quite clearly what worked and what did not. For the components that did not work, make sure that you can offer a different alternative to what you actually did that would correct existing problem in the project.

Go home, Desktop Publish your work and insert this section into your folio.



New Folio Heading

Conclusion

HSC Marking Criteria (17 – 20 marks range)

"Demonstrates a wide range of presentation skills and techniques, including ICT skills, appropriate to the development of the major project".

(NSW Board of Studies 2010)

So here is another page that you are going to lose from the 80 page count that you may deem as being unnecessary as it will not be marked. But with any good book, there needs to be an ending. You have developed this bond with the HSC Marker, and it is only right that you say good-bye in a professional manner. Also, as with any subject, to get into those upper echelons of marks you need to present yourself at the highest level.

Here is what needs to be said in a conclusion:

1. Tell them what it is that you intend to make.
2. Tell them what you actual did.
3. Tell them the level of success that you actually achieved.

Here you do not want to have them leaving laughing. If you have a bundle of sticks, do not say that all is as you planned … I am just giggling to myself thinking about it now…

Mrs B will probably arc-up again, but if you have the page spare, give the reader a final farewell.

The Exam…no this subject is not just about making stuff

It's a problem with most students in Industrial Technology…you've spent your whole year making your project, working through your folio, and have finally gotten to the downhill run. Well, just remember, you're not finished yet. Although it's a great advantage to see 60% of your HSC exam already finished before you even start the HSC exam, don't break out the cake yet. Both Mr B and I have seen students with spectacular projects go down a band or two because of their performance in the exam. It is 40 marks of your HSC still left to go….yes, you will actually need to study for this.

The aim of this section of the book is to give you an easier way of studying. No, we're not going to give you all the answers. This is not that type of book. However, we will give you a scaffold of things that you need to know for the exam, and how to answer questions.

Like any HSC exam, there are tricks to Industrial Tech. The best thing though, is not to be surprised by the exam questions. My students will tell you that we do sample exams over and over and over again….the aim being that by the time they get to the HSC exam, then they will have seen a similar question, either in format or content within their practices. Whenever they're looking particularly unfocussed on their majors, I make up an exam question, and we answer it under exam conditions. Of course if you're a student of mine and you're reading this at the beginning of the year….Surprise! If your teacher is not as evil as me, team up with one of your other class members and write questions for each other, and then answer them.

So, the aim is within this section is to make you familiar with the exam…not only the content, but the format and how to answer questions within. Instead of writing in your journals (which I'm sure Mr B has already discussed our "disagreement" on these) we will give you space within this book to write your answers, and keep it all together.

The Exam Format

Firstly, an important point…in all subjects, it's really important to look at past exam papers for your subject. It's also important to ask your teacher which years to look at. This is important because the syllabus has recently changed for Ind Tech, and importantly, so has the structure of the exam. The first year of the new exam structure was 2010, so any exams prior to this date will be in a different format. In addition to this, you can also look at the Sample papers for Multimedia and Timber Products and Furniture Industries were also provided for students of 2010 as a guide to what the paper looked like, and this is also available from the Board of Studies.

The Industrial Tech exam has three sections:

Section	Type of Question	Content Covered
Section I	Multiple Choice 10 Questions 10 Marks	Industry-Specific Content (ie, Timber and Furniture specific Content)
Section II	Short Answer questions Space provided in exam	
Section III	Extended Response	Industry Study (generic section that every focus area gets)

It's important to remember that you need to look at the syllabus for all sections. Some students make the mistake of thinking that the content covered in the Industry Specific content (ie the Timber stuff) is just whatever they have done in their project. This isn't the case. You should be looking at other student's projects as well while they are making them. Ask them questions about how they've done stuff, and make sure again that you study! Check the glossary in this book and make sure you know everything in there…this is the stuff that the exam gets written around. Not because this book is so fantastic, but because this glossary comes directly from the syllabus dot points.

Multiple Choice

The multiple choice assesses knowledge of content. You need to study. Did I say that again? You need to study. The multiple choice is not tricky, but sometimes you do need to apply your knowledge of situations to the question. The board tries to write these questions so that they're not just straight recall questions. Normally you have to apply your knowledge of content to the question, or at least think about the question. Don't rush through them….sit and think about each one. You likely will not have to use the allocated time, but prepare for the exam as though you will.

Double check you have answered every question and have not answered it more than once! It seems silly but every time I mark papers, there's at least one student that has not put down an answer in multiple choice, and at least one that has marked A and D both correct. Firstly, if you don't know the answer, work through the options until you have at least two that seem plausible. If in doubt, you can't get any marks for putting down nothing…so put *something* down.

Short Answers

Use the space provided for the answer. The Board of Studies suggests the amount that you should be answering for each question, so make sure that you fill this space if you have average sized handwriting.

Know your key words! Particularly those that are used often in Technology subjects: Outline, describe, explain, discuss, evaluate, justify, compare and contrast. Make sure that you answer to the keyword and make it obvious that you have done so.

Look at the number of marks for each question. Technology exams may often imply a number of responses, even if there is no number indicated in the question. Unless you get a question like "Discuss an implication of this..." where it specifies a number, you will need to look at the amount of marks and the length of space required to try to gauge how many items you will need to talk about.

Be concise. You won't get any marks for rewriting the question, or writing introductions and conclusions within short answer questions in this subject...don't waffle! Don't introduce and conclude short answer questions…I've seen this before, when students transfer their understanding of exams for other subjects, where you may have to do this, to Industrial Technology, and it will not lose you marks here, but it's a waste of time and space in the exam.

Extended Responses

Write as much as you can in the time that you have. There is no reason why you should finish an Industrial Tech (or any exam really) early. The time is allocated for students based on a formula of 2 minutes per mark. Remember that it is an extended response. The Board specifies approximately 600 words for this section.

Write an essay plan and write it within your answer booklet. This shouldn't take you more than a minute, but it will mean that you won't forget your arguments within your essay, and you can always go back to it for help. Also, your essay plan can be helpful for markers to orient themselves, and can also be marked if you don't get around to mentioning all the points in your essay.

You must know and answer to the key words. Discuss requires positives and negatives, explain is cause and effect, analyse requires you to relate between components/considerations. Use trigger words to identify when you are answering to the key term. E.g.…a positive of this is…the effect of this is…

Use the SEEEK formula: First, state what the issue is, explain the effect of it (for a discuss you must give a positive and a negative), give an example, evaluate it, then give the knock on effect. This formula will go one step beyond the key word of most key words required in Industrial Technology. If you repeat this for every issue that you have to discuss, then you will cover the content well.

You must always l~~L~~ink to the question. Make every point link back to the question, and make sure that it is specific "this effects the introduction of new technology by…" Regurgitating the dot points will get you very low-level marks.

For example:

> ***IND Tech is a company within Australia that wishes to move location to a more rural area, as the real estate is cheaper so that they will save money.***
>
> ***Evaluate the environmental, structural and technical issues that the business needs to consider within the scenario.***

The first environmental issue that need to be considered when IND Tech moves location is that of waste management. The business needs to consider how any wastage produced by the business is disposed of. If the business manages their waste effectively, this can have the positive effect of reduced the costs to the business, which can improve the efficiency of the production process. This is important if they are moving to a rural area, as they need to consider where the disposal of any wastage is, as generally these disposal areas are further away from the business. For example, if a Timber business is using chemical stains, glues and lacquer then they must ensure that it is disposed of correctly, as this may have an effect on the environment. This can cause a negative cost to the business, as in a rural area, it would be more difficult to dispose of waste, as the wastage disposal services that are available within the city are not available within the country. The further effect of this is that the company may then dispose of the waste incorrectly and cause further environmental damage.

Exercise:

In the paragraph above, highlight each element in SEEK in a different colour. By the way, the paragraph above only answers ONE of the environmental factors. You need to do this for a second factor, and then two each of structural and technical factors.

Watch out for AND, OR and plurals of words. E.g. "Discuss the considerations that ~~are~~ need ~~ed~~ to be considered..." means that you need to discuss more than one consideration. You always have to answer ALL parts of the question. Unless indicated by the key word, don't spend more time on one part of the question.

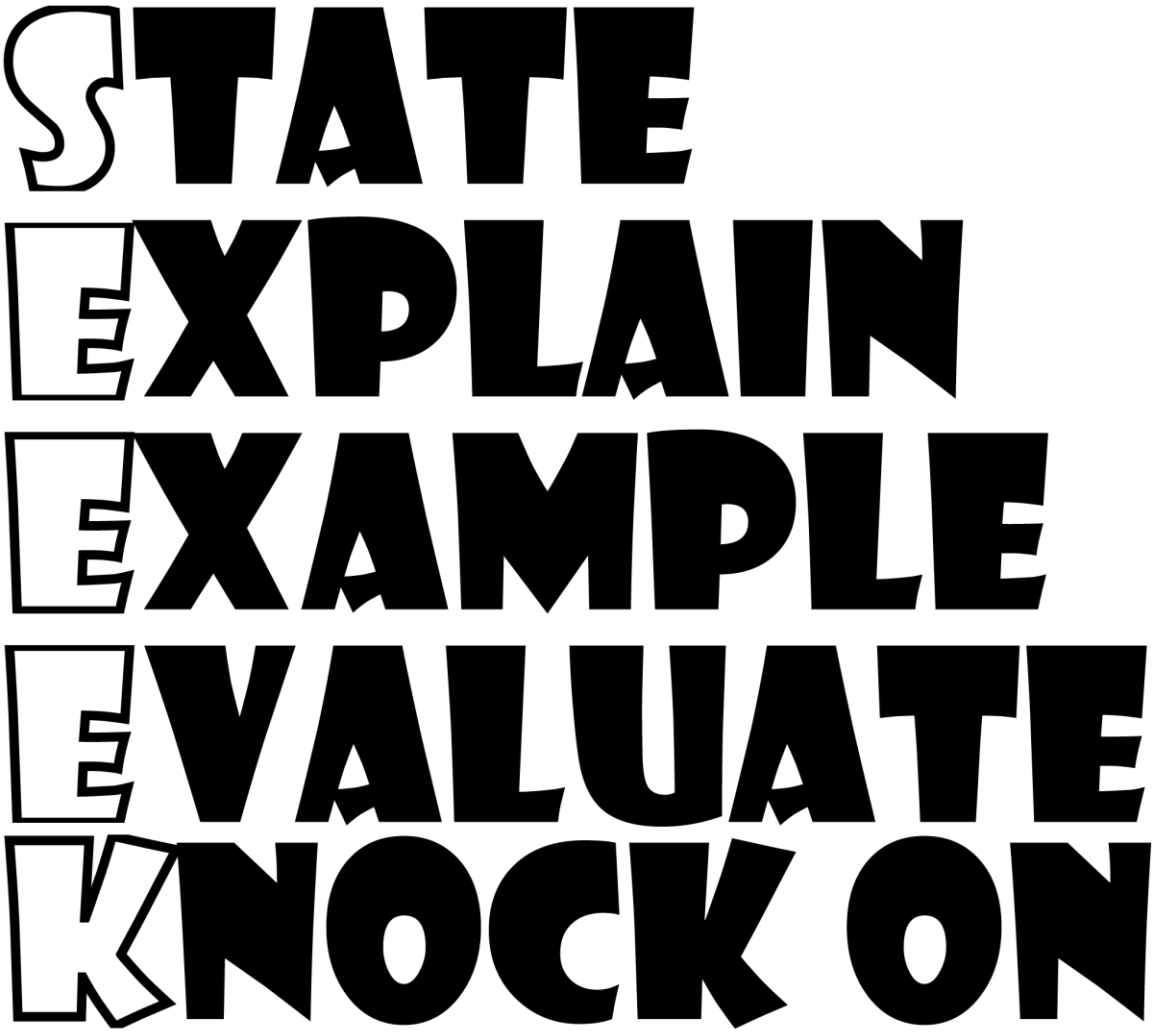
If you get a HOW, WHAT, WHERE, WHY, look at the amount of marks allocated for the question. This will help you determine what depth you are required to go to.

Know the dot points and where they are located within the considerations. For example, if you are asked to talk about Structural and Personnel considerations, and you spend your

whole essay talking about OHS, then you won't get any marks for it unless you can somehow link this to Personnel. PPE is required by all workers…this can then be linked to requirements of the employers which can then be linked to contract requirements and unions. (Be careful of doing this though, as it's much easier to link to obvious things within the dot points.

Answer as many past paper questions that you can prior to the exam. The following pages outline some sample questions that may be similar in style to those you will get in the extended response.

Look at the past papers and also the marking criteria. Try to predict, from the question what the criteria is.



Structural considerations

The purpose of businesses is to:

Forms of businesses include:

Companies can be either _____or _____

Forms of Business:			
Advantages			
Disadvantages			

Compare and Contrast Limited and Unlimited Liability

Describe how a hierarchical structure works. You may like to use drawings to aid your description.

Describe how a flattened structure works. You may like to use drawings to aid your description.

Discuss the reasons that people would move from a hierarchical to a flattened structure.

Marketing is:

Sales is:

Marketing is important because:

The effect on businesses of	
Good marketing	Bad marketing

Marketing can include:

Production is:

Efficiency is:

Efficiency can be measured in terms of a number of different criteria. For example:

T_____

M_____ U_____

C_____

The more efficient an industry is _____.

Identify and describe two methods of restructuring:

What is the effect of restructuring?

Define quality control.

What are methods of maintaining quality control within a business?

What effect does maintaining quality control have on a business?

Technical Considerations

Define mechanisation.

What are the effects of mechanisation on the industry in general?

What are the effects of mechanisation on the people within the industry?

An example of where mechanisation has been used in the Timber industry is:

Advantages:	Disadvantages

Specialisation is:

Advantages	Disadvantages

Explain an effect that specialisation could have on production and on the workforce.

Define mass production.

What is the effect of mass production on industry, product, and employees?

Distinguish between mass production and automation.

Define automation.

Where would automation be used?

Discuss the positive and negative effects of automation?

Emerging Technology

In an exam, you will likely be required to make suggestions as to the effect of an emerging technology on different syllabus dot points from the Industry Study.
Fill out the table on the following page relating the emerging technology to the effect:

Emerging Technology			
Effect on Structural Factors			
Effect on Technical Factors			
Effect on Environment			
Effect on Society			
Effect on OHS			
Effect on Personnel			

Environmental and sociological considerations

Describe some alternative resources for the production of your project in your focus area:

Resource previously used	Alternative	Limitations of that resource
Power		
Materials		
Processes		

Distinguish between recycling and reusing.

Why would a company want to use recycled products for their supply?

Describe TWO methods of minimising wastage in production.

Outline ways that waste must be managed in order to cater for environmental issues.

Outline different forms of pollution.

How can pollution be minimised?

Describe how development can be sustainable.

Why would businesses want to be sustainable developers?

What government requirements are there regarding sustainable development?

Why would people choose to rehabilitate commercial sites?

What is involved with this process?

Discuss the advantages and disadvantages of rehabilitating commercial sites.

Outline the legislative requirements for businesses regarding the environment.

Local Requirements
State Requirements
Federal Requirements

Describe the process that needs to be gone through to create an environmental study. What role does the Environmental Impact Statement play?

Outline the advantages and disadvantages of moving location.

Issue	Advantages	Disadvantages
Land cost and availability		
Transportation facilities		
Workforce		
Impact on surrounding population		
Resource Availability		
Geographical Factors		
Waste Management		

Personnel issues

Define industrial relations.

Describe the role of unions in negotiating both individual and group contracts.

Describe the legislation that has occurred in the development of industrial relations.

Discuss how career and training opportunities should be offered to people within the business.

Compare and contrast specialisation and multi-skilling. Discuss and evaluate the effectiveness of each in a small business.

Who sets roles of industry personnel? Why is this important?

Describe how work practices have changed based on the changes within your industry. What issues need to be considered when changing work practices?

Occupational health and safety

Discuss the importance of OHS in your industry

Outline the government legislation that relates to OHS. Why is this legislation important?

Compare and contrast the responsibilities of employers and employees under this legislation.

Describe the industry standards for OHS within your focus area. What is the consequence of not following these standards? Whose responsibility is it to maintain this standard? How is it policed?

Describe the hierarchy of risk.

Outline the process of assessing risks within the workplace. How should risks be responded to?

Bob wants to start a new business. What safety training would he have to implement?

Explain how workplace culture is important in OHS.

Discuss how communication can affect OHS.

Historical Development

Outline major changes within the timber and furniture industry within the last 50 years.

Major Change	Effect on Manufacturing Processes	Materials available	The way people work

Discuss how developments in the industry have changed the industry.

Sample HSC Style Questions

Question 1:

IND Tech is a company within Australia that wishes to move location to a more rural area, as the real estate is cheaper so that they will save money.

a) Describe the personnel issues that need to be considered — 5 marks

b) Evaluate the environmental, structural and technical issues that the business needs to consider within the scenario. — 10 marks

Question 2:

IND Tech is a company within Australia that is trying to implement changes within their business in order to make more profit within their business.

a) Explain factors that the business needs to consider in terms of OHS within the business within this scenario. — 6 marks

b) Discuss changes that you could make in order to make the business more profitable. — 9 marks

Question 3:

IND Tech has decided to invest in an emerging technology in order to increase production.

a) Explain the structural factors that are affected by the implementation of an emerging technology. — 5 marks

b) Discuss the environmental, personnel and technical issues that may be affected. — 10 marks

Glossary

Throughout your folio and when answering questions in you exams, you need to know what the following words and terms mean and be able to argue them to a "Critically Evaluate" level. Yes … critically evaluate may be over kill, but if you can argue points of view at the highest level, then you would also be able to do it at any argue at an level.

The following glossary has been created directly from the Industrial Technology Syllabus from the Industry Related Manufacturing Technology focus area of ***Timber Products and Furniture Technologies (HSC)*** (NSW Board of Studies 2008 pp. 51 - 54). Again, here this document is our bestest friend as it indicates exactly what you will be tested on. The only trick here is that the Preliminary HSC course work is assumed knowledge for the HSC, therefore it might be worthwhile casting your eye over last years work to as a refresher.

Materials		
Timber recovery and conversion		
Sawing:		
– live		
– quarter		
– back		
Flitches		
Burls		

Stability		
Seasoning:		
– air		
– kiln		
– equilibrium moisture content (EMC)		
Timber selection considerations		
– plantation timbers		
– exotic timbers		
– recycling/reusing timbers		
– ‘green’ timbers		

– economical usage/waste minimisation		
– environmental issues/pollution		
– sustainability		
– OHS issues		
• Manufactured boards		
– construction and manufacture,		
– veneers		
– plywood		
– particle board		
– fibre boards		

– block		
– lamiboards		
– glues		
– environmental/OHS issues		
Fittings and allied materials		
• hardware and fittings		
– screws		
– nails		
– nuts		
– bolts		

– knockdown fittings		
– hinges		
– handles		
– knobs		
– staples/staple guns		
– drawer runners		
– table clips		
– latches		
– catches		
– shelf hangers		

• additional materials applied to timber and timber-based projects		
– glass		
– metal		
– polymers		
– upholstery materials		
– composite materials		
Adhesives:		
– PVA		
– epoxy resin		
– hot melt		

– urea-formaldehyde		
– resorcinol		
– contact		
Processes, tools and machinery		
Processes		
• planning		
– sketches		
– working drawings		
– materials lists		

– calculations		
– costing		
• preparation of timber		
– dressing		
– thicknessing		
– face		
– edge		
• manufacturing individual components as part of a project		
– legs		
– rails		
– drawers		

– doors		
– tops		
– panels		
• widening joints		
– dowelled butt		
– tongue and groove		
– rebate		
– groove and feather		
– biscuit		
• framing joints		

– mitre		
– halving joints		
– dowelled		
– box pin		
– mortise and tenon joints		
– bridle joints		
• carcase joints		
– rebate		
– scribed		
– dovetail		

– housing		
• construction techniques, including:		
– sawing		
– drilling		
– edge treatments		
– nailing and screwing		
– sanding		
– scraping		
• other construction techniques		

– turning		
– carving		
– inlaying		
– marquetry		
– veneering		
– parquetry and intarsia		
– laminating		
– bending		
– routing		
• construction techniques using manufactured boards		

– economical sheet layout		
– cutting sheet material		
– handling sheet material		
– assembly of components		
• assembly of components, including:		
– test, fit and check joints		
– dry cramp		
– use of cramps		
– testing for square and flatness		
• finishing		

– preparation		
– staining		
– filling		
– oils		
– finishes (oil and water-based)		
– shellac		
– french polish		
– spray finishes		
– environmental issues associated with finishing		
– industrial processes		

Tools and machinery		
• the use and maintenance of the tools and machinery involved in the processes listed above		
• tools and machinery used in industry that are not available in the school		

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