

Stage 2 Design and Technology – Material Products
Assessment Type 2: Product
Major Product

WEEK 1

My first week of term 2 was used to finish off any unfinished design book work. I also started my scale model and that helped me for my cuttings and costing's sheet especially being able to see all the different lengths of wood I needed.



Planning
In-depth analysis of information to develop imaginative, innovative, and enterprising solutions to an identified design brief.

Planning
Use of scale model evidence of validation of ideas or procedures.

WEEK 2

I started my bed by making the legs. This week I cut the 2 end legs to size and marked out the joint that needed to be mortised out. I cut my end rail as well and marked out my tooth for my mortise and tenon joint.



Producing
Sophisticated application of appropriate skills, processes, procedures, and techniques to create a product or system to a precise or polished standard and specification.

WEEK 3

I used the radial arm saw too cut my tooth on my end rail this was new for me because I had to change the height of the blade which I haven't done before. This is so it didn't cut all the way through and left a small tooth for the joint. I used the mortise machine to cut out my joint for the tooth to go into. I dry clamped it then I glued it up and it should be ready next week.



Planning
Purposeful testing indicated by 'dry clamping'.

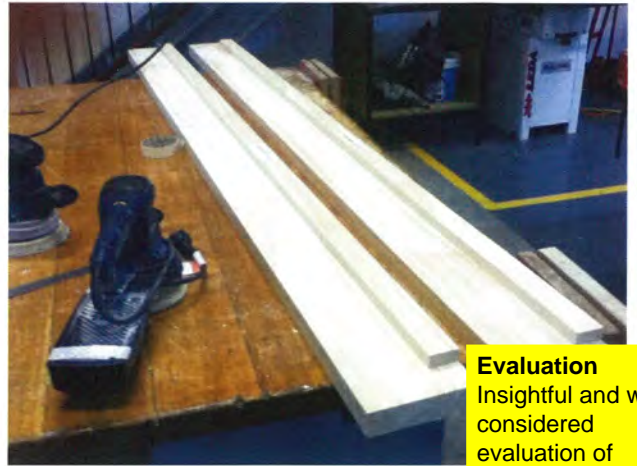
WEEK 4

I did the same for my bedhead frame but I just cut the legs longer. This isn't ready for gluing yet because I need to glue my headboard together and slide it in first. I also need to ensure my legs are the correct height for my headboard.



WEEK 5

This week I made my side rails for my bed. I sanded them as they were a bit rough from the processing plant. I nailed and glued one piece of 42mm x 19mm flush on the bottom of the rail so my mattress supports can be reinforced.



Evaluation
Insightful and well-considered evaluation of product success against design brief requirements.

WEEK 6

I started gathering the wood I needed for my headboard. This lesson was used wholly to get all my slats for my headboard cut to length. I had to decide what to do in the middle because there was a large gap. It worked out best to put 2 (40mm x 19mm) next to each other, the patterns in the wood disguise this but it still looks fabulous. This took a while because I had to cut them all individually on the radial arm saw.



WEEK 7

I measured all the planks to the length of the highest point of my design. This took a long time to do because there were a lot of them and I had to measure every piece accurately.



WEEK 8

Only a certain width (500mm approx.) can fit through the thickness machine so I needed to make sure I glued it up in parts so I can then thickness it down the track. It took me two lessons to do this. I laid all the planks out on the table and numbered them 1-24 ready for when they get glued once I cut each plank up.

Producing
Accomplished use of resources, equipment, and materials to create a product or system safely and accurately.

WEEK 9

I cut 3 biscuits into both sides of every plank to ensure it doesn't come out of shape even though it is wood and it will have some movement. This was a timely exercise as I had to make sure each biscuit was at the correct measurement.



WEEK 10

This week I had another timely exercise of gluing up every plank with each biscuit joint. I also had to ensure there was sufficient glue in. This took a while and was a messy job. Clamping each section up was difficult because we had to make sure that the wood didn't bow and come out of shape.

Producing
Accomplished use of resources, equipment, and materials to create a product or system safely and accurately.

WEEK 2

To get ready for when my bed is all constructed I began to cut the lengths for my bed supports. This took a while because lots of people were all using the radial arm saws.



WEEK 3

I forgot to cut biscuits out of my last two planks for my headboard so I had to measure and cut them out. Once that was done I glued one to each end. I cut a groove in both my long legs for my slatted headboard to slide into.



WEEK 4

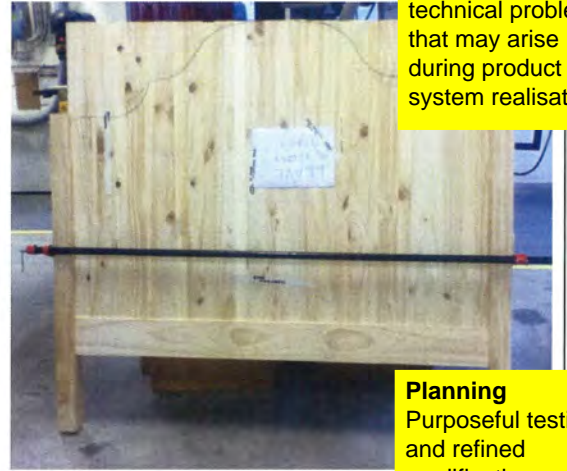
I started designing my stencil on a large piece of paper for my curled headboard design. I made it symmetrical and cut it out. I taped it to my wood and traced it using a light pencil. My panel was slightly wider than my frame for my bedhead so I cut it down on the table saw.



Producing
Accomplished and resourceful development of solutions to technical problems that may arise during product or system realisation.

WEEK 5

I did a dry clamp of my bedhead to see if it was all correct but found that my bedhead stencil was too low for my bed legs. I had to mark my legs down where the stencil finished. There wasn't enough time to do it that lesson so I came back during the week to cut out my stencil and belt sand it down so it was even.



Planning
Purposeful testing and refined modification and validation of ideas or procedures.

WEEK 6

This week I worked on preparing my headboard for gluing. I screwed 2 lengths of 70mm x 25mm to the back of my curved headboard to help straighten it up and prevent it from bowing when I glue it up. I slightly offset it so it could slide into the leg grooves. I cut my long legs down to fit my stencil because it is too low for the legs. I sanded my legs and took off the sharp corners so next week I should be already to glue up next lesson.



WEEK 7

I drilled my bed brackets onto each of the end of my bed. One of my foot brackets cracked my wood so I had to take that out again. I got 3 of my other class mates to help me glue my bed head all together. This took a long time because I had to make sure all the measurements were the same and ensure that there was no dripping glue left on the project.



Planning
Purposeful testing and refined modification to address problem.

WEEK 8

To open the crack which was caused from the bed bracket I used a knife to wedge it open while I squirted some glue into. I then clamped it together using a G clamp and left it until the end of the lesson. My next job after I had sanded them down was to finish my side rails.



WEEK 9

I tried to drill my bed bracket into the foot that I glued but it just cracked the wood again so this time I put glue into the screw holes then clamped the wood and drilled into the screws. This seemed to work so it should crack again. I sanded and finish my foot which took longer than my side rails because there are more angles to cover. While these dried I continued to sand my bed head which took a long time due to its size.

Producing
Accomplished and resourceful development of solutions to technical problems that may arise during product or system realisation.

WEEK 10

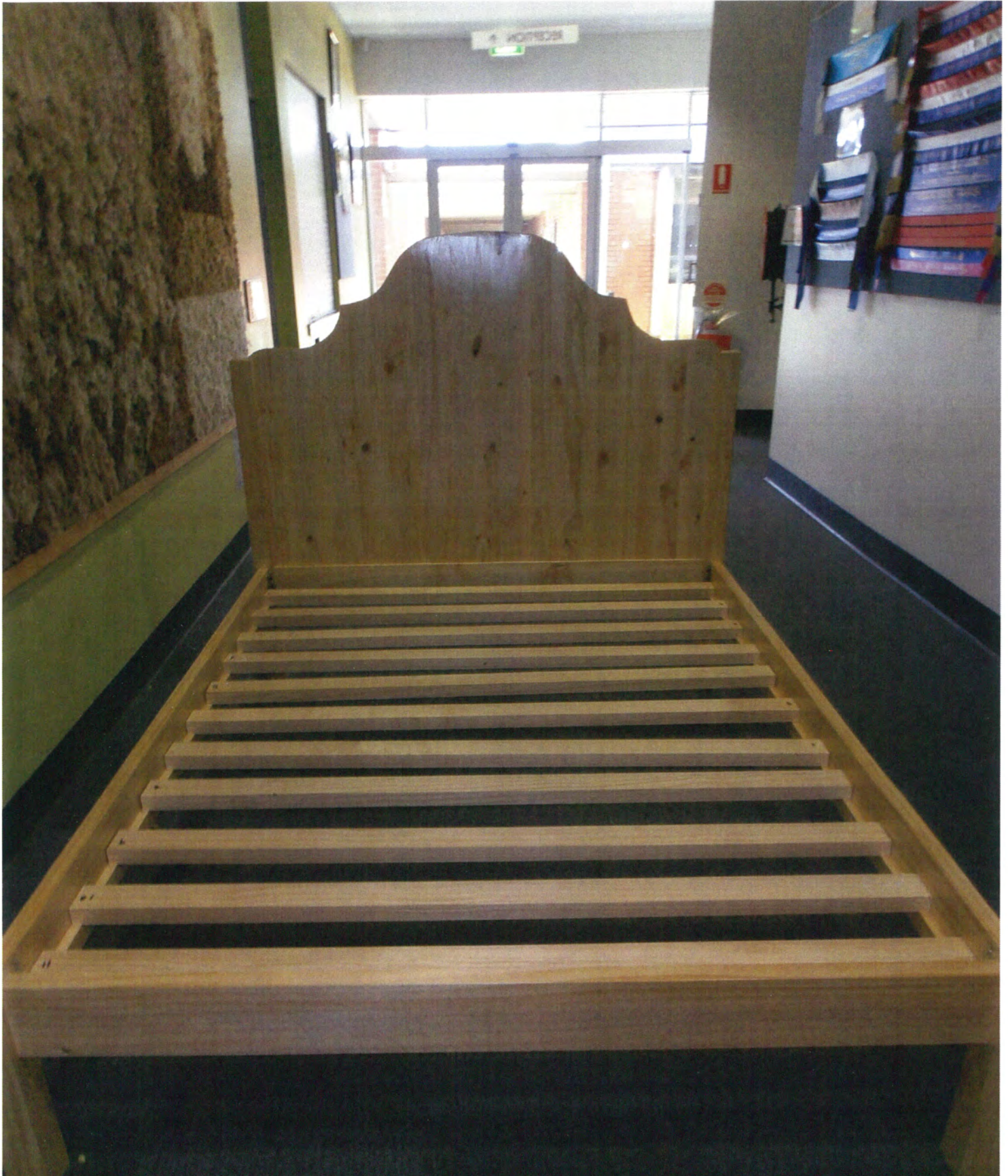
I was a few coats off finishing my bed head which was meant to be finished by Friday. All I have to do is one or two thick last coats and all my finishes will be done. Next term I will just need to cut a few more mattress supports and I'll be done my major year 12 project.



WEEK 1

This week was when my whole folio and bed were due. I finished my final coats of my bed in the lesson and set it up in the library. The rest of the week was spent finishing off my folio ready to be sent to SACE.





Additional Comments

Product record covers 20 weeks and provides evidence of:

- student engagement
- safe use of machinery
- excellent time management.

The images used are appropriate and clear and do not identify the student or school.

Performance Standards for Stage 2 Design and Technology

	Investigating	Planning	Producing	Evaluating
A	<p>Clear, comprehensive, and well-considered identification of a need, problem, or challenge.</p> <p>Thorough and insightful creation and validation of initial design brief based on needs analysis and task identification.</p> <p>Purposeful investigation and critical analysis of the characteristics of a broad variety of existing products, processes, systems, and/or production techniques.</p> <p>In-depth investigation into product material options and focused and thorough critical analysis for product use.</p> <p>Focused and perceptive investigation into the impact of products or systems on individuals, society, and/or the environment.</p>	<p>In-depth analysis of information to develop imaginative, innovative, and enterprising solutions to an identified design brief.</p> <p>Accomplished communication of a variety of refined product design ideas, consistently using relevant technical language.</p> <p>Purposeful testing and refined modification and validation of ideas or procedures.</p>	<p>Sophisticated application of appropriate skills, processes, procedures, and techniques to create a product or system to a precise or polished standard and specification.</p> <p>Accomplished use of resources, equipment, and materials to create a product or system safely and accurately.</p> <p>Accomplished and resourceful development of solutions to technical problems that may arise during product or system realisation.</p>	<p>Insightful and well-considered evaluation of product success against design brief requirements.</p> <p>Insightful and detailed evaluation of the effectiveness of the product or system realisation process.</p> <p>Refined and well-considered reflection on materials, ideas, and procedures, with sophisticated recommendations.</p> <p>Resourceful and well-informed analysis of the impact of the product or system on individuals, society, and/or the environment.</p>
B	<p>Well-considered identification of a need, problem, or challenge.</p> <p>Well-considered creation and validation of an initial design brief based on needs analysis and task identification.</p> <p>Thoughtful investigation and analysis of the characteristics of a variety of existing products, processes, systems, and/or production techniques.</p> <p>Detailed investigation into product material options and thorough analysis for product use.</p> <p>Some depth of investigation into the impact of products or systems on individuals, society, and/or the environment.</p>	<p>Thoughtful analysis of information to develop enterprising solutions to an identified design brief.</p> <p>Capable communication of different quality product design ideas, using relevant technical language.</p> <p>Thoughtful testing, modification, and validation of ideas or procedures.</p>	<p>Capable application of appropriate skills, processes, procedures, and techniques to create a product or system to a mostly precise or polished standard and specification.</p> <p>Capable use of resources, equipment, and materials to create a product or system safely and mostly accurately.</p> <p>Thoughtful development of solutions to technical problems that may arise during product or system realisation.</p>	<p>Well-considered evaluation of product success against design brief requirements.</p> <p>Well-considered and detailed evaluation of the effectiveness of the product or system realisation process.</p> <p>Well-considered reflection on materials, ideas, and procedures, with thoughtful recommendations.</p> <p>Well-informed analysis of the impact of the product or system on individuals, society, and/or the environment.</p>
C	<p>Considered identification of a need, problem, or challenge.</p> <p>Considered creation and validation of an initial design brief based on needs analysis and task identification.</p> <p>Competent investigation of the characteristics of some existing products, processes, systems, and/or production techniques.</p> <p>Competent investigation into product material options and analysis for product use.</p> <p>Generally thoughtful investigation into the impact of products or systems on individuals, society, and/or the environment.</p>	<p>Analysis of information to develop appropriate solutions to an identified design brief.</p> <p>Competent communication of product design ideas, using appropriate technical language.</p> <p>Competent testing, modification, and validation of ideas or procedures.</p>	<p>Competent application of skills, processes, procedures, and techniques to create a product or system to an appropriate standard and specification.</p> <p>Competent use of resources, equipment, and materials to create a product or system safely and generally accurately.</p> <p>Development of appropriate solutions to technical problems that may arise during product or system realisation.</p>	<p>Considered evaluation of product success against design brief requirements.</p> <p>Considered evaluation of the effectiveness of the product or system realisation process.</p> <p>Considered reflection on materials, ideas, and procedures, with appropriate recommendations.</p> <p>Informed analysis of the impact of the product or system on individuals, society, and/or the environment.</p>

	Investigating	Planning	Producing	Evaluating
D	<p>Identification of a basic need, problem, or challenge.</p> <p>Creation of a basic initial design brief with some consideration of a needs analysis.</p> <p>Identification of the characteristics of some existing products, processes, systems, or production techniques.</p> <p>Some basic description of material options.</p> <p>Some description of the impact of products or systems on individuals, society, or the environment.</p>	<p>Some identification of information to attempt basic solutions to an identified design brief.</p> <p>Basic communication of some product design ideas with some use of appropriate technical language.</p> <p>Partial testing and some modification of ideas or procedures.</p>	<p>Partial application of skills, processes, procedures, and techniques to make one or more articles to a limited standard and specification.</p> <p>Some use of basic resources, equipment, or materials to create a product or system, with some consideration of safety aspects.</p> <p>Partial development of some basic solutions to technical problems that may arise during product or system realisation.</p>	<p>Description of product progress, with elements of basic testing against design brief requirements.</p> <p>Some description of the effectiveness of the product or system realisation process.</p> <p>Superficial reflection on or description of materials, ideas, or procedures, with basic recommendations.</p> <p>Some consideration of the impact of the product on individuals, society, or the environment.</p>
E	<p>Limited identification of a need, problem, or challenge.</p> <p>Creation of a very basic initial design brief, with support.</p> <p>Statement of one or more characteristics of an existing product, process, system, or production technique.</p> <p>Limited description of one or more product material options.</p> <p>Identification of one impact of a product or system on individuals, society, or the environment.</p>	<p>Attempted identification of some information to develop limited solutions to an identified design brief.</p> <p>Limited communication of one or more product design ideas.</p> <p>Some attempt at testing and limited modification of an idea or procedure.</p>	<p>Attempted application of one or more skills, to follow an appropriate process, procedure, or technique.</p> <p>Attempted use of resources, equipment, or materials, with emerging awareness of safety issues.</p> <p>Some attempted description of problems that may arise during product or system realisation.</p>	<p>Identification of some product progress, with limited testing.</p> <p>Identification of some aspects of the effectiveness of the product or system realisation process.</p> <p>Identification rather than description of materials, ideas, or procedures, with one or more recommendations.</p> <p>Emerging recognition of one or more of the impacts of the product on individuals, society, or the environment.</p>