

PROJECT

DEVELOPMENT

(i) Evidence of

Creativity:

GENERATION OF IDEAS: - EXPLAIN WHY THE IDEA IS CREATIVE & HOW THE IDEA

WAS GENERATED: IDEA WAS CREATIVE DUE TO A NUMBER OF FACTORS

- Something being made for someone - Sister & Brother in law's pergola.
- Very basic in function & really is great for outdoor setting
- CREATIVE BECAUSE IT IS A GOOD DESIGN - TWO BENCHES seating 4 people & a tiled table with a good effective pattern which is alot greater than just a plain green plastic table & chairs.
- Also creative because environmental recycled product - used - Treated Pine wood - Made to last & alot better than just normal p.p.

• IDEA WAS GENERATED: From Researching Design books - internet - knowing it was being made for my sister & brother in law - something to say thanks for everything they had done for me.

• Knowing they needed an outdoor setting for the pergola - coming up with idea from looking at designs on internet off different jobs - 2x2 SEAT BENCHES WITH TILED TABLE. Tiled alot more effective & with pattern it would make more of a better set - not dull.

EXPLORATION OF EXISTING IDEAS: - SHOW EVIDENCE OF WHAT YOU DID TO EXPLORE EXISTING IDEAS

First ideas before a tiled table was a mosaic table. Looking & focusing on shapes such as circle & octagonal. Here I've included pictures of designs off the internet of various mosaic table some of a Dolphin Table Diary of Mosaic & one looking at my earlier design idea of an octagonal table & benches - Showing construction & ideas.

• Also I went around to shops - furniture ones which had these type of projects experimenting with different measurements, shapes, materials - & different mosaic. Shops like ones at home town, Freedom Furniture, & T&C country furniture.



Different Mosaic Designs off internet at Artz Teves.com

- Typing in Mosaic all this comes up.



DEGREE OF DIFFERENCE • DEMONSTRATE HOW YOUR CREATIVE IDEAS ARE DIFFERENT FROM EXISTING IDEAS.

- My existing idea being the Mosaic involved too much time consuming. I wanted to do a Pattern & not just break them up. But I thought doing a pattern with little pieces would be too hard even though the Mosaic Pattern looked very interesting.
- My Creative ideas are different from the existing because I've gone for a much more simpler & less time consuming look - still with great effect with the pattern.
- Also the octagonal table & benches would blow my finances away with the amount of wood needed.
- My Rectangle table & benches were just right. Simple - but the looking at of Octagonal table & benches & the investigating in different shops did help.



Picture of table - Pattern is great, colours are great. Me staining it with a Turrabu Finish. Legs of similar structure to the octagonal table.

(ii) CONSIDERATION OF DESIGN FACTORS RELEVANT TO THE MDP.

COST: This was something very relevant when designing my major project. Looking at cost of buying materials was extremely important, keeping to a budget of \$300 - no more. And in total I spent \$228.40 so I saved a great deal & got away with very good materials at cheap price - from hardware - house in Villawood mainly.

Ergonomics: This was extremely important when designing knee room under the table, so I had to get measurements right. Experimenting with the user of the table my brother in law & sister.

RECYCLABILITY: This wasn't a very important thing I looked at, in the making of my project. I did though go for a recyclable wood in treated pine - good in adaption to the environment. - Durable is a Renewable Resource - being made to withstand the environment & last.

SAFETY: This very important in making the project. Doing experiments to make sure it can withstand weight & doesn't break. Making sure the tiles are safe & tiled on properly. Making sure it was safe where it was going to be placed. - On the project.

QUALITY: QUALITY was extremely in the designing of the MDP. Sanding it for long periods getting the benches & table legs nice & smooth. - Using sandblaster-disc sanders, orbital sanders - circular sanders, (plane) to get pieces nice & straight. - Even working on a high finish. With my Jurek Stain. Tiling - doing a high quality job.

DURABILITY: This something I was really aiming for when making the project. Durability - long lasting - something which I want my project to fulfil. Aiming on making strong. Treated Pine wood good for this. And in making it durable & using very strong screws & bolts to hold the project together. Making the structure of it very good & supportive.

Strengths: Very important in my project under Durability. Trying to make it very tough so how many people it can support - benches, - including the table on what it put on - table strong - tiles making it very strong & supportive. Particle Board under tiles very strong & excellent price.

Aesthetics: This coming under quality. Really wanting it to look of very high class, a good finish - a product you would find in the shops & want to buy. That is why I tiled it. If I didn't tile it it would have looked very plain with the particle board - with a Jarrach Finish. - That is why I tiled it. Found it more of a challenge, better looks & also more interesting. Knowing at the start of the project I wanted to mosaic or tile - even if under feature which is what I considered doing at the start of the project. Jarrach Finish good on benches. - & sanding making it look very smooth & more comfortable to sit on.

(iii) RESEARCH, EXPERIMENTATION & TESTING:

Refer to evidence ^{of} Creativity in Folio - has past research-track catalogues.

Also has previous designs that were going to be done - Mosaic - didn't follow through.

DESIGN IDEAS: - Shows how you researched, experimented & tested your original design ideas

RESEARCHED IDEAS, by going to shops & checking out various designs & looking at Sister & brother in Lewis pergola. By doing all this made up Measurements of table, benches & files needed. By experimenting this & refer back to (Evidence of creativity under project development). - & by all this I came up with simple measurements & design ideas.

- Stats of wood for bench 120 cm each. - 33 cm wide - benches 42 cm high. 3 cm thick - going across. 3 cm thick.

- Table - 120 x 90 - 10 cm cut off with circular saw. Tiles 20 x 20 cm. Legs 76.5 cm long. 71 cm distance from ground.

120 cm long table. 83 cm wide. Support bit 79 cm long. All Measurements combined & made up by exploring shops & just researching. Experimenting that the table could fit under the pergola with the benches - doing that early. Testing it can withstand weight, that it was straight & even on the pergola.

Researching a number of tables seeing which shape supported well enough.

Test's done: (but bench)

1st bench
Lolo
2nd bench

Sister	Brother in law	Sum line
Knee Room	Knee Room	
20 cm	17 cm	
21 cm	18 cm	

Bench 1

Bench 2

Withstanding weight	
Sister	Brother in law
60 kg - Easy	90 kg - Easy
60 kg - Piece of wood - not strong - not great	90 kg - Piece of wood - not strong - not great

Combined weights
(same frame on each bench)

(ii) RESEARCH EXPERIMENTATION & TESTING

- Looking at also temperatures which were the best that could be used for the project experimenting this at shops.
- Another Experimentation I test done was how much table tops could hold. Shapes of circle, octagon, or rectangle. **RECTANGLE** HERE CARRYING OUT MORE WEIGHT TESTING AT MANY STOPS - I GETTING OPINIONS OF EXPERTS.
- Another experiment was that the particle board could support before weight was put on it. This was done with ease - showing how strong the particle board really was. - extremely strong & withstanding. Placing 20 kg - I going heavier - holding with ease.

MATERIALS: Describe the experiments & tests you conducted to determine the most appropriate materials for your MDP.

I experimented with a number of Materials in my MDP. I wasn't really sure at the start if I was going to go with treated pine. But I experimented seeing temperature & which wood was stronger.

Temperatures - Projects	MDF	PINE	TREATED PINE
	<ul style="list-style-type: none"> - Not extremely strong 	<ul style="list-style-type: none"> - Not very strong sitting on bench - not very supportive. 	<ul style="list-style-type: none"> - Treated Pine table & benches at shop - very strong supporting three people on bench - only supports to 62 supporting two

✓ Best one

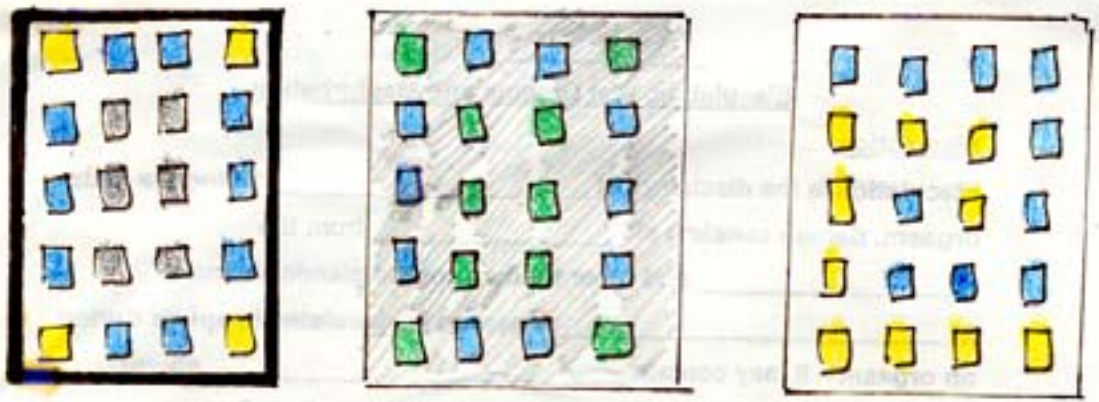
Experimenting with woods seems to go on & on

MDF: Didn't adapt well to the environment - bad for health - not water resistant.

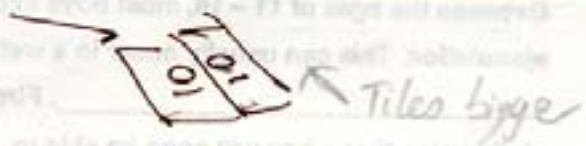
PINE: Was not strongly water resistant, doesn't adapt as well to environment. I have knots & defects in the wood.

Treated PINE: This was the best. -Water Resistant, adapts well to environment, durable wood. long lasting, insect resistant so insects can't bite into wood & very strong.

For the Table it was simple. Knowing tiles were on the list. Experimenting with my sister & brother in how finding out pattern & colour really suited them. The Turquoise finish the best finish - checking out many projects which had that sort of finish.
 -Particle board - being a good base & not needing anything stronger underneath. -Good enough for me. -had great bed for design



10 Blue
 6 Grey/off white
 4 yellow/red/orange



↑ Eye of pattern
 -white though instead of green

055
 002
 -258

047
 008
 05
 09
 02
 04

10 3/7 - ↑ 145
 11 300+300+45

12 17/7 - ↑ 745
 13 300+300+45

14 300+300+45+55 - ↑ 190

15 in account.

Need 455 to cover

By 28

Picture of
me using drop saw.



Getting legs nice & straight with
drop saw.



↑ Me using electric circular
saw to get rough
grain out of
wood

TOOLS: - DESCRIBE EXPERIMENTS & TESTS YOU CONDUCTED TO DETERMINE THE MOST APPROPRIATE TOOLS TO USE FOR YOUR MDP:

- Many Tools used - Rasp, work bench, Mitre box, hand saw, screw driver, cordless drills, electric drill, circular saw, orbital sander, sand paper block, disc sander, drop saw, plane.

- One's that were the toughest to decide on when it was sanding.

Mitre box & work bench used at home. Whereas vice used at school.

Electric saw much more quicker, efficient, & accurate than hand saw.

When sanding though it was hard. I needed something with a good finish, quick to use.

Tests done of various tools.

Block sand paper	electric circular sander	orbital sander	disc sander	drop saw	plane
- good finish - quick if used quickly ✓ used what	- best for cuts - getting even - gets grain out of wood ✓ used to get straight	- good finish - not extremely even - can take too much off at times. 1/2 used not good	- wood to get pretty straight. - good finish - can take too much off 1/2 used to get some straight	- used to get level - straight - good & gentle ✓ used	- good finish - can take too much off - don't really like it because it is slow & not the best tool. ✓ pathetic didn't like it not a great tool at all.

Used all Tools. Best ones are one ticked at the bottom of table.

Techniques: - Describe the experiments & tests you conducted to determine the most appropriate techniques (methods or processes) to use for your MDP:

- | Tools wise |
|----------------------------|
| ✓ Block sandpaper |
| ✓ electric/circular sander |
| ✓ disc sander |
| ✓ drop saw |
| ✓ cordless drill |
| ✓ electric drill |

- | Materials |
|------------------|
| ✓ Treated Pine |
| ✓ Turf |
| ✓ Particle board |
| ✓ 20x20 cm tiles |

Testing all with experiment all great in different.







HSC 2002 – Design and Technology

Major Design Project

Band 3/4

Sample 3



PRODUCT



DETAIL 1



DETAIL 2

- consideration of a range of design factors is evident, and well described [CLICK TO VIEW \(P5 & 6\)](#), and clearly relates to the development of the product.
- research, experimentation and testing is based on design factors – eg ergonomics. [CLICK TO VIEW \(P7\)](#)
- investigation of a range of materials is evident in both the folio and the product. [CLICK TO VIEW \(P8\)](#)
- good design practice is evident in the range of sketches, calculations, and application of ergonomic theory.
- the student has shown evidence of effective time management in a well finished, quality Major Design Project.