GREEN POINT CHRISTIAN COLLEGE

INDUSTRIAL TECHNOLOGY

Timber Products and Furniture Technologies

PRACTICAL BASED

PROBLEM SOLVING

CROSS-CURRICULAR LINKS

PRACTICAL BASED

- Tools and Techniques
- Develops management skills
- Research and designing skills
- CAD (Computer Aided Drawing)
- Self evaluation

Research of Components, Processes, Technologies, and Resources

Processes:

Process	Where would it be used?	Why?	How?
Routing	Routing would be used to create a moulding around the top and bottom plates.	Adding these mouldings would create a look similar to that of Bob Tiew's Design. This more ornate detail also fits my desired aesthetic for the orrery.	With the desired router bit fitted, the piece of timber is slowly fed into the router bit in the same direction as the grain of the timber to prevent splitting. The timber is then pushed through the router bit against the guide until the whole length has been routed.

Process	Where would it be used?	Why?	How?
Turning	I would use turning to create the 6 planets that rotate around the sun. I would also use turning to make the crank handle.	I have experience turning spheres after my Year 11 project, meaning that turning would enable me to create the planets myself.	With the piece of timber secured between 2 centres or in a universal chuck, it can then be shaped using tools such as a bowl gouge, parting tool and skew chisel, or with sandpaper. To create the planets, a vague spherical shape will be turned within the block before the ball is cut out and turned between two cups to make the piece spherical. The rotation speed will be increased when each piece has been transferred to the cups to ensure a fine finish.

Process	Where would it be used?	Why?	How?
Mitre Joints	Mitre joints would be used to join the 12 side panels together to create the dodecagonal shape.	Mitre joints would create a clean join and easily work with the required 30° angle	The mitre joints can either be cut by tilting the compound mitre saw to create the 30° angle, or by angling the blade of the table saw to 30°.

PROBLEM SOLVING

- Creative and critical thinking
- Informed decision making
- Testing, experimenting and prototyping

CROSS-CURRICULAR LINKS

- Maths
- Science
- English
- Business Studies

PROJECTS

- Teacher selected projects in Year 11
- Develop skills and confidence
- Major Project in Year 12 – student selected
- Major project folio

Finance Plan - Budget

I spoke to my parents and we decided that around $1000 (and under $1200) was reasonable for my HSC Major Work.

They knew my passion for woodworking and how important this subject is for me, and that I wanted to build something that would last for many years, so this was a worthwhile investment.

My costing estimations were:

Wood	$750
Hardware	$100
Finishing	$100
Unexpected costs	$100
Total	**$1050**

	Costings	What I paid	Actual value	Alternate quotes	
Wood	Wood (Armour timber)	$ 1,166.73		Wood (Anagote)	$ 1,300.00
				Wood (Rallis timber)	$ 1,390.71
	Veneered back (Specialty Wood Veneer Panels)	$ -		Veneered back (Briggs veneer)	$ 214.00
	Plywood for veneering (Bunnings)	$ 21.80			
	Wood Sample (Anagote)	$ 10.00			
	Wood sample (Armour)	$ -			
	Plywood drawer base (school offcut)	$ -			
Finishes	Pure Tung Oil 500ml (The Woodworks)	$ -	$ 46.00	Osmo oil (Eurostyle flooring)	$ 69.70
	Citrus Terpene 250ml (The Woodworks)	$ -	$ 27.15	Osmo oil (Coopers Store)	$ 140.00
	Citrus Terpene 500ml (The Woodworks)	$ 27.00		Carbothane clear timber varnish (Carbots)	$ 34.00
	Pure Tung Oil 250ml (The Woodworks)	$ 35.00			
	Microfibre roller (Bunnings)	$ 7.48			
	600 grit sand paper cloth back (The Woodworks)	$ -	$ 14.00		
	Sandpaper (The Sandpaper Man)	$ 37.85			
Fractal burner	Cable (Jaycar)	$ 67.80			
	Switch (Jaycar)	$ 24.25			
	Alligator clips (Jaycar)	$ 15.95			
	Microwave (old one from grandmother)	$ -		Ebay	$ 40.00
	Wooden housing (wood lying around home)	$ -			
Glues/Epoxies	Perfect coat Epoxy (Carbatec) Split with JP	$ 32.50		West stystem epoxy (Carbatec)	$ 92.00
	Syringes (Gymea Pharmacy)	$ 4.00			
	Acetone (Bunnings)	$ 20.00			
	Titebond 3 glue (Carbatec)	$ 15.00		Titebond 3 glue (Anagote)	$ 30.00
Hardware	Brusso hinges (The Woodworks)	$ 189.85	$ 210.94	Hinges (Veneer Inlay)	$ 14.80
	Panel pins (The Woodworks)	$ 14.29	$ 15.88		
	Screws for hinges (The Woodworks)	$ 12.84	$ 14.27		
	Drawer lock and key (Chippendale Restorations)	$ 20.00			
	Rare earth magnets (Carbatec)	$ 20.00			
	2 escutcheons (Chippendale Restorations)	$ 10.00			
	Figure 8 clips (Bunnings)	$ 3.44			
Tools	Bahco chisel set (Facebook market place)	$ 75.00		Bahco chisel set (Total Tools)	$ 199.00
				Stanley Fat Max Chisel set (Bunnings)	$ 119.00
	Glass (Sydney Glass)	$ 27.50		Glass (Glo-rite)	$ 80.00
	Total	**$ 1,858.28**			
	Note: Where there is no figure, I was donated this equipment				

ASSESSMENT

- 3 Tasks in Year 11
- 4 Tasks in Year 12
- Major Project and Folio marked by NESA – 60%
- HSC exam – 40%

Equipped for Life

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