



Stage 4 Technology (Mandatory)

Nowra High School

Rationale

Nowra is located approximately 160 kilometres, (2 1/2 hours drive) south of Sydney. It is close to the coast, being twenty kilometres away from local beaches.

Nowra High School is a large comprehensive, dynamic high school with a current population of 1057 students. A small but significant number are of Aboriginal origin. Students are drawn mainly from the residential areas of Nowra, local farming and rural areas, and from defence force families, with the Royal Australian Navy base 'Albatross' situated at South Nowra.

The school has very good facilities with a wide range of technologies available including, wood, metal, computers, food, fashion, photography and textiles along with a specialist design and technology room. The staff are adept at teaching a variety of technologies through the delivery of the current Design and Technology course. The staff are supportive of each other in the delivery of Design and Technology, working from a team teaching approach to provide students with an opportunity to experience a range of design briefs and projects.

The school has a strong emphasis on special programs, including literacy and numeracy programs for Year 7 & 8 students and extension programs for the gifted and talented. These programs will be incorporated into the delivery of the Technology (Mandatory) Years 7-8 syllabus, including the opportunity for students to enter state wide competitions such as the Ministers Young Designer Awards. Staff and students have developed a wide range of community links through a broad work placement program as well as through community service involvement. It is envisaged that these community links will be fostered and utilised during the program.

Agreed purpose statement

It is the aim of this school that by the time students have completed this course they will have gained deep understandings about:

- the process of design and how this process can be applied to develop a range of quality solutions to identified needs and opportunities
- the use and safe application of a range of materials, tools and techniques in the development of solutions to design projects
- creative thinking techniques
- innovation in design
- the impact of design and innovation upon the environment and society
- the use of information and communication technologies to assist with design development, research, production, communication and presentation techniques.

Quality teaching practices that will facilitate these deep understandings include:

- encouraging risk taking through the use of open ended design briefs
- connecting learning to the wider community (show significance)
- modelling of ideas to show expectations
- the use of creative thinking processes e.g. CORT
- student centred learning that focuses upon problem solving.

The organisational model that the school will adopt for the implementation of Technology (Mandatory) includes:

- each class being taught by the one teacher for the whole year providing an opportunity for progression of learning to be clearly identified and mapped as common outcomes will be delivered to all students at the same time
- semester units of work, providing a time frame for the development of more complex concepts and processes
- incorporation of information and communication technologies throughout each unit by ensuring all students are timetabled into a computer room for at least one period per week.

**Nowra High School: Programming matrix Technology (Mandatory)**

Design projects 4 compulsory
Write your design brief in here

	1	2a	2b	3	4	5	7	8
	Snapshot Shoalhaven	Nowra high herbs	Nowra high Herbs	Navigating the system	Playing around	Talk to the animals		
Maximum 3 design projects from each Area of Study								
Built Environments					X			
Products	X	X	X			X		
Information & Communications				x				
Focus outcomes for assessment								
4.1.1	X	X	X	X	X	X		
4.1.2	X				X			
4.1.3		X	X			X		
4.2.1		X	X	X				
4.2.2	X				X			
4.3.1	X	X	X	X	X	X		
4.3.2	X	X	X	X	X	X		
4.4.1.		X	X	X				
4.5.1	X	X	X	X		X		
4.5.2	X	X	X	X	X	X		
4.6.1	X	X	X	X	X	X		
4.6.2				X		x		
Design specialisations studied once only								
Architectural design								
Environmental design								
Interior design								
Landscape design					X			
Structural design								
Accessories design	X							
Agricultural product design						X		
Fashion design								
Food design		X						
Industrial design			X					
Jewellery design								
Communication systems design								
Information systems design				X				
Promotional design								
Software design								
Digital media design								
Technologies - minimum of 6								
Animal production technologies								
Control technologies								
Electronics technologies								
Food technologies		X						
Graphics technologies								
Information technologies				X				
Media technologies								
Metals technology			X					
Mixed materials technologies	x							
Model-making technologies					x			
Plant production technologies		x						
Polymer technologies								
Textiles technologies						X		
Timber technologies			x					
School developed technologies								



Nowra High School: Course Plan Technology (Mandatory)

At Nowra High School four teachers will trial the early implementation of the Technology (Mandatory) syllabus with (middle band) students from Year 7 and 8 over 2 years. Classes remain with the one teacher for this period, with two classes timetabled on at the same time for 6 X 50 minute periods, per two week cycle. The four classes will undertake five common units that have focus outcomes which promote higher order thinking and deep understanding of the syllabus outcomes, through progressively more complex yet relevant tasks. This will be done in the school's technology building that has the resources needed to allow students to develop quality solutions, in a quality learning environment. The design briefs are open ended allowing students to select a range of solutions and cater for individual differences within the student group.

There is a strong community emphasis upon tourism and the promotion of this. The first unit of work provides significance for the students as it allows them to promote their understanding of the local area. The unit is titled *Where in the world-Snapshot of the Shoalhaven*.

To continue with the emphasis upon making learning more meaningful, students will then be given an opportunity to negotiate which technologies they study in the second unit. As there will be two classes timetabled on at the same time, the students will select which design brief they would prefer to do. They will nominate whether they would prefer to experience food and plant production technologies, or metals and timber technologies.

The school has a requirement that students attain a 'computer licence' through Technology (Mandatory) lessons. As a result, the third unit, *Navigating the system*, will run concurrently with the first two units. Due to resource constraints this will be achieved by teaching the unit for two of the six periods each cycle, for the whole year in Year 7. At the beginning of this unit, pre-testing students for skills and knowledge acquired in K-6 will take place. It is expected that a progression of learning, from use of simple computer applications through to more complex concepts will be demonstrated in a diary of work.

The fourth unit, *Playing around* provides an opportunity for students to experience the built environments area of study. The focus is the development of recreational areas within the local Nowra area for young people.

The final unit, *Talk to the animals* returns to the products area of study to accommodate an experienced staff, and to provide students with a more open ended brief, with higher expectations. Shoalhaven is again the focus, with links to the first unit covered in Year 7 ensuring students have relevant background knowledge.

Year 7

Unit One		
Title: Where in the world: Snapshot of the Shoalhaven		Length: 20 weeks, 4/6 periods/cycle
Area of study: Products		Design specialisation: Accessories design
Essential technologies specific content: Mixed material technology		
Design brief: Design and manufacture quality mementos or souvenirs that will help to promote the local Shoalhaven area.		
Focus outcomes being assessed: 4.1.1, 4.1.2; 4.2..2, 4.3.1;4.3.2, 4.5.1, 4.5.2; 4.6.1		
Unit Two		
Title: Nowra High Herbs	OR	Title: Nowra High Herbs
Length: 20 weeks, 4/6 periods/cycle		Length: 20 weeks, 4/6 periods/cycle
Area of study: Products		Area of study: Products
Design specialisation: Food design		Design specialisation: Industrial design



Essential technologies specific content: Plant production technologies, Food technologies		Essential technologies specific content: Metals technologies, Timber technologies
Design brief: Design and produce a herb garden. Trial these herbs in food production to produce a cookbook.		Design brief: Design and produce a container for use in your home that will hold herbs grown at school.
Focus outcomes being assessed: 4.1.1, 4.1.3, 4.2.1, 4.3.1, 4.3.2, 4.4.1, 4.5.1, 4.5.2, 4.6.1		Focus outcomes being assessed: 4.1.1, 4.1.3, 4.2.1, 4.3.1, 4.3.2, 4.4.1, 4.5.1, 4.5.2, 4.6.1
Unit Three		
Title: Navigating the system	Length: 40 weeks- 2/6 period /cycle	
Area of study: Information and communications	Design specialisation: Information systems design	
Essential technologies specific content: Information technologies		
Design brief: Design and present a diary that showcases your information and communication skills.		
Focus outcomes being assessed: 4.1.1, 4.2.1, 4.3.1, 4.3.2, 4.4.1, 4.5.1, 4.5.2, 4.6.1, 4.6.2		

Year 8

Unit One	
Title: Playing around	Length: 20 weeks, 6/6 periods/cycle
Area of study: Built environments	Design specialisation: Landscape design
Essential technologies specific content: Model making technologies	
Design brief: Design a recreational area for use by teenagers in the Shoalhaven.	
Focus outcomes being assessed: 4.1.1, 4.1.2, 4.2.2, 4.3.1, 4.3.2, 4.5.2, 4.6.1	
Unit Two	
Title: Talk with the animals	Length: 20 weeks - 6/6 period /cycle
Area of study: Products	Design specialisation: Agricultural product design
Essential technologies specific content: Textiles technologies	
Design brief: Design and produce a felted item of your choice to promote the Shoalhaven Alpaca industry.	
Focus outcomes being assessed: 4.1.1, 4.1.3, 4.3.1, 4.3.2, 4.5.1, 4.5.2, 4.6.1, 4.6.2	