Stage 4 Technology (Mandatory)

East Hills Girls Technology High School

Rationale

East Hills Girls' Technology High School (EHGTHS) is a single sex high school, south west of Sydney in the metropolitan area. The current enrolment of the school is around 960 with an NESB portion of 22% and a staff of over 80. The focus on learning is technology based with cross curriculum integration and compulsory computing studies undertaken by Years 9 and 10. In addition, the school combines a strong tradition of high student achievement with a wide range of opportunities for students in learning and leadership. The continued and ongoing focus is educating girls for a technological future.

Factors affecting course plan

Rooming facilities and resources for Technological and Applied Studies (TAS) classes

East Hills Girls Technology High School has a wide range of equipment and technologies, extending beyond those traditionally established in many girls schools. It has facilities and equipment for the teaching of wood and art metal technics courses, technical drawing, food technology, textiles technology, and design and technology.
The IT faculty is a separate faculty to the TAS faculty at EHGTHS. At present, the IT teachers are largely responsible for the management of computer labs throughout the school.

Access to computers

The school has many rooms allocated for the use of computers. There are 5 main computer labs and one large area in the library. Some faculties have a small mini lab of computers for integrated class activities requiring the use of ICT. Each of the main computer areas is networked and contains about 16 computers and a networked printer. Using technology for enhanced learning is integrated into all the Key learning areas (KLA's). The whole school commitment to technology in learning makes it difficult for TAS classes to book available times in the six major computer areas. As a result, the TAS KLA has developed its own small computer lab area (currently 8 computers) to partly satisfy its additional course needs for greater computer access. To implement the new Technology (Mandatory) course from 2005, the TAS KLA will need greater timetabled access to the larger computer labs.

Timetabling Structure, Staff expertise and course presentation

East Hills Girls Technology High school has mixed ability classes. In Year 7 the Design and Technology (DAT) course is presented throughout the year in 7 x 50 minute periods per two-week cycle (1 double period is timetabled per cycle). In Year 8 the DAT course is presented in 6 x 50 minutes periods per two-week cycle (again 1 double period per cycle is timetabled). On the timetable, TAS and Art are linked because of the need for reduced class sizes.

Timetabling is extremely difficult at EHGTHS because the timetable developed is linked to an adjoining high school in common lines for Year11 and 12, so that the curriculum choices offered to the students are more comprehensive. Unfortunately, Years 7 and 8 classes are the last classes placed across the whole school timetable and are often placed on the timetable where they can 'best fit' because of timetable restrictions. As a result, classes are sometimes split and teachers are required to share classes (Eg in Year7 there may be a 4/3 period split). The TAS teachers at EHGTHS are multiskilled practitioners for the presentation of Design and Technology in Stage 4. Each teacher presents all the areas of the course for their allocated class.

Pedagogy model

The TAS staff at East Hills Girls Technology High School developed a clear focus on *raising expectations* in education and wanted to develop programs that were reflective of the NSW Pedagogy Model presented in 2003. Care was taken when planning the Technology (Mandatory) course, to design projects as well as teaching and learning activities that would produce:

- Deep understanding of important concepts, skills and ideas (Intellectual quality)
- Work engagement in an environment clearly focused on learning (Quality Learning Environment) and
- Clear understanding of the significance of the work undertaken (Significance)

The programs developed by EHGTHS provide many opportunities for:

- Self and peer evaluation,
- Tasks involving the use of metalanguage and problematic knowledge
- Collaborative learning
- Discovery learning
- Opportunities for substantial communication of ideas and observations
- Thorough meaningful research and understanding of concepts
- Use of very explicit and comprehensive task criteria
- Student direction and task management and

- Engagement in a learning environment where students are able to undertake design risks with project development.

East Hills Girls Technology High: Course plan Technology (Mandatory)

Year 7

The areas of study, design specialisations and technologies integrated within this teaching and learning program have been selected because of their suitability with regards to the facilities and resources available at the school. Additionally, the design projects created reflect some the skills and talents of all the TAS teaching staff at the school. All teachers will work through all the design projects with each of their classes. This presentation style suits timetabling requirements and enables the teachers to model competency in a wide range of TAS areas. The design projects can be done in any order within Year 7 or within Year 8.

Year 7	**Title:** Say hello to technology	**Duration:** 4 weeks Commencement of Year 7 for all students
	Introductory Unit: • Overview of the TAS KLA • Co operative learning and CORT thinking skills • Evaluation of computer skills • Introduction to the design process	

Year 7	**Title:** Fantastic plastic	**Duration:** 18 weeks
	Area of study: Products	
	Design specialisation: Jewellery design	
	Technologies: Polymer technologies, Graphics technologies	
	Description of the design project: The students will design and make a marketable product that consists of a range of jewellery and an acrylic product to hold and /or display the jewellery. During the planning and development of the product, students will use graphics technologies to produce computer generated production drawings (CAD). Hand generated design folio work will be used to monitor and record progress throughout the design project.	
	Assessment focus will be based on aspects of syllabus outcomes: 4.1.1, 4.3.1, 4.3.2, 4.5.2, 4.6.1	

Year 7	**Title:** Room for improvement	**Duration:** 18 weeks
	Area of study: Built environments	
	Design specialisation: Interior design	
	Technologies: Textile technologies, Graphics technologies	
	Description of the design project: The students will plan a renovation “makeover” of their own bedroom space. As part of the design project, students will investigate a range of traditional/cultural bedroom spaces and identify their personal needs for bedroom space. Graphics technologies will be incorporated into the project in order to develop and create computer generated renovation plans. As a component of the project, time will be spent investigating and demonstrating the nature of textile technologies (materials, tools and techniques) and the contribution of soft furnishings to effective interior design. Hand generated design folio work will be used to monitor and record progress throughout the design project.	
	Assessment focus will be based on aspects of syllabus outcomes: 4.1.1, 4.1.3, 4.2.1, 4.3.1, 4.6.1	

These following Year 8 units can be presented in any order.

Year 8

Year 8	**Title:** Food on the Net	**Duration:** 1 semester
	Area of study: Information and communications	
	Design specialisation: Promotional design	
	Technologies: Media technologies, Food technologies	
	Description of the design project: Using media technologies, students are to design an electronic recipe web site, in *Microsoft FrontPage* or *Publisher* software, which promotes healthy eating to teenagers. As part of the research for the design brief they will undertake food technology tasks to generate images and recipes for their recipe website. The students' recipe books will be entered onto the school local intranet to promote healthy eating. Additionally, the recipe website will be transferred to CD-ROM for students to take home.	
	Assessment focus will be based on aspects of syllabus outcomes 4.1.1, 4.2.2 , 4.3.1, 4.4.1, 4.6.1	

Year 8	**Title:** Inspired by me	**Duration:** 1 semester
	Area of study: Products	
	Design specialisation: Industrial design	
	Technologies: Mixed material technologies, Information technologies	
	Description of the design project: Design, make and decorate a box frame to display a collage of mixed media. The students will work with a variety of different technologies to suit their choice of materials used for the production and decoration of the frame and the "memories" collage displayed in a box style frame. Students will use information technologies to generate an electronic portfolio to monitor and record progress throughout the design project.	
	Assessment focus will be based on aspects of syllabus outcomes: 4.1.2, 4.3.1, 4.3.2, 4.5.1, 4.6.2	

Monitoring student progress

The class teacher manages the monitoring of student progress. For each assessable task undertaken, the teacher produces a student profile (feedback sheet). The student profile sheet indicates clearly to the student their level of achievement of outcomes using terms such as not demonstrated, developing, competent and highly developed. The profile also includes a constructive comment with regards to the project. The teacher maintains a copy of the students' profiles and these are kept in a class file. As the students continue through the course, the profiles are accumulated so that student proficiency can be assessed.