Stage 5 Information and Software Technology
Year 9 units of work

Project 1: Our virtual world: The Internet and web site development

Overview	The Internet and web site development is the introductory option in the teaching and learning cycle of Hurstville Boys Campus' Information and Software Technology course. The Year 9 course has been designed to grow from modelled (Project 1) to guided (Projects 1 and 2) to independently constructed (Project 3). The theory component of *Our virtual world* is distinct from *The digital revolution*, but is connected by a common assessment task.
Students prior learning	Students will have some understanding of how to navigate the world wide web using a web browser and some fundamental expectations of web sites. They will have experience of the design process through the mandatory Design and Technology course. No Information and Software Technology outcomes will have yet been covered.
Purpose	The purpose of this project is for students to understand and appreciate the evolution of this technology and how they can harness Internet technology for their own means. Through detailed analysis students will value the social and ethical issues that such technology generates.
Project summary	Students will explore the past, present and future capabilities of the Internet. • Past: Students will investigate the historical context and subsequent development of the Internet, identifying key developments. • Present: Students explore how the Internet works and the roles that a number of key elements play. Analysis of design principles used in web pages will follow, culminating in the application of those principles for web site design. • Future: Student research should uncover issues arising from our virtual world.
Project structure	*Our virtual world* runs for 14 weeks. The web site development (assessment for component 2) runs through both Project one: *Our virtual world* and Project two: *The digital revolution* running to a length of about 28 weeks.
Project outline	*Component one* involves students investigating the historical context and subsequent development of the Internet, identifying key developments. They will then engage in the critical analysis and evaluation of web sites. Students compare and contrast a series of web sites against a given scaffold, using the DET Internet Scavenger Hunt project. *Component two* addresses the challenge faced by local councils in maintaining a positive profile for our local community. Whilst councils have taken on board digital media to disseminate council information, they are calling for ideas on ways to promote the community in an upbeat light. Information and Software Technology students will develop a proposal to promote their community using a web site medium. The proposal will include: • A fully working and documented prototype of the students' web site. • Documentation outlining all project management. *Component three* comprises a research task examining the multitude of issues rising from the development of Internet technology. Students choose a topic from a series and conduct an investigation into the legal and industrial implications arising from its development. Students will create a short presentation outlining main points.

Literacy demands	Writing demands		Key terms and concepts	
	Survey/questionnaire	Comparative study	See Appendix.	
	Information report	Journal		
	Description			
Outcomes A student:	5.2.1	describes and applies problem-solving processes when creating solutions	5.4.1	analyses the effects of past, current and emerging information and software technologies on the individual and society
	5.2.2	designs, produces and evaluates appropriate solutions to a range of challenging problems	5.5.1	applies collaborative work practices to complete tasks
	5.2.3	critically analyses decision-making processes in a range of information and software solutions	5.5.2	communicates ideas, processes and solutions to a targeted audience
	5.3.1	justifies responsible practices and ethical use of information and software technology		

Project 2: The digital revolution: Digital media

Overview	*The digital revolution* explores digital media in two parts. Part one concentrates on the processes involved in the creation and manipulation of digital files and the second part investigates the social and ethical consequences of the processes. The teaching and learning cycle moves towards a guided framework where students will experience greater independence in the planning and production of work. *The digital revolution* builds upon the modelled framework of *Our virtual world* through the common assessment task.
Students prior learning	Following Project 1: *Our virtual world*, students should have a fundamental understanding of the Internet and an appreciation of the underlying technology. They should be able to explain a range of legal and industrial issues associated with the Internet and recall examples of such.
Purpose	The purpose of this project if for students to develop skill sets in the production of digital media. Students should acquire knowledge to critically analyse digital media in terms of the social and ethical issues that arise from both production and dissemination.
Project summary	Students will undertake opportunities to apply knowledge and skills gained from a close examination and analysis of digital media products. Digital media to be explored include: • Graphic files: Existing and original files will be developed and manipulated for use in web site production. • Audio files: Original compositions will be developed to be used in conjunction with web site development. • Animated files: Exploration of production techniques involved in animating using a web based platform. Students will also be asked to identify a range of social and ethical implications in the production and dissemination of digital media, to culminate in a debate once the issue has been investigated.
Project structure	*The digital revolution* runs for 14 weeks. The web site development task runs through both Project one: Our virtual world and Project two: The digital revolution running to a length of about 28 weeks.
Project outline	*Component one: Graphics* Students begin with an existing graphic file and apply a series of guided production techniques. Students will then independently develop an original graphic file for use on their web site. *Component two: Audio* Students undertake an investigation into the types and attributes of audio files and requirements needed for efficient use of music files in a web site. Using an evaluation scaffold, students will critically assess the attributes of a selection of companies and their jingles. Students will develop an original composition that will reflect the theme of their web site and run efficiently. *Component three: Animation* Students will appraise a selection of web animations and evaluate against a given scaffold. After familiarisation with the application software students will construct an original animation for use on their web site. *Component four: Issues* Comprises an in depth investigation into the social and ethical implications in the production and dissemination of digital media. In groups, students identify a key issue and construct a series of arguments outlining both positive and negative aspects of the issue. A debate will then be used as a platform for critical analysis and evaluation of student ideas.

Literacy demands	Writing demands		Key terms and concepts	
	Comparative study		See Appendix.	
	Argument			
	Journal			
Outcomes A student:	5.1.2	selects, maintains and appropriately uses hardware for a range of tasks	5.2.3	critically analyses decision-making processes in a range of information and software solutions
	5.2.1	describes and applies problem-solving processes when creating solutions	5.3.1	justifies responsible practices and ethical use of information and software technology
	5.2.2	designs, produces and evaluates appropriate solutions to a range of challenging problems	5.3.2	acquires and manipulates data and information in an ethical manner

Project 3: A feast for the senses: Authoring and multimedia

Overview	Authoring and multimedia is the culminating project in the Year 9 teaching and learning cycle for Information and Software Technology. Students have moved from a modelled to a guided framework and will now independently manage their project in *A feast for the senses*.
Students prior learning	Students should have a solid understanding of the design process used in web site construction. They have utilised a scaffold for critical analysis and evaluation of a range of web based applications and used the results to direct their own projects. Students should have sound knowledge and skills in project management.
Purpose	The purpose of this project is for students to utilise learned skills to independently manage the development of a real world multimedia package. An investigation into multimedia systems and their expanding role will help students focus the direction of their project.
Project summary	Students will define and identify multimedia systems and the expanding role of multimedia in society. They will then utilise acquired knowledge and skills to deliver a real world multimedia package.
Project structure	*A feast for the senses* project will run for twelve weeks.
Project outline	*Component one* involves the defining and identifying of multimedia systems, where students demonstrate understanding through the delivery of a *Powerpoint* presentation *Component two* capitalises on student's implicit everyday knowledge of multimedia and acquired abilities in project management. Students will be given a product and associated brief. It will then be their responsibility to deliver: • a multimedia prototype to promote the product • documentation of the production process detailing individual roles, the design process, difficulties encountered and solutions together with an evaluation guide.

Literacy demands	**Writing demands**		**Key terms and concepts**	
	Powerpoint presentation Journal Project management documentation		See Appendix.	
Outcomes A student:	5.2.1	describes and applies problem-solving processes when creating solutions	5.3.2	acquires and manipulates data and information in an ethical manner
	5.2.2	designs, produces and evaluates appropriate solutions to a range of challenging problems	5.4.1	analyses the effects of past, current and emerging information and software technologies on the individual and society
	5.2.3	critically analyses decision-making processes in a range of information and software solutions	5.5.1	applies collaborative work practices to complete tasks
	5.3.1	justifies responsible practices and ethical use of information and software technology	5.5.2	communicates ideas, processes and solutions to a targeted audience