Stage 5 Information and Software Technology

Unit 4: Authoring and multimedia (Option 2)

Title: Personal profile

Duration: 15 weeks **Sequence:** Week 6 Term 1 – Week 10 Term 2

Project overview	**Personal profile** During week 6 Term 2 you will be presenting to a community member, a teacher and a year 9 student, reflections on your achievements, learning and goals you have experienced over Stage 4 and 5. Students will also publish a multimedia presentation profiling students' sporting, personal and academic achievements during Stage 4 and 5.	
Outcomes	5.2.1, 5.2.2, 5.2.3, 5.3.1, 5.3.2, 5.5.1, 5.5.2, 5.5.3, 5.1.2, 5.1.1	
Assessment outcomes	A student: 5.2.3 critically analyses decision-making processes in a range of information and software solutions 5.3.2 acquires and manipulates data and information in an ethical manner 5.5.2 communicates ideas, processes and solutions to a targeted audience 5.1.2 selects, maintains and appropriately uses hardware for a range of tasks.	
Core	**Students learn about:**	**Students learn to:**
	Design, produce and evaluate **Management** • planning • resources, such as: – time – finances – people **Communication techniques,** including	• apply management plans and techniques

	• verbal • written • graphical and visual	• document decision-making and problem-solving in the development of solutions • outline a range of communication techniques appropriate to the solution • communicate ideas, processes and solutions to a targeted audience
Core	**Students learn about:**	**Students learn to:**
	Collaboration and group work • criteria for group formation such as expertise and group dynamics • roles and responsibilities of group members • effective collaboration strategies	• identify and negotiate roles and responsibilities of group members • establish and use strategies for effective collaboration • outline and reflect on the benefits/advantages of collaboration during group work • evaluate individual and group contributions to the project • apply collaborative work practices when developing solutions
	Data handling **Data storage and function** • primary storage such as RAM and ROM • secondary storage such as random and sequential access • secondary storage media such as tape, disk and optical media • bits and bytes such as kilobytes, megabytes, gigabytes and terabytes • file types	• contrast primary and secondary • describe the functions of Primary and secondary memory • select and use the appropriate data storage media for a given situation in an ethical manner • state the reasons for the range of data storage and media formats • discuss the units used when measuring data storage • recognise file extensions and their use within chosen options
	Hardware **Functions that hardware performs** • input • process • output • storage • control	• describe and classify hardware devices • identify and use hardware devices in the context of the chosen option

Core	Students learn about:	Students learn to:
	Hardware components Components of a hardware system and their functions such as: • motherboard • central processing unit (CPU) • coprocessor chips • memory: random access memory (RAM), read only memory (ROM) • hard disk • controller cards • graphics adapter cards • power supply • expansion slots • bus lines • input/output ports display	• examine a hardware system and identify the components and their functions
	Microprocessors such as those found in: • cameras • digital watches • monitoring devices	• identify and describe the use of microprocessors in a range of devices
	Care and maintenance of hardware systems	• develop basic procedures for the care and maintenance of hardware
	People • project manager • users • technicians, such as repair, maintenance • multimedia specialists • software engineers • programmers	• describe key roles within the information and software technology field and critically analyse possible role stereotypes • examine the contribution of people to the field of information and software technology

Core	Students learn about:	Students learn to:

	Software
	
	Types and examples of software
	• system including
	  – operating
	  – utility
	• applications including
	  – customised
		• distinguish between types of software
		• select and justify the use of software for a given situation
		• compare and contrast the features of packages, including relationships to other packages
		• list the features of software packages appropriate to particular users and a range of tasks

	Factors affecting hardware requirements, such as • central processing unit (CPU) speed • demands on memory • communication and peripheral devices **Features and elements of a graphical user interface (GUI)** such as • consistency of elements • functionality • navigation	• discuss how software packages affect hardware requirements • calculate memory requirements for specific purposes • explain the features and elements of GUI in a range of applications • design, produce and manipulate features of GUI • establish the criteria for the evaluation of GUI

Option 2: Authoring and multimedia	**Multimedia products** for areas such as: • education • entertainment • information **Data types** • commonly used in multimedia products • features of data types imported to multimedia products **Authoring software systems** • the combining of data types into a multimedia presentation using existing application products such as *HyperStudio* and *Macromedia* software	• define and describe the types of multimedia products • assess the effectiveness of a range of multimedia products • recognise the integrated nature of multimedia products • recognise features of data types for multimedia products • describe the processes of acquiring and/or capturing, manipulating, storing, displaying and distributing data types • discuss advantages and limitations of authoring software • justify the selection of the authoring software to be used for the multimedia product