Year 10 Digital Technologies: Introduction to Multimedia

Achievement Standard: By the end of Year 10, students explain the control and management of networked digital systems and the security implications of the interaction between hardware, software and users. **They explain simple data compression,** and why content data are separated from presentation.

Students plan and manage digital projects using an iterative approach. **They define and decompose complex problems in terms of functional and non-functional requirements**. **Students design and evaluate user experiences** and algorithms. They design and implement modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities. They take account of privacy and security requirements when selecting and validating data. **Students test and predict results and implement digital solutions. They evaluate information systems and their solutions in terms of risk, sustainability and potential for innovation and enterprise.** They share and collaborate online, establishing protocols for the use, transmission and maintenance of data and projects.

Unit Specific Information: *[various forms e.g. assessment focus, context, etc]*

Students will be introduced to the concepts of multimedia, using them to help design and develop efficient and effective presentations.

Students will study the process of developing a multimedia presentation that will be used for a real world context (tutorial or explanation).

Guiding Questions:

Why is data compression important in Digital Technology? What are the implications of data compression in media files?
- What is data compression?
- What evidence do you need to show you have evaluated a digital solution?
- How can you show your thinking about risk, sustainability, innovation and enterprise?

Assessment Details:

Summative Task:
Students will create a multimedia presentation for a client

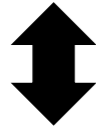Key Skill/s: Explain, Plan/Manage, Define, Create/Implement

Conditions: Project in class for 3 weeks.

READING / VIEWING/ LISTENING:
Core Text 1: OneNote tutorials
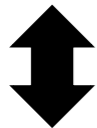
COMPREHENSION SKILL FOCUS:
Determining Importance

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THINKING:
Decompose
Design
Implement
Evaluate

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EXAM
In Class Exam featuring VB programming code

HIGHLY VALUED LANGAUGE FEATURE FOCUS:
Elaborating clauses

Priority Standards (Proficiency Scale – level 2/3)

	Knowledge & Understanding	Processes & Production Skills
3	I can understand basic data compression I can understand security implications of media files	I can evaluate digital solutions in terms of risk, sustainability and potential for innovation and enterprise. I can create digital solutions for clients according to criteria.
2	Recognise or describe key vocabulary and concepts: • Security • Privacy • Network • Compression • Risk • Sustainability • Innovation • Enterprise	Recognise and apply key vocabulary and concepts: • Functional requirements • Non-functional requirements • Data compression • Risk, sustainability, innovation, enterprise Perform basic processes such as: - Define and decompose complex problems (using functional/non-functional requirements) - Explain networked digital systems - Explain simple data compression - evaluate digital solutions

Learning Goals:

Strands and Sub-Strands	Australian Curriculum Content Descriptors	Kirwan High Learning Goals
Knowledge & Understanding	• Explain simple data compression	• Explain simple data expression.
Processes & Production Skills	• Select and validate data, taking account of privacy and security requirements.	• understand the problem definition and analysis of a client's problem • take into account the client's requirements for a multimedia presentation • I can take into account client requirements to identify needs to create criteria.
	• Define and decompose complex problems in terms of functional and non-functional requirements	• Design a multimedia presentation for a target audience. • evaluate designs against the criteria of functionality, accessibility, usability, and aesthetics
	• Evaluate information systems and their solutions in terms of risk, sustainability and potential for innovation and enterprise	• Understand that a project has a plan and the plan needs to consider sustainability. • understand that the project needs to be managed to improve sustainability • Get feedback from client or member of target audience on the product • Evaluate my product and the process and make future recommendations about enterprise i.e. the challenges, effort, intiative and risks.