KIRWAN STATE HIGH SCHOOL:YEAR 11 Unit OVERVIEW

Term 1: Creating with code

Unit Description:

In Unit 1, students will explore the creative and technical aspects of developing interactive digital solutions. They investigate algorithms, programming features and useability principles to generate small interactive solutions using programming tools and gain a practical understanding of programming features. This allows them the opportunity to explore existing and developing trends involving digital technologies.

Unit Objectives:
1. recognise and describe programming elements and useability principles
2. symbolise and explain information, ideas and interrelationships related to programming problems
3. analyse problems and information related to a selected technology context
4. determine user experience and programming requirements, and self-determined and prescribed criteria of a programming problem
5. synthesise information and ideas to determine possible prototype digital solutions
6. generate user interface and programmed components of the prototype digital solution
7. evaluate impacts, components and solutions against criteria to make refinements and justified recommendations
8. make decisions about and use mode-appropriate features, language and conventions for particular purposes and contexts.

Assessment Overview:

Formative IA1: Project — digital solution (30%)	**Formative IA2:** Project — technical proposal (20%)
This assessment focuses on the problem-solving process in Digital Solutions that requires the application of a range of cognitive, technical and creative skills and theoretical understandings. The response is a coherent work that documents the iterative process undertaken to develop a solution to a technical proposal. It may include written paragraphs and annotations, diagrams, sketches, drawings, and components of a prototype digital solution. This assessment occurs over an extended and defined period. Students may use class time and their own time to develop a response.	This assessment requires students to research a specific problem through collection, analysis and synthesis of information. A technical proposal uses research or investigative practices to assess a range of cognitions in a particular context. Research or investigative practices include locating and using information beyond students' own knowledge and the data they have been given. Students must adhere to research conventions, including citations, reference lists or bibliographies. This assessment occurs over an extended and defined period of time. Students may use class time and their own time to develop a proposal and identify a low-fidelity prototype digital solution.
Length: • 3–4 A3 pages • 2–4 A4 pages of code with annotations Other: • the reference list is not included in the page count • schools implement authentication strategies that reflect QCAA guidelines (see Section 1.3.2)	Length: Multimodal presentation, 5-7 minutes
All unit objectives are assessed	All unit objectives are assessed

Guaranteed Vocabulary:

Constraints, requirements, explore, develop, generate, evaluate, user experience, useability principles, algorithm, pseudocode