

YEAR 9 GAME PROGRAMMING

This subject aims to introduce students to game design and game programming through the use of various game development platforms. Students will be introduced to component-based object-oriented programming by coding a series of 2D game modules incorporating game pitch/concept, game logic, graphics and audio. Students will also consider visual design elements in relation to user input and user interfaces. Students will have the opportunity to either work individually or collaboratively in small teams to design and develop their own 2D games. A formal technology design process is followed such as planning gameplay, designing program logic which may include incorporating game physics and exploring a range of game development elements such as designing game scenes and writing code to manipulate game elements, sound and graphics. Students will hone their problem-solving and collaboration skills by working with classmates to test the functionality of games and debug errors in their program code.

Digital Systems

Students will learn to:

- Investigate the role of gaming consoles, pc hardware and software in the gaming industry.

Data and information

Students will learn to:

- Manage game assets (audio, images, video) and package file directories including the handling of code scripts, graphics and sound files.
- Design and develop data structures to store and manipulate data (such as player score or player health).

Creating Digital Solutions

Students will learn to:

- Prepare a game design document – incorporating design considerations such as accessibility, user interfaces, level design and functional and non-functional requirements.
- Design and develop an effective user interface conveying information such as player scores or inventory items.
- Apply computational thinking to design algorithms aimed at manipulating objects within the game environment in response to player input.
- Develop programs by writing scripts in prescribed programming languages within the selected games development platforms.
- Test and debug their game and evaluate their solution in response to the project goals stated in their game design document.