

Year 6 Digital Technologies (Semester 1 only)

Achievement Standard

By the end of Year 6 students develop and modify digital solutions, and define problems and evaluate solutions using user stories and design criteria. They process data and show how digital systems represent data. Students design algorithms involving complex branching and iteration and implement them as visual programs including variables. They securely access and use multiple digital systems and describe their components and how they interact to process and transmit data. Students select and use appropriate digital tools effectively to plan, create, locate and share content, and to collaborate, applying agreed conventions and behaviours. They identify their digital footprint and recognise its permanence.

Assessable Elements

An overall level of achievement in this subject is determined by the teacher's on-balance judgment of the evidence presented in students' summative assessment across the following:

- **Knowledge and Understanding** – digital systems and representation of data
- **Processes and Production Skills** – collecting, managing and creating data, defining, implementing, evaluating, collaborating and managing

Delivery (mode, time requirements, lessons)

Students will be offered a blended model of delivery with one 1 hour live lesson and independent study on their program to complete lessons, tasks and assessment in accordance with the Work Rate Calendar.

Student Requirements

Computer, internet access, email, printer, scanner, headset with microphone, stationery, resource list and SRS list.

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Units, Learning Experiences and Summative Assessment		
Semester 1	Term 1	<p>Unit 1 Netbytes NetBytes is a comprehensive, interactive course designed for Year 6 students. It provides an in-depth exploration of digital systems, networking, binary code and online collaboration. This course aims to equip students with foundational knowledge in computing and digital literacy, foster critical thinking and problem-solving skills in a digital context.</p>
	Term 1	<p>Summative Assessment: AT1 – NetBytes Using activities completed over the course of the unit, students will create a digital portfolio that demonstrates knowledge in digital systems and networks, data representation and online collaboration.</p> <ul style="list-style-type: none"> • Understanding Digital Systems: <ul style="list-style-type: none"> ➤ Describe the main components of a digital system ➤ Explain how they interact to process data. • Networks and Data Transmission: <ul style="list-style-type: none"> ➤ Explain of how digital systems form networks to transmit data • Binary Data Representation: <ul style="list-style-type: none"> ➤ Explain how digital systems represent all data using numbers ➤ Show how can be represented by off and on states (zeros and ones in binary) • Online Collaboration and Digital Tools: <ul style="list-style-type: none"> ➤ Explain what makes online collaboration effective ➤ Show an example of a collaborative online document
	Term 2	<p>Unit 2 Designing Digital Systems In this unit, students will explore the user-centred design process to investigate how games are designed, created and played. Students will analyse the audience of games, understanding the importance of empathy in the design process and use user stories to identify user needs.</p> <p>Students will design, create and test a digital solution that solves a problem for a user with an identified need using a computer program such as Scratch to apply their knowledge a visual programming language, including designing algorithms involving complex branching and iteration, including variables.</p>
	Term 2	<p>Summative assessment: Game Design Students will use computational thinking to create digital solutions by defining problems, designing and modifying algorithms, and developing visual programs with branching, iteration, variables, and input responsiveness. Employing design thinking, they'll generate and refine solution designs through user stories and criteria</p>

Disclaimer All of the above information is accurate at the time of development.