

Australian Curriculum: Digital Technologies Years 7–10 achievement standards ■ and aligned content descriptions ■ on a page

	Year 7	Year 8	Year 9	Year 10
Knowledge and understanding strand				
Digital systems	Students distinguish between different types of networks and defined purposes. <i>Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance (ACTDIK023)</i>		Students explain the control and management of networked digital systems and the security implications of the interaction between hardware, software and users. <i>Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems (ACTDIK034)</i>	
Representation of data	Students explain how text, image and audio data can be represented, secured and presented in digital systems. <i>Investigate how digital systems represent text, image and audio data in binary (ACTDIK024)</i>		Students explain simple data compression, and why content data are separated from presentation. <i>Analyse simple compression of data and how content data are separated from presentation (ACTDIK035)</i>	
Processes and production skills strand				
Collecting, managing and analysing data	Students analyse and evaluate data from a range of sources to model and create solutions. <i>Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025)</i> <i>Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026)</i>		Students take account of privacy and security requirements when selecting and validating data. <i>Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements (ACTDIP036)</i> <i>Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data (ACTDIP037)</i>	
Creating digital solutions by:				
Investigating and defining	Students define and decompose problems in terms of functional requirements and constraints. <i>Define and decompose real-world problems taking into account functional requirements and economic, environmental, social, technical and usability constraints (ACTDIP027)</i>		Students define and decompose complex problems in terms of functional and non-functional requirements. <i>Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs (ACTDIP038)</i>	
Generating and designing	Students design user experiences and algorithms incorporating branching and iterations, and test, modify and implement digital solutions. <i>Design the user experience of a digital system, generating, evaluating and communicating alternative designs (ACTDIP028)</i> <i>Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)</i>		Students design and evaluate user experiences and algorithms, and they test and predict results and implement digital solutions. <i>Design the user experience of a digital system by evaluating alternative designs against criteria including functionality, accessibility, usability, and aesthetics (ACTDIP039)</i> <i>Design algorithms represented diagrammatically and in structured English and validate algorithms and programs through tracing and test cases (ACTDIP040)</i>	
Producing and implementing	Students plan and manage digital projects to create interactive information. <i>Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)</i>		Students 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. <i>Implement modular programs, applying selected algorithms and data structures including using an object-oriented programming language (ACTDIP041)</i>	
Evaluating	Students evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability. <i>Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)</i>		Students evaluate information systems and their solutions in terms of risk, sustainability and potential for innovation and enterprise. <i>Evaluate critically how student solutions and existing information systems and policies, take account of future risks and sustainability and provide opportunities for innovation and enterprise (ACTDIP042)</i>	
Collaborating and managing	Students use appropriate protocols when communicating and collaborating online. <i>Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account (ACTDIP032)</i>		Students share and collaborate online, establishing protocols for the use, transmission and maintenance of data and projects, and they plan and manage digital projects using an iterative approach. <i>Create interactive solutions for sharing ideas and information online, taking into account safety, social contexts and legal responsibilities (ACTDIP043)</i> <i>Plan and manage projects using an iterative and collaborative approach, identifying risks and considering safety and sustainability (ACTDIP044)</i>	