

7-8 Mapping of Australian Digital Technologies Curriculum



Content Descriptions

Australian Curriculum Levels 7-8	Western Australian Year 8 Syllabus
Digital systems Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance (ACTDIK023)	Digital systems Methods of data transmission and security in wired, wireless and mobile networks (ACTDIK023) Specifications of hardware components and their impact on network activities (ACTDIK023)
Representation of data Investigate how digital systems represent text, image and audio data in binary (ACTDIK024)	Representation of data Whole numbers are used to represent data in a digital system (ACTDIK024)
Collecting, managing and analysing data Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025) Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026)	Collecting, managing and analysing data Evaluate the authenticity, accuracy and timeliness of acquired data (ACTDIP025) Evaluate and visualise data, using a range of software, to create information, and use structured data to model objects or events (ACTDIP026)
Investigating and defining Define and decompose real-world problems taking into account functional requirements and economic, environmental, social, technical and usability constraints (ACTDIP027)	Investigating and defining Investigate a given need or opportunity for a specific purpose (WATPPS46) Evaluate and apply a given brief (WATPPS47) Consider components/resources to develop solutions, identifying constraints (WATPPS48)
Generating and designing Design the user experience of a digital system, generating, evaluating and communicating alternative designs (ACTDIP028) Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)	Designing Design, develop, evaluate and communicate alternative solutions, using appropriate technical terms and technology (WATPPS49) Produce a simple plan designed to solve a problem, using a sequence of steps (WATPPS50) Digital implementation Design the user experience of a digital system (ACTDIP028) Design plans, using a sequence of steps, and represent them diagrammatically and in English, to solve a problem and to predict output for a given input to identify errors (ACTDIP029)
Producing and Implementing Implement and modify programs with user interfaces involving branching, iteration and functions in a general purpose programming language (ACTDIP030)	Producing and Implementing Safely apply appropriate techniques to make solutions using a range of components and equipment (WATPPS51) Digital Implementation Implement and modify solutions, that include user interfaces within a programming environment, including the need for choice of options and/or repeating options (ACTDIP030)
Evaluating Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability ACTDIP031)	Evaluating Develop contextual criteria independently to assess design processes and solutions (WATPPS52)
Collaborating and managing Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account (ACTDIP032)	Collaborating and managing Work independently, and collaboratively when required, to plan, develop and communicate ideas and information when managing projects (WATPPS53) Digital Implementation Implement and modify solutions, that include user interfaces within a programming environment, including the need for choice of options and/or repeating options (ACTDIP030)



Achievement Standards

Australian Curriculum Levels 7-8	Western Australian Year 8 Syllabus
<p>By the end of Year 8, students distinguish between different types of networks and defined purposes. They explain how text, image and audio data can be represented, secured and presented in digital systems. Students plan and manage digital projects to create interactive information. They define and decompose problems in terms of functional requirements and constraints. Students design user experiences and algorithms incorporating branching and iterations, and test, modify and implement digital solutions. They evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability. They analyse and evaluate data from a range of sources to model and create solutions. They use appropriate protocols when communicating and collaborating online.</p>	<p>At Standard, students identify methods of data transmission and security in wired, wireless and mobile networks and identify specifications of hardware components and outline apparent impacts on network activities. They identify how binary is used to represent data in digital systems. Students evaluate the authenticity, accuracy and timeliness of acquired data and use a range of software to evaluate and visualise data. Students present diagrammatically and in English, their designs and plans for the user experience of a digital system, with sequenced steps. They predict output for a given input to identify errors. Students modify and implement digital solutions, considering the user interface within a programming environment and the need for user choice and/or repeating options. They work collaboratively online to create and communicate interactive ideas with consideration for social contexts. In Digital Technologies, students investigate a given need or opportunity for a specific purpose. They evaluate and apply a given brief, using some examples. Students consider and select components/resources to develop solutions, identifying constraints. They use appropriate technical terms and technology to design, develop, evaluate and communicate alternative digital solutions. Students develop sequenced steps to produce a simple, problem-solving plan. They apply safe and appropriate techniques to make solutions, using a range of components and equipment. Students independently develop contextual criteria to assess design processes and solutions. They work independently, and collaboratively, to plan, develop and communicate ideas and information when managing projects.</p>