

## Content Descriptions and Outcomes

Knowledge and Understanding Digital Systems			Digital Technology	Digital Systems
Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance (ACTDIK023)	Different types of networks, including wired, wireless and mobile networks (ACTDIK023)  Hardware components of a network (ACTDIK023)	Methods of data transmission and security in wired, wireless and mobile networks (ACTDIK023)  Specifications of hardware components and their impact on network activities (ACTDIK023)		Investigate how data are transmitted and secured in wired, wireless and mobile networks (VCDTDS035)

Representation of Data			Digital Technology	Data and Information
Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
Investigate how digital systems represent text, image and audio data in binary (ACTDIK024)	Digital systems represent text, image and audio data (ACTDIK024)	Whole numbers are used to represent data in a digital system (ACTDIK024)	explains how data is represented in digital systems and transmitted in networks (TE4-7DI)	Investigate how digital systems represent text, image and sound data in binary (VCDTDI036)

# 7-8 Australian Digital Technologies Curriculum Mapping Tool



Process of Production Skills Collecting, managing and analysing data			Producing and Implementing	Data and Information
Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
<p>Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025)</p> <p>Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026)</p>	<p>Explore how to acquire data from a range of digital sources (ACTDIP025)</p> <p>Create information using relevant software, and create data to model objects and/or events (ACTDIP026)</p>	<p>Evaluate the authenticity, accuracy and timeliness of acquired data (ACTDIP025)</p> <p>Evaluate and visualise data, using a range of software, to create information, and use structured data to model objects or events (ACTDIP026)</p>		<p>Acquire data from a range of sources and evaluate their authenticity, accuracy and timeliness (VCDTDI037)</p> <p>Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (VCDTDI038)</p>

## Creating Digital Solutions by...

Investigating and defining				
Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
<p>Define and decompose real-world problems taking into account functional requirements and economic, environmental, social, technical and usability constraints (ACTDIP027)</p>	<p>Define and break down a given task, identifying the purpose (WATPPS39)</p> <p>Consider components/resources to develop solutions, identifying constraints (WATPPS40)</p>	<p>Investigate a given need or opportunity for a specific purpose (WATPPS46)</p> <p>Evaluate and apply a given brief (WATPPS47)</p> <p>Consider components/resources to develop solutions, identifying constraints (WATPPS48)</p>		<p>Define and decompose real-world problems taking into account functional requirements and sustainability (economic, environmental, social), technical and usability constraints (VCDTCD040)</p>

# 7-8 Australian Digital Technologies Curriculum Mapping Tool



Generating and Designing	Designing			Creating Digital Solutions
Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
<p>Design the user experience of a digital system, generating, evaluating and communicating alternative designs (ACTDIP028)</p> <p>Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)</p>	<p>Design, develop, review and communicate design ideas, plans and processes within a given context, using a range of techniques, appropriate technical terms and technology (WATPPS41)</p> <p>Follow a plan designed to solve a problem, using a sequence of steps (WATPPS42)</p> <p><b>Digital Implementation</b></p> <p>Design the user experience of a digital system (ACTDIP028)</p>	<p>Design, develop, evaluate and communicate alternative solutions, using appropriate technical terms and technology (WATPPS49)</p> <p>Produce a simple plan designed to solve a problem, using a sequence of steps (WATPPS50)</p> <p>Design the user experience of a digital system (ACTDIP028)</p> <p>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)</p>		<p>Design the user experience of a digital system, generating, evaluating and communicating alternative designs (VCDTCD041)</p> <p>Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (VCDTCD042)</p>

# 7-8 Australian Digital Technologies Curriculum Mapping Tool



Producing and Implementing				Creating Digital Solutions
Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
Implement and modify programs with user interfaces involving branching, iteration and functions in a general purpose programming language (ACTDIP030)	Safely make solutions using a range of components, equipment and techniques (WATPPS43)	Safely apply appropriate techniques to make solutions using a range of components and equipment (WATPPS51)		Develop and modify programs with user interfaces involving branching, iteration and functions using a general-purpose programming language (VCDTCD043)
	<b>Digital Implementation</b> Create digital solutions that include a user interface where choices can be made (ACTDIP030)	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				Creating Digital Solutions
Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)	Independently apply given contextual criteria to evaluate design processes and solutions (WATPPS44)	Develop contextual criteria independently to assess design processes and solutions (WATPPS52)	explains how people in technology related professions contribute to society now and into the future (TE4-10TS)	Evaluate how well student-developed solutions and existing information systems meet needs, are innovative and take account of future risks and sustainability (VCDTCD044)

# 7-8 Australian Digital Technologies Curriculum Mapping Tool



Collaborating and managing			Data and Information	
Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account (ACTDIP032)	Work independently, and collaboratively when required, to plan, develop and communicate ideas and information when using management processes (WATPPS45)	Work independently, and collaboratively when required, to plan, develop and communicate ideas and information when managing projects (WATPPS53)		Manage, create and communicate interactive ideas, information and projects collaboratively online, taking safety and social contexts into account (VCDDI039)
	<b>Digital Implementation</b>			
	Create and communicate information collaboratively online, taking into account social contexts (ACTDIP032)	Implement and modify solutions, that include user interfaces within a programming environment, including the need for choice of options and/or repeating options (ACTDIP030)		



# 7-8 Australian Digital Technologies Curriculum Mapping Tool



## Achievement Standards

Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
<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 types of networks, including wired, wireless and mobile networks and the hardware components of a network. They identify ways digital systems represent text, image and audio data. Students use a range of digital sources to explore how to acquire data. They create information using relevant of software and creates data to model objects and/or events. Students create digital solutions considering the user experience of a digital system that allows for choices to be made within a user interface. They work collaboratively online to create and communicate information, with consideration for social contexts. In Digital Technologies, students develop solutions and identify the purpose for a given digital task by considering constraints and components/resources. Students use a range of techniques, appropriate digital technical terms and technologies to design, develop, review and communicate design ideas, plans and processes. They follow sequenced steps to a problem-solving plan. Students apply safe procedures to make solutions, using a range of components, equipment and techniques. They apply given contextual criteria to independently evaluate design processes and solutions. Students work independently, and collaboratively, to plan, develop and communicate ideas</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</p>	<p>By the end of Stage 4, students explore problems and opportunities considering functional, economic, environmental, social, technical and/or usability constraints. They investigate, select, justify and safely use a range of tools, materials, components, equipment and processes to develop, test and communicate design ideas using appropriate technical terms and technologies. Students plan, manage and evaluate the production of design solutions. They develop thinking skills to communicate the development of digital and non-digital solutions. Students collect and interpret data from a range of sources to assist in making informed judgements. They explain how data is represented in digital systems and transmitted and secured in networks. Students are responsible users of technology, capable of designing and producing solutions to identified needs or opportunities. They develop an appreciation of the contribution of technologies on their lives now and the impact of innovations for creating preferred futures. They develop an appreciation of the dynamic nature of design and production processes and how thinking skills are used to develop solutions to personal, social and global issues.</p>	<p>By the end of Level 8, students distinguish between different types of networks and their suitability in meeting defined purposes. Students explain how text, image and sound data can be represented and secured in digital systems and presented using digital systems. They analyse and evaluate data from a range of sources to model solutions and create information. They manage the collaborative creation of interactive ideas, information and projects and use appropriate codes of conduct when communicating online. Students define and decompose problems in terms of functional requirements and constraints. They design user experiences and algorithms incorporating branching and iterations, and develop, test, and modify digital solutions. Students evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability.</p>

# 7-8 Australian Digital Technologies Curriculum Mapping Tool



Australian	Western Australian Level 7	Western Australian Level 8	New South Wales Stage 4	Victorian
	and information, when using management processes.	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.	<b>*Any achievement standards that does not relate directly to Digital Technology has been removed.</b>	