



# Curriculum comparison

Year 7

Western Australian Curriculum	Australian Curriculum
Year 7	Years 7 and 8
Methods of data transmission in different types of networks including wired, wireless and mobile networks	AC9TDI8K01 explain how hardware specifications affect performance and select appropriate hardware for particular tasks and workloads
Hardware devices of networks and their purposes	AC9TDI8K02 investigate how data is transmitted and secured in wired and wireless networks including the internet
Digital systems use binary to represent data in text	AC9TDI8K03 investigate how digital systems represent text, image and audio data using integers
Acquire, store and visualise data from a range of sources using spreadsheets	AC9TDI8K04 explain how and why digital systems represent integers in binary
Issues relating to a user's digital footprint and the permanence of data	AC9TDI8P01 acquire, store and validate data from a range of sources using software, including spreadsheets and databases
Protecting accounts with multifactor authentication	AC9TDI8P02 analyse and visualise data using a range of software, including spreadsheets and databases, to draw conclusions and make predictions by identifying trends
Break down the user experience (UX) of a digital system	AC9TDI8P03 model and query the attributes of objects and events using structured data
Design algorithms involving control structures (selection, decision and iteration), and represent them using flowcharts and pseudocode	AC9TDI8P04 define and decompose real world problems with design criteria and by creating user stories
Implement, modify, and debug programs involving control structures	AC9TDI8P05 design algorithms involving nested control structures and represent them using flowcharts and pseudocode
Plan, develop and communicate, using project management processes, considering time and available resources to achieve solutions	AC9TDI8P06 trace algorithms to predict output for a given input and to identify errors
Investigate and define the problem and requirements of a given design brief	AC9TDI8P07 design the user experience of a digital system
Break down a given design brief, identifying and defining the purpose and competing considerations	AC9TDI8P08 generate, modify, communicate and evaluate alternative designs



# Curriculum comparison

Years 7

Western Australian Curriculum	Australian Curriculum
Year 7	Years 7 and 8
Consider given technologies, resources and/or components to develop solutions	AC9TDI8P09 implement, modify and debug programs involving control structures and functions in a general purpose programming language
Design processes and solutions with given technologies and techniques, using appropriate technical terms	AC9TDI8P10 evaluate existing and student solutions against the design criteria, user stories and possible future impact
Implement agreed protocols and use a range of technologies, components and/or equipment to produce designed solutions	AC9TDI8P11 select and use a range of digital tools efficiently, including unfamiliar features, to create, locate and communicate content, consistently applying common conventions
Use given contextual criteria to evaluate design processes and solutions	AC9TDI8P12 select and use a range of digital tools efficiently and responsibly to share content online, and plan and manage individual and collaborative agile projects
	AC9TDI8P13 explain how multi factor authentication protects an account when the password is compromised and identify phishing and other cyber security threats
	AC9TDI8P14 investigate and manage the digital footprint existing systems and student solutions collect and assess if the data is essential to their purpose



# Curriculum comparison

Year 7

Western Australian Curriculum	Australian Curriculum
Achievement Standards	Achievement Standards
<p><b>By the end of the year:</b> Students identify the ways different types of networks, including wired, wireless and mobile networks, and the hardware components transmit data. They identify ways digital systems represent data using binary. Students acquire, store and visualise data from a range of sources using spreadsheets. They design algorithms involving control structures (iteration and selection) and represent them using flowcharts, pseudocode and correct terminology to implement, modify, and debug programs.</p> <p>In Digital Technologies, students use project management processes/skills to plan, develop and communicate solutions, whilst considering time and available resources, and identify the purpose for a given digital task. They also consider constraints and components and/or 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 implement agreed protocols when using a range of technologies, components and/or equipment to produce designed solutions. Students identify issues relating to a user's digital footprint and the permanence of data whilst outlining ways of protecting accounts with multifactor authentication.</p>	<p><b>Learning Area Achievement Standard</b> By the end of Year 8 students explain how people design, innovate and produce products, services and environments for preferred futures. For each of the 4 prescribed technologies contexts students explain how the features of technologies impact on design decisions, and create designed solutions based on analysis of needs or opportunities. They acquire, interpret and model with spreadsheets and represent data with integers and binary. Students design and trace algorithms; and implement them in a general-purpose programming language. Students create and adapt design ideas, processes and solutions, and justify their decisions against developed design criteria that include sustainability. They communicate design ideas and solutions to audiences using technical terms and graphical representation techniques, including using digital tools. They select appropriate hardware for particular tasks, explain how data is transmitted and secured in networks, and identify cyber security threats. They use a range of digital tools to individually and collaboratively document and manage production processes to safely and responsibly produce designed or digital solutions for the intended purpose. Students manage their digital footprint.</p> <p><b>Subject Achievement Standard</b> By the end of Year 8 students develop and modify creative digital solutions, decompose real-world problems, and evaluate alternative solutions against user stories and design criteria. Students acquire, interpret and model data with spreadsheets and represent data with integers and binary. They design and trace algorithms and implement them in a general-purpose programming language. Students select appropriate hardware for particular tasks, explain how data is transmitted and secured in networks, and identify cyber security threats. They select and use a range of digital tools efficiently and responsibly to create, locate and share content; and to plan, collaborate on and manage projects. Students manage their digital footprint.</p>



# Curriculum comparison

Year 8

Western Australian Curriculum	Australian Curriculum
Year 8	Years 7 and 8
Methods of data transmission and security in wired, wireless and mobile networks	AC9TDI8K01 explain how hardware specifications affect performance and select appropriate hardware for particular tasks and workloads
The effect of hardware specifications on performance and the appropriateness of hardware for particular tasks	AC9TDI8K02 investigate how data is transmitted and secured in wired and wireless networks including the internet
Digital systems represent image and audio data using binary	AC9TDI8K03 investigate how digital systems represent text, image and audio data using integers
Analyse and validate data using spreadsheets to draw conclusions and make predictions by identifying trends	AC9TDI8K04 explain how and why digital systems represent integers in binary
Evaluate the authenticity, accuracy and timeliness of acquired data	AC9TDI8P01 acquire, store and validate data from a range of sources using software, including spreadsheets and databases
Ethical issues relating to the collection and ownership of data	AC9TDI8P02 analyse and visualise data using a range of software, including spreadsheets and databases, to draw conclusions and make predictions by identifying trends
Cybersecurity threats including phishing	AC9TDI8P03 model and query the attributes of objects and events using structured data
Design the user experience (UX) of a digital system	AC9TDI8P04 define and decompose real world problems with design criteria and by creating user stories
Design algorithms involving nested control structures and represent them using flowcharts and pseudocode	AC9TDI8P05 design algorithms involving nested control structures and represent them using flowcharts and pseudocode
Trace algorithms to predict output for a given input and to identify and fix errors	AC9TDI8P06 trace algorithms to predict output for a given input and to identify errors
Implement, modify and debug programs involving control structures in a general-purpose programming language	AC9TDI8P07 design the user experience of a digital system
Plan, develop and communicate, using project management processes, considering time, resources and costs to achieve solutions	AC9TDI8P08 generate, modify, communicate and evaluate alternative designs



# Curriculum comparison

Year 8

Western Australian Curriculum	Australian Curriculum
Year 8	Years 7 and 8
Investigate a problem for a given need or opportunity	AC9TDI8P09 implement, modify and debug programs involving control structures and functions in a general purpose programming language
Develop a design brief for a given need or opportunity	AC9TDI8P10 evaluate existing and student solutions against the design criteria, user stories and possible future impact
Consider technologies, resources and/or components to develop solutions, identifying constraints	AC9TDI8P11 select and use a range of digital tools efficiently, including unfamiliar features, to create, locate and communicate content, consistently applying common conventions
Design processes and solutions considering a range of technologies and techniques, using appropriate technical terms	AC9TDI8P12 select and use a range of digital tools efficiently and responsibly to share content online, and plan and manage individual and collaborative agile projects
Implement agreed protocols, a range of technologies, techniques, components and processes to produce designed solutions	AC9TDI8P13 explain how multi factor authentication protects an account when the password is compromised and identify phishing and other cyber security threats
Use student-developed contextual criteria to evaluate design processes and solutions	AC9TDI8P14 investigate and manage the digital footprint existing systems and student solutions collect and assess if the data is essential to their purpose



# Curriculum comparison

Years 8

Western Australian Curriculum	Australian Curriculum Version 9
Achievement Standards	Achievement Standards
<p><b>By the end of the year:</b> Students describe methods of data transmission and security in wired, wireless and mobile networks, identify specifications of hardware components and outline potential impact on particular tasks. They identify how digital systems represent image and audio data using binary. Students analyse and validate data using spreadsheets to draw conclusions and make predictions based on identified trends. They design algorithms involving nested control structures and represented by flowcharts and pseudocode in plain English. Students implement, modify and debug programs involving control structures in a general-purpose programming language. They trace algorithms to predict output for a given input and identify errors. Students identify ethical issues regarding the collection and ownership of data and evaluate the authenticity, accuracy and timeliness of acquired data.</p> <p>In Digital Technologies, students investigate a given need or opportunity for a specific purpose. They apply a given design brief. Students consider and select components/resources to develop solutions, identifying constraints. They use appropriate technical terms and technologies to design, develop, evaluate and communicate alternative digital solutions. Students use project management skills to plan, develop and communicate, whilst considering time, resources and costs to achieve solutions. They develop contextual criteria to evaluate design processes and solutions.</p>	<p><b>Learning Area Achievement Standard</b> By the end of Year 8 students explain how people design, innovate and produce products, services and environments for preferred futures. For each of the 4 prescribed technologies contexts students explain how the features of technologies impact on design decisions, and create designed solutions based on analysis of needs or opportunities. They acquire, interpret and model with spreadsheets and represent data with integers and binary. Students design and trace algorithms; and implement them in a general-purpose programming language. Students create and adapt design ideas, processes and solutions, and justify their decisions against developed design criteria that include sustainability. They communicate design ideas and solutions to audiences using technical terms and graphical representation techniques, including using digital tools. They select appropriate hardware for particular tasks, explain how data is transmitted and secured in networks, and identify cyber security threats. They use a range of digital tools to individually and collaboratively document and manage production processes to safely and responsibly produce designed or digital solutions for the intended purpose. Students manage their digital footprint.</p> <p><b>Subject Achievement Standard</b> By the end of Year 8 students develop and modify creative digital solutions, decompose real-world problems, and evaluate alternative solutions against user stories and design criteria. Students acquire, interpret and model data with spreadsheets and represent data with integers and binary. They design and trace algorithms and implement them in a general-purpose programming language. Students select appropriate hardware for particular tasks, explain how data is transmitted and secured in networks, and identify cyber security threats. They select and use a range of digital tools efficiently and responsibly to create, locate and share content; and to plan, collaborate on and manage projects. Students manage their digital footprint.</p>



# Curriculum comparison

Year 9

Western Australian Curriculum	Australian Curriculum
Year 9	Year 9 and 10
Role of hardware and software to manage, control and secure the movement of data in a digital system	AC9TDI10K01 investigate how hardware and software manage, control and secure access to data in networked digital systems
Different methods of manipulation and storage of data	AC9TDI10K02 represent documents online as content (text), structure (markup) and presentation (styling) and explain why such representations are important
Data compression techniques for an intended purpose	AC9TDI10K03 investigate simple data compression techniques
Acquire, store and validate data from a range of sources using software, including spreadsheets and/or databases	AC9TDI10P01 develop techniques to acquire, store and validate data from a range of sources using software, including spreadsheets and databases
Single table (flat file) databases are created to store and manage data	AC9TDI10P02 analyse and visualise data interactively using a range of software, including spreadsheets and databases, to draw conclusions and make predictions by identifying trends and outliers
Australian Privacy Principles (APP) regarding the collection and ownership of data	AC9TDI10P03 model and query entities and their relationships using structured data
Cybersecurity threat models	AC9TDI10P04 define and decompose real world problems with design criteria and by interviewing stakeholders to create user stories
Define and decompose real-world problems by surveying stakeholders to create the requirements of the user	AC9TDI10P05 design algorithms involving logical operators and represent them as flowcharts and pseudocode
Design and prototype the user experience (UX) of a digital system based on user requirements	AC9TDI10P06 validate algorithms and programs by comparing their output against a range of test cases
Design algorithms that use functions and represent them as flowcharts and/or pseudocode	AC9TDI10P07 design and prototype the user experience of a digital system
Predict the output of an algorithm using a given range of test cases and compare against actual output	AC9TDI10P08 generate, modify, communicate and critically evaluate alternative designs



# Curriculum comparison

Year 9

Western Australian Curriculum	Australian Curriculum
Year 9	Year 9 and 10
Implement, modify and debug programs that use functions in a general-purpose programming language	AC9TDI10P09 implement, modify and debug modular programs, applying selected algorithms and data structures, including in an object oriented programming language
Manage projects, using suitable technologies, with an agile and collaborative approach. Use project management processes to consider time, risk, economic and sustainable factors	AC9TDI10P10 evaluate existing and student solutions against the design criteria, user stories, possible future impact and opportunities for enterprise
Ideate a problem and define the needs of an end user, through interviews and/or surveys	AC9TDI10P11 select and use emerging digital tools and advanced features to create and communicate interactive content for a diverse audience
Develop a design brief for a solution based on end user needs	AC9TDI10P12 use simple project management tools to plan and manage individual and collaborative agile projects, accounting for risks and responsibilities
Investigate a range of technologies, resources and/or components to develop ideas and solutions, with consideration of social, ethical and other constraints	AC9TDI10P13 develop cyber security threat models, and explore a software, user or software supply chain vulnerability
Design alternative solutions considering available technologies, usability and aesthetics, using appropriate technical terms	AC9TDI10P14 apply the Australian Privacy Principles to critique and manage the digital footprint that existing systems and student solutions collect
Select, implement and test a range of technologies, techniques and processes to produce designed solutions and/or prototypes	
Evaluate design processes and solutions against student-developed criteria	



# Curriculum comparison

Year 9

Western Australian Curriculum	Australian Curriculum
Achievement Standards	Achievement Standards
<p><b>By the end of the year:</b> Students describe the role of hardware and software to secure the movement of data in digital systems with a focus on cyber security threat models. They identify different methods used for manipulation, storage and transmission of data. Students acquire, store and validate data from a range of sources using software, including spreadsheets and databases. They define and decompose real-world problems, by interviewing stakeholders, to develop user experiences. Students design and prototype the user experience of a digital system. They design algorithms that use functions and represent them as flowcharts and/or pseudocode. Students implement and modify programs in a general-purpose programming language and trace algorithms to predict output against a range of test cases. They describe the Australian Privacy Principles regarding the collection and ownership of data.</p> <p>In Digital Technologies, students identify and define the needs of a stakeholder to develop a design brief for a solution. They investigate a range of components/resources to develop ideas, and identify and consider constraints. Students apply design thinking, creativity and enterprise skills to produce purposeful and holistic solutions. Students select, test and implement appropriate technologies and processes to produce effective solutions. They evaluate design processes against student-developed criteria. Students manage projects using digital technologies through an agile and collaborative approach, and consider time, risk, economic and sustainable factors.</p>	<p>By the end of Year 10 students develop and modify innovative digital solutions, decompose real-world problems, and critically evaluate alternative solutions against stakeholder elicited user stories. Students acquire, interpret and model complex data with databases and represent documents as content, structure and presentation. They design and validate algorithms and implement them, including in an object-oriented programming language. Students explain how digital systems manage, control and secure access to data; and model cyber security threats and explore a vulnerability. They use advanced features of digital tools to create interactive content, and to plan, collaborate on, and manage agile projects. Students apply privacy principles to manage digital footprints.</p>



# Curriculum comparison

Year 10

Western Australian Curriculum	Australian Curriculum
Year 10	Years 9 and 10
Hardware and software are used to manage, control and secure access to data in networked digital systems	AC9TDI10K01 investigate how hardware and software manage, control and secure access to data in networked digital systems
Represent documents online as content (text), structure (mark-up) and presentation (styling) and the purpose of these distinctions	AC9TDI10K02 represent documents online as content (text), structure (markup) and presentation (styling) and explain why such representations are important
Analyse and visualise data interactively using a range of software, including spreadsheets and/or relational databases, to draw conclusions and make predictions by identifying trends and outliers	AC9TDI10K03 investigate simple data compression techniques
Model and query entities and their relationships using structured data	AC9TDI10P01 develop techniques to acquire, store and validate data from a range of sources using software, including spreadsheets and databases
Australian Privacy Principles (APP) are used to critique systems and manage the digital footprint of individuals	AC9TDI10P02 analyse and visualise data interactively using a range of software, including spreadsheets and databases, to draw conclusions and make predictions by identifying trends and outliers
User or software supply chain vulnerabilities	AC9TDI10P03 model and query entities and their relationships using structured data
Define and decompose real-world problems by using data gathering techniques to create the client needs	AC9TDI10P04 define and decompose real world problems with design criteria and by interviewing stakeholders to create user stories
Design and prototype the user experience and user interface (UX/UI) of a digital system based on client needs	AC9TDI10P05 design algorithms involving logical operators and represent them as flowcharts and pseudocode
Design modular algorithms involving functions and logical operators (AND, OR, NOT) and represent them as flowcharts and/or pseudocode	AC9TDI10P06 validate algorithms and programs by comparing their output against a range of test cases
Validate algorithms and programs by comparing output against a range of test cases	AC9TDI10P07 design and prototype the user experience of a digital system
Implement, modify and debug modular programs, applying algorithms and data structures in a general-purpose programming language	AC9TDI10P08 generate, modify, communicate and critically evaluate alternative designs



# Curriculum comparison

Year 10

Western Australian Curriculum	Australian Curriculum
Year 10	Years 9 and 10
<p>Manage projects, using suitable technologies, with an agile and collaborative approach. Use project management processes to consider time, production processes, social, ethical, economic and sustainable factors, and legal responsibilities</p>	<p>AC9TDI10P09 implement, modify and debug modular programs, applying selected algorithms and data structures, including in an object oriented programming language</p>
<p>Ideate a problem and define the needs of the client/stakeholder through anecdotal evidence and/or data gathering techniques</p>	<p>AC9TDI10P10 evaluate existing and student solutions against the design criteria, user stories, possible future impact and opportunities for enterprise</p>
<p>Develop a design brief for a solution or to innovate an existing product, service or environment</p>	<p>AC9TDI10P11 select and use emerging digital tools and advanced features to create and communicate interactive content for a diverse audience</p>
<p>Investigate a range of technologies, resources and/or components to develop ideas and solutions, with consideration of social and ethical factors, legal responsibilities and competing constraints</p>	<p>AC9TDI10P12 use simple project management tools to plan and manage individual and collaborative agile projects, accounting for risks and responsibilities</p>
<p>Design alternative solutions considering available technologies, functionality, accessibility, usability and aesthetics, using appropriate technical terms</p>	<p>AC9TDI10P13 develop cyber security threat models, and explore a software, user or software supply chain vulnerability</p>
<p>Select, justify, implement and test a range of technologies, techniques and processes to produce solutions and/or prototypes</p>	<p>AC9TDI10P14 apply the Australian Privacy Principles to critique and manage the digital footprint that existing systems and student solutions collect</p>
<p>Evaluate design processes and solutions against student-developed criteria</p>	



# Curriculum comparison

Year 10

Western Australian Curriculum	Australian Curriculum
Achievement Standards	Achievement Standards
<p><b>By the end of the year:</b> Students describe the role of hardware and software when used to manage, control and secure access to data, in networked digital systems with a focus on software supply chain vulnerabilities. They represent documents online as content (text), structure (mark-up) and presentation (styling) and explain the purpose of these distinctions. Students analyse and visualise data interactively using a range of software, including spreadsheets and relational databases, to draw conclusions and make predictions based on identifying trends and explain outliers. They model and query entities and relationships using structured data. Students apply the Australian Privacy Principles to critique systems and manage the digital footprint of individuals. Students define and decompose real-world problems and use data gathering techniques to create user experiences and user interface. They design and prototype the user experience of a digital system and algorithms involving functions, modules and logical operators and represent them as flowcharts and/or pseudocode. Students validate algorithms and programs by comparing their output against a range of test cases. They implement, modify and debug modular programs, applying algorithms and data structures, in a programming language.</p> <p>In Digital Technologies, students identify the needs of the client/stakeholder to determine the basis for a solution. They develop and critique design briefs for a designed solution. Students investigate components/resources to develop increasingly sophisticated solutions, identifying and considering associated constraints. They apply design thinking, creativity, enterprise skills and innovation to develop, modify and communicate detailed design ideas. Students design possible solutions, analysing designs against criteria, including functionality, accessibility, usability and aesthetics, using appropriate technical terms and technologies. They select, justify, implement and test appropriate technologies and processes to produce designed solutions. Students provide an analysis of design processes and solutions against student-developed criteria. They manage projects, using digital technologies with an agile and collaborative approach whilst considering time, production processes, social, ethical, economic and sustainable factors, and legal responsibilities.</p>	<p>By the end of Year 10 students develop and modify innovative digital solutions, decompose real-world problems, and critically evaluate alternative solutions against stakeholder elicited user stories. Students acquire, interpret and model complex data with databases and represent documents as content, structure and presentation. They design and validate algorithms and implement them, including in an object-oriented programming language. Students explain how digital systems manage, control and secure access to data; and model cyber security threats and explore a vulnerability. They use advanced features of digital tools to create interactive content, and to plan, collaborate on, and manage agile projects. Students apply privacy principles to manage digital footprints.</p>