



Western Australian Curriculum

Technologies | Digital Technologies

Proposed Achievement Standards | Pre-primary–Year 10

Draft for consultation | Not for implementation

Acknowledgement of Country

Kaya. The School Curriculum and Standards Authority (the Authority) acknowledges that our offices are on Whadjuk Noongar boodjar and that we deliver our services on the country of many traditional custodians and language groups throughout Western Australia. The Authority acknowledges the traditional custodians throughout Western Australia and their continuing connection to land, waters and community. We offer our respect to Elders past and present.

Copyright

© School Curriculum and Standards Authority, 2023

This document – apart from any third-party copyright material contained in it – may be freely copied, or communicated on an intranet, for non-commercial purposes in educational institutions, provided that the School Curriculum and Standards Authority (the Authority) is acknowledged as the copyright owner, and that the Authority's moral rights are not infringed.

Copying or communication for any other purpose can be done only within the terms of the *Copyright Act 1968* or with prior written permission of the Authority. Copying or communication of any third-party copyright material can be done only within the terms of the *Copyright Act 1968* or with permission of the copyright owners.

Any content in this document that has been derived from the Australian Curriculum may be used under the terms of the [Creative Commons Attribution 4.0 International licence](#).

Disclaimer

Any resources such as texts, websites and so on that may be referred to in this document are provided as examples of resources that teachers can use to support their learning programs. Their inclusion does not imply that they are mandatory or that they are the only resources relevant to the course. Teachers must exercise their professional judgement as to the appropriateness of any they may wish to use.

Contents

Overview	1
Pre-primary	2
Year 1.....	3
Year 2.....	4
Year 3.....	5
Year 4.....	7
Year 5.....	9
Year 6.....	11
Year 7.....	13
Year 8.....	15
Year 9.....	17
Year 10.....	19

Overview

The current Western Australian Curriculum: Technologies was adopted from the Australian Curriculum version 8.4.

Western Australia provided feedback to the Australian Curriculum, Assessment and Reporting Authority (ACARA) during the consultation for the Australian Curriculum.

The proposed revisions to the Western Australian Curriculum: Technologies are adopted and adapted from the Australian Curriculum version 9.

Guide to reading this document

This document shows the current Western Australian Curriculum: Technologies curriculum Achievement Standards in the first column, the comparable Australian Curriculum version 9 Achievement Standards in the centre column, and the proposed revised Achievement Standards for the Western Australian Curriculum in the third column.

Pre-primary

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students label digital systems (hardware and software) and where they are used. They represent data using pictures, symbols and patterns. Students follow safety strategies while they collect and use information from an online source.</p> <p>In Digital Technologies, students explore needs for designing simple solutions. They generate and record design ideas through describing, drawing, modelling and/or a sequence of written or spoken steps. Students safely use given components and equipment, to make simple solutions and evaluate their success using personal preferences.</p>	<p>By the end of Foundation students identify familiar products, services and environments and develop familiarity with digital systems, using them for a purpose. They create, communicate and choose design ideas. Students follow steps and use materials and equipment to safely make a designed solution for a school-selected context. They show how to represent data using objects, pictures and symbols and identify examples of data that is owned by them.</p> <p>Subject achievement standard</p> <p>By the end of Foundation students show familiarity with digital systems and use them for a purpose. They represent data using objects, pictures and symbols and identify examples of data that is owned by them.</p>	<p>By the end of year, children identify digital systems (hardware and software), where they are used and their common features. They identify that data can be represented as objects or pictures. Children follow safety strategies in online encounters. They identify that some data is personal and owned by them and the importance of keeping personal data safe.</p> <p>Children follow an algorithm (sequence of steps) to achieve an outcome and begin to understand computational thinking through sequence.</p> <p>In Digital Technologies, children explore needs for design, and they develop, create and evaluate designed solutions.</p>

Year 1

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students identify specific features of digital systems (hardware and software) and where they are used in everyday life. They represent data using pictures, symbols and diagrams. Students follow strategies to stay safe online while they select and use a variety of digital tools to present information in an online environment.</p> <p>In Digital Technologies, students explore opportunities when designing products or solutions. They develop and communicate design ideas through describing, drawing, modelling and/or a sequence of written or spoken steps. Students use given components and equipment and work safely to make solutions. They develop personal preferences to evaluate the success of design processes. Students work independently, or with others, to safely create and share sequenced steps for solutions.</p>	<p>By the end of Year 2 students describe the purpose of familiar products, services and environments, including digital systems. They represent and process data in different ways and follow and describe basic algorithms involving a sequence of steps and branching to show how simple digital solutions meet a need for known users. For each of the 2 prescribed technologies contexts they identify the features and uses of technologies and create designed solutions. Students select design ideas based on their personal preferences. They access and use the basic features of common digital tools to create, locate and share content, and collaborate and communicate design ideas using models and drawings. Students safely produce designed or digital solutions and recognise that digital tools may store their personal data online.</p> <p>Subject achievement standard</p> <p>By the end of Year 2 students show how simple digital solutions meet a need for known users. Students represent and process data in different ways. They follow and describe basic algorithms involving a sequence of steps and branching. With assistance, students access and use digital systems for a purpose. They use the basic features of common digital tools to create, locate and share content, and to collaborate, following agreed behaviours. Students recognise that digital tools may store their personal data online.</p>	<p>By the end of year, children identify specific features of digital systems (hardware and software) and where they are used in everyday life. They represent data using pictures, symbols, numbers and words. Children follow strategies to stay safe online, while including identifying data that is personal and can be shared with trusted people.</p> <p>In Digital Technologies, children explore opportunities when designing products or solutions. They follow a visual representation of a sequence of steps. Children develop personal preferences and evaluate the success of a solution for a personal need through discussion following models, diagrams and/or a sequence of steps to plan and create solutions for a personal need.</p>

Year 2

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students use digital systems for a specific purpose making connections between software and hardware. They identify patterns within data to make simple conclusions. Students select, present and use data using a variety of digital tools in an online environment.</p> <p>In Digital Technologies, students explore design to meet needs or opportunities. They develop, communicate and discuss design ideas through describing, drawing, modelling and/or sequenced steps. Students use components and given equipment to safely make solutions. They use simple criteria to evaluate the success of design processes and solutions. Students work independently, or collaboratively, to organise information and ideas to safely create and share sequenced steps for solutions.</p>	<p>By the end of Year 2 students describe the purpose of familiar products, services and environments, including digital systems. They represent and process data in different ways and follow and describe basic algorithms involving a sequence of steps and branching to show how simple digital solutions meet a need for known users. For each of the 2 prescribed technologies contexts they identify the features and uses of technologies and create designed solutions. Students select design ideas based on their personal preferences. They access and use the basic features of common digital tools to create, locate and share content, and collaborate and communicate design ideas using models and drawings. Students safely produce designed or digital solutions and recognise that digital tools may store their personal data online.</p> <p>Subject achievement standard</p> <p>By the end of Year 2 students show how simple digital solutions meet a need for known users. Students represent and process data in different ways. They follow and describe basic algorithms involving a sequence of steps and branching. With assistance, students access and use digital systems for a purpose. They use the basic features of common digital tools to create, locate and share content, and to collaborate, following agreed behaviours. Students recognise that digital tools may store their personal data online.</p>	<p>By the end of the year, children use digital systems for a specific purpose, making connections between software and hardware for an identified purpose. They identify patterns within data and recognise that data can be represented by diagrams, symbols, numbers and words. Children independently access their school account with a recorded username and password and log out afterwards. Children recognise that websites and apps store personal data and ways to stay safe.</p> <p>In Digital Technologies, children explore design to meet needs or opportunities. They develop, follow and describe algorithms (sequence of steps) and decisions made by the user (branching). They use components and given equipment to safely make solutions. Children evaluate the success of design ideas and solutions based on the needs of known users.</p>

Year 3

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students explore and recognise some differences and the purpose of digital systems and peripheral devices and present data in a variety of ways. Students develop ideas with sequenced steps (algorithms) and branching, using simple software to collect and present data. They work with others to create and communicate ideas and information.</p> <p>In Digital Technologies, students create sequenced steps (algorithms) to solve a given digital task. They develop and communicate ideas using labelled drawings and appropriate technical terms. Students select and safely use appropriate components with given equipment to make a solution. They use criteria to evaluate design processes and solutions developed. Students work independently, or collaboratively, to plan, safely create and communicate sequenced steps.</p>	<p>By the end of Year 4 students describe how people design products, services and environments to meet the needs of people, including sustainability. They process and represent data for different purposes, follow and describe simple algorithms involving branching and iteration, and implement them as visual programs. For each of the 2 prescribed technologies contexts they describe the features and uses of technologies and create designed solutions. Students select design ideas against design criteria. Students securely access and use digital systems and their peripherals for a range of purposes, including transmitting data. They communicate design ideas using models and drawings including annotations and symbols. Students plan and sequence steps and use technologies and techniques to safely produce designed solutions. They use the core features of common digital tools to plan, create, locate and share content, and to collaborate, following agreed behaviours. Students identify their personal data stored online and its risks.</p> <p>Subject achievement standard</p> <p>By the end of Year 4 students create simple digital solutions and use provided design criteria to check if solutions meet user needs. Students process and represent data for different purposes. They follow</p>	<p>By the end of the year, students identify peripheral devices and their purpose, and identify data is of different types and can be represented in different ways. They communicate ideas and information. Students identify different types of personal data stored online.</p> <p>In Digital Technologies, students create, design and implement algorithms (sequence of steps) in a visual programming environment to include decisions made by the user (branching) to solve a given digital task. They develop and communicate ideas using labelled drawings and technical terms. Students select and safely use appropriate components with given equipment to create a solution. They use criteria to evaluate developed design processes and solutions. Students design and communicate solutions, follow a plan, with consideration of time management.</p>

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
	<p>and describe simple algorithms involving branching and iteration and implement them as visual programs. Students securely access and use digital systems and their peripherals for a range of purposes, including transmitting data. They use the core features of common digital tools to plan, create, locate and share content, and to collaborate, following agreed behaviours. Students identify their personal data stored online and recognise the risks.</p>	

DRAFT

Year 4

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students identify different purposes for digital systems and peripheral devices, recognising they can store and transmit a variety of data. They use simple visual programming, including a sequence of steps (algorithms) and branching, students represent data in a range of ways. They create and communicate ideas and information and use software to collect and represent different types of data, using agreed protocols (netiquette).</p> <p>In Digital Technologies, students use algorithms (sequenced steps) to design a solution for a given digital task. They identify and choose the appropriate resources from a given set. Students develop and communicate design ideas and decisions, using annotated drawings and appropriate technical terms. They select and safely use appropriate components and equipment to make solutions. Students use criteria to evaluate and justify simple design processes and solutions for a given digital task. They work independently, or collaboratively, to plan, safely create and communicate ideas and information for solutions.</p>	<p>By the end of Year 4 students describe how people design products, services and environments to meet the needs of people, including sustainability. They process and represent data for different purposes, follow and describe simple algorithms involving branching and iteration, and implement them as visual programs. For each of the 2 prescribed technologies contexts they describe the features and uses of technologies and create designed solutions. Students select design ideas against design criteria. Students securely access and use digital systems and their peripherals for a range of purposes, including transmitting data. They communicate design ideas using models and drawings including annotations and symbols. Students plan and sequence steps and use technologies and techniques to safely produce designed solutions. They use the core features of common digital tools to plan, create, locate and share content, and to collaborate, following agreed behaviours. Students identify their personal data stored online and its risks.</p> <p>Subject achievement standard</p> <p>By the end of Year 4 students create simple digital solutions and use provided design criteria to check if solutions meet user needs. Students process and represent data for different purposes. They follow</p>	<p>By the end of the year, students identify purposes for digital systems hardware components and peripheral devices. They design and implement algorithms (sequence of steps) in a visual programming environment that involve decisions (branching) and repetition. They create and communicate ideas and information and use software to collect and represent different types of data, using agreed protocols. Students identify their personal data stored online and recognise the risks.</p> <p>In Digital Technologies, students identify and select resources from a given set. Students develop and communicate design ideas and decisions, using labelled drawings and technical terms. They select and safely use appropriate components and equipment to make designed solutions. Students use given criteria to evaluate design processes and solutions for a given digital task. They use agreed conventions and management roles to plan, make decisions and communicate ideas for solutions for a given task.</p>

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
	<p>and describe simple algorithms involving branching and iteration and implement them as visual programs. Students securely access and use digital systems and their peripherals for a range of purposes, including transmitting data. They use the core features of common digital tools to plan, create, locate and share content, and to collaborate, following agreed behaviours. Students identify their personal data stored online and recognise the risks.</p>	

DRAFT

Year 5

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students identify components of digital systems and their basic functions that connect to form networks which transmit data. They represent data using code, as well as using software to collect, store and present data for a specific purpose. Students create design solutions for a user interface and design, follow and represent diagrammatically, a simple sequence of steps (algorithms), involving branching (decisions) and iteration (repetition), implementing and using simple programming. They create and communicate information for online collaborative projects, using agreed social, ethical and technical protocols (codes of conduct).</p> <p>In Digital Technologies, students define a problem, identify available resources and create algorithms (sequenced steps) to assist in decision making for a given digital task. They develop and communicate alternative solutions, and use annotated diagrams, storyboards and appropriate technical terms when following design ideas. Students select and apply safe procedures when using components and equipment. They develop negotiated criteria to evaluate and justify design processes and solutions. Students work independently, or collaboratively, to plan, safely develop and communicate ideas and information.</p>	<p>By the end of Year 6 students explain how people design products, services and environments to meet the needs of communities, including sustainability. For each of the 3 prescribed technologies contexts students explain how the features of technologies impact on design decisions and they create designed solutions. They process data and show how digital systems represent data, design algorithms involving complex branching and iteration, and implement them as visual programs including variables. They select and justify design ideas and solutions against design criteria. Students share and communicate ideas or content to an audience using technical terms, graphical representation techniques and appropriate digital tools. They develop project plans, including production processes, and select technologies and techniques to safely produce designed or digital solutions. Students securely access and use multiple digital systems and describe their components and how they interact to process and transmit data. They identify their digital footprint and recognise its permanence.</p> <p>Subject achievement standard</p> <p>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</p>	<p>By the end of the year, students identify internal components of digital systems and their functions. Students create design solutions for a user interface and design, follow and represent diagrammatically a simple sequence of steps (algorithms) involving user input, variables and control structures, such as sequencing, decisions and repetition. They implement algorithms using visual programming. Students identify and make judgements based on the trustworthiness of websites that store personal data.</p> <p>In Digital Technologies, students define a problem, identify available resources and create algorithms to assist in decision-making for a given digital task. They develop and communicate alternative solutions, and use annotated diagrams, storyboards and appropriate technical terms for design ideas. Students select and apply safe procedures when using components and equipment. They access multiple personal accounts using unique passphrases and explain the risks of password re-use and not logging out.</p>

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
	<p>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.</p>	

DRAFT

Year 6

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students outline interactions between components and basic functions within digital systems and how they transmit different types of data to form networks. They make a connection between whole numbers being used to represent data within a digital system. They use software to collect, sort, interpret, visually present and manipulate data for a range of purposes. Students use simple visual programming environments to design, modify, follow and represent both diagrammatically, and in written text, algorithms (sequence of steps), involving branching (decisions), iteration (repetition) and consider user input. Students manage, create and communicate information for online collaborative projects, using agreed social, ethical and technical protocols.</p> <p>In Digital Technologies, students identify available resources to design a solution for a given digital task, outlining problem-solving decisions, using algorithms (sequenced steps). Students develop alternative solutions by designing, modifying and following both diagrammatically and in written text, using a range of appropriate technical terms, technologies and techniques. They select and apply safe procedures when using a variety of components and equipment to make solutions. Students develop criteria collaboratively to evaluate and justify design</p>	<p>By the end of Year 6 students explain how people design products, services and environments to meet the needs of communities, including sustainability. For each of the 3 prescribed technologies contexts students explain how the features of technologies impact on design decisions and they create designed solutions. They process data and show how digital systems represent data, design algorithms involving complex branching and iteration, and implement them as visual programs including variables. They select and justify design ideas and solutions against design criteria. Students share and communicate ideas or content to an audience using technical terms, graphical representation techniques and appropriate digital tools. They develop project plans, including production processes, and select technologies and techniques to safely produce designed or digital solutions. Students securely access and use multiple digital systems and describe their components and how they interact to process and transmit data. They identify their digital footprint and recognise its permanence.</p> <p>Subject achievement standard</p> <p>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</p>	<p>By the end of the year, students outline interactions between wired and wireless networks to transmit data for a variety of purposes. They explain how data can be represented by off and on states (zeros and ones in binary) and make simple conversions.</p> <p>Students use visual programming environments to design, modify and create algorithms that involve user input, variables and control structures, such as sequencing, decisions and various types of iteration. They identify their digital footprint and recognise its permanence.</p> <p>In Digital Technologies, students identify available resources to design a solution for a given digital task, outlining problem-solving decisions. They develop, design and compare alternative solutions that are achieved through an iterative process including decision-making, graphical representations, use of a range of technologies, techniques, technical terms and/or a sequence of steps. Students select and apply safe procedures when using a variety of components and equipment to make solutions. They use agreed conventions to set goals, manage competing factors, resources and time, to plan, develop, communicate ideas and solutions for a given task.</p>

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>processes and solutions. They work independently, or collaboratively, considering resources and safety to plan, develop and communicate ideas and information for solutions.</p>	<p>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.</p>	

DRAFT

Year 7

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<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 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.</p> <p>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 and information, when using management processes.</p>	<p>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>By the end of the year, students identify different types of networks, including wired, wireless and mobile networks and the hardware components. They identify ways digital systems represent data in 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 and correct terminology to implement, modify, and debug programs.</p> <p>In Digital Technologies, students plan, develop and communicate solutions, using project management processes, 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. Students implement agreed protocols when using a range of technologies, components and/or equipment to produce designed solutions.</p>

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
	<p>Subject achievement standard</p> <p>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>	

Year 8

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<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.</p> <p>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</p>	<p>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>By the end of the year, students describe methods of data transmission and security in wired, wireless and mobile networks, identify specifications of hardware components and outline apparent 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 identifiable 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 and functions 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 evaluate and apply a given brief, using examples. 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 develop sequenced steps to</p>

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>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>	<p>Subject achievement standard</p> <p>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>	<p>produce a 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 plan, develop and communicate, using project management processes, considering time, resources and costs to achieve solutions.</p>

Year 9

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students identify the role of hardware and software have in managing, controlling and securing the movement of data in digital systems. They identify different methods used for manipulation, storage and transmission of data. Students explore techniques for acquiring, storing and validating quantitative and qualitative data. They analyse and visualise data to create information and address complex problems. Students create a design for the user experience of a digital system supported by drafts with annotations. They design algorithms, represented diagrammatically and in structured English, and validate plans and programs through tracing. Students implement and apply data storage and organisation techniques. They create and use interactive solutions for sharing ideas and information online, taking into account social contexts.</p> <p>In Digital Technologies, students identify and define the needs of a stakeholder to create a brief for a solution. They investigate a selection of components/resources to develop ideas, identifying and considering constraints. Students apply design thinking, creativity and enterprise skills. They provide design solutions assessing alternative designs against given criteria, using appropriate technical terms and technology. Students select, test and safely implement appropriate</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>	<p>By the end of the year, students identify the role hardware and software have in securing the movement of data in digital systems. 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, with design criteria and by interviewing stakeholders, to create 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 modular programs in a programming language and trace algorithms to predict output against a range of test cases.</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 selection of components/resources to develop ideas, identifying and considering constraints. Students apply design thinking, creativity and enterprise skills. They provide design solutions assessing alternative designs against given criteria, using appropriate technical terms and technology. Students select, test and safely implement appropriate technologies and processes to produce</p>

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>technologies and processes to make solutions. They evaluate design processes against student-developed criteria. Students work independently and collaboratively to manage projects, using digital technology and an iterative and collaborative approach. They consider time, cost, risk and safety.</p>		<p>solutions. They evaluate design processes against student developed criteria. Students manage projects using digital technologies through an agile, iterative and collaborative approach, and consider time, risk, economic and sustainable factors.</p>

DRAFT

Year 10

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>At Standard, students describe the role of hardware and software in managing, controlling and securing access to data, in networked digital systems. They describe the process of simple compression of data and how content data is separated from presentation data. Students apply techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, and consider privacy and security requirements. They analyse, visualise and model processes and entities, and their relationships, using structured data. Students create a design for algorithms represented diagrammatically and in structured English, including iteration. They validate algorithms and programs, using commonly accepted methods. Students implement data storage and organisation techniques within a programming environment. They create interactive solutions for sharing ideas and information online, taking into account social contexts and legal responsibilities.</p> <p>In Digital Technologies, students identify the needs of the client/stakeholder to determine the basis for a solution. They create and critique briefs. Students investigate components/resources to develop increasingly sophisticated solutions, identifying and considering associated constraints. They apply design thinking, creativity, enterprise skills and innovation to</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>	<p>By the end of the year, students consider the role of hardware and software in managing, controlling and securing access to data, in networked digital systems with a focus on cyber security threat models. They represent documents online as content (text), structure (mark-up) and presentation (styling) and 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 outliers. They model and query entities and relationships using structured data.</p> <p>Students define and decompose real world problems with design criteria and use data gathering techniques to create user experiences. 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 create and critique briefs. Students</p>

Current WA Curriculum	Australian Curriculum v9	Proposed WA Curriculum
<p>develop, modify and communicate design ideas of increasing sophistication. Students design possible solutions, analysing designs against criteria, including functionality, accessibility, usability and aesthetics, using appropriate technical terms and technology. They select, justify and safely implement and test appropriate technologies and processes to make solutions. Students provide relevant analysis of design processes and solutions against student-developed criteria. They work independently, and collaboratively to manage projects, using digital technology and an iterative and collaborative approach. Students consider time, cost, risk, safety, production processes, sustainability and legal responsibilities.</p>	<p></p>	<p>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 and safely implement and test appropriate technologies and processes to produce designed solutions. Students provide relevant analysis of design processes and solutions against student developed criteria. They manage projects, using digital technology through an agile and collaborative approach. Students consider time, production processes, social, ethical, economic and sustainable factors, and legal responsibilities to manage projects.</p>