



Curriculum comparison

Years 7 and 8

Victorian Curriculum 2.0	Victorian Curriculum
Digital Systems and security	Digital Systems
<p>explain how hardware specifications affect performance and select appropriate hardware for particular tasks and workloads VC2TDI8S01</p>	<p>Investigate how data are transmitted and secured in wired, wireless and mobile networks (VCDTDS035)</p>
<p>investigate how data is transmitted and secured in wired and wireless networks including the internet VC2TDI8S02</p>	
<p>explain how multi-factor authentication protects an account when the password is compromised and identify phishing and other cyber security threats VC2TDI8S03</p>	
Data, information and privacy	Data and information
<p>investigate how digital systems represent text, image and audio data using integers and binary VC2TDI8D01</p>	<p>Investigate how digital systems represent text, image and sound data in binary (VCDTDI036)</p>
<p>acquire, store, manipulate and validate data from a range of sources using software tools, including spreadsheets and single-table databases VC2TDI8D02</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, including spreadsheets and simple database queries, draw conclusions and make predictions by identifying trends VC2TDI8D03</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>
<p>select and use a range of digital tools effectively, including unfamiliar features, to create, locate and communicate content, consistently applying common conventions for a diverse audience VC2TDI8D04</p>	<p>Manage, create and communicate interactive ideas, information and projects collaboratively online, taking safety and social contexts into account (VCDTDI039)</p>
<p>select and use a range of digital tools effectively and responsibly to share content online, and plan and manage individual and collaborative iterative projects VC2TDI8D05</p>	
<p>investigate and manage the digital footprint that existing systems and student solutions collect, and assess if the data is essential to their purpose VC2TDI8D06</p>	



Curriculum comparison

Years 7 and 8

Creating Digital Solutions	Creating Digital Solutions
define and decompose real-world problems by taking into account functional requirements and constraints VC2TDI8C01	Define and decompose real-world problems taking into account functional requirements and sustainability (economic, environmental, social), technical and usability constraints (VCDTCD040)
design algorithms involving nested control structures and represent them using flowcharts and pseudocode, and use tracing techniques to test and identify errors VC2TDI8C02	Design the user experience of a digital system, generating, evaluating and communicating alternative designs (VCDTCD041)
design and modify the user interface and user experience of a digital system; generate, communicate and evaluate the alternative designs VC2TDI8C03	Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (VCDTCD042)
implement, modify and debug programs involving control structures and functions in a general-purpose programming language VC2TDI8C04	Develop and modify programs with user interfaces involving branching, iteration and functions using a general-purpose programming language (VCDTCD043)
evaluate existing and student-created solutions against the requirements, constraints and possible future impacts VC2TDI8C05	Evaluate how well student-developed solutions and existing information systems meet needs, are innovative and take account of future risks and sustainability (VCDTCD044)

Achievement Standards	Achievement Standards
<p>By the end of Level 8, students select appropriate hardware for particular tasks. They explain how data is transmitted and secured in networks. Students identify and describe cyber security threats.</p> <p>Students represent data using integers and binary. They acquire, manipulate and validate data using spreadsheets and single-table databases. Students interpret, model and visualise data using spreadsheets and database queries to draw conclusions. They select and use a range of digital tools to create, locate and communicate content, applying common conventions. Students use a range of digital tools to plan tasks, share content online, and manage individual and collaborative iterative projects. They manage their digital footprint and privacy when collecting data.</p> <p>Students define and decompose real-world problems, and determine functional requirements and constraints. They design and trace algorithms using flowcharts and pseudocode. Students design and modify user interfaces and user experiences, and evaluate alternative designs. They implement algorithms and debug programs using a general-purpose programming language. Students evaluate digital solutions against the functional requirements.</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>



Curriculum comparison

Years 9 and 10

Victorian Curriculum 2.0	Victorian Curriculum
Digital Systems and security	Digital Systems
investigate how hardware and software manage, control and secure access to data in networked digital systems VC2TDI10S01	Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems (VCDTDS045)
develop cyber security threat models, and explore a software, user or software supply chain vulnerability VC2TDI10S02	
Data, information and privacy	Data and information
investigate simple data compression techniques VC2TDI10D01	Analyse simple compression of data and how content data are separated from presentation (VCDTDI046)
represent documents online as content (text), structure (markup) and presentation (styling) and explain why such representations are important VC2TDI10D02	Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements (VCDTDI047)
develop techniques to acquire, store, manipulate and validate data from a range of sources using software tools, including spreadsheets and relational databases VC2TDI10D03	Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data (VCDTDI048)
analyse and visualise data interactively using a range of software, including spreadsheets and relational databases and queries, to draw conclusions and make predictions by identifying trends and outliers VC2TDI10D04	Manage and collaboratively create interactive solutions for sharing ideas and information online, taking into account social contexts and legal responsibilities (VCDTDI049)
select and use emerging digital tools and advanced features to create and communicate interactive content for a diverse audience VC2TDI10D05	
use simple project management tools to plan and manage individual and collaborative iterative projects, accounting for risks and responsibilities VC2TDI10D06	
apply the Australian Privacy Principles to critique and manage the digital footprint that existing systems and student solutions collect VC2TDI10D07	



Curriculum comparison

Years 9 and 10

Creating Digital Solutions	Creating Digital Solutions
define and decompose real-world problems, taking into account functional and non-functional requirements and by interviewing and surveying stakeholders to identify needs VC2TDI10C01	Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs (VCDTCD050)
design algorithms involving logical operators and represent them as flowcharts and pseudocode, and validate algorithms and programs by comparing their output against a range of test cases VC2TDI10C02	Design the user experience of a digital system, evaluating alternative designs against criteria including functionality, accessibility, usability and aesthetics (VCDTCD051)
design, modify and prototype the user interface and user experience of a digital system; generate, communicate and critically evaluate alternative designs against design criteria VC2TDI10C03	Design algorithms represented diagrammatically and in structured English and validate algorithms and programs through tracing and test cases (VCDTCD052)
implement, modify and debug modular programs, applying selected algorithms and data structures, including in an object-oriented programming language VC2TDI10C04	Develop modular programs, applying selected algorithms and data structures including using an object-oriented programming language (VCDTCD053)
evaluate existing and student-created solutions against the requirements and design criteria, user needs, possible future impact and opportunities for enterprise and innovation VC2TDI10C05	Evaluate critically how well student-developed solutions and existing information systems and policies take account of future risks and sustainability and provide opportunities for innovation (VCDTCD054)

Achievement Standards	Achievement Standards
<p>By the end of Level 10, students explain how digital systems manage, control and secure access to data in networks. They model and evaluate cyber security threats and vulnerabilities. Students describe a range of data compression techniques. They represent documents as content, structure and markup. Students acquire, manipulate and validate data using spreadsheets and relational databases. They interpret, model and visualise data using spreadsheets, and relational databases using queries, to draw conclusions and identify trends. Students use advanced features of digital tools to create and communicate interactive content for an audience. They use project management tools to plan and manage individual and collaborative iterative projects. Students identify and apply privacy principles to manage digital footprints. Students decompose real-world problems, identify needs, and determine functional and non-functional requirements. They design, validate and test algorithms using flowcharts and pseudocode. Students design and prototype user interfaces and user experiences, and evaluate alternative designs against design criteria. They implement algorithms and debug programs using an object-oriented programming language. Students critically evaluate digital solutions against user needs and the functional and non-functional requirements.</p>	<p>By the end of Level 10, students explain the control and management of networked digital systems and the data security implications of the interaction between hardware, software and users. Students explain simple data compression, and why content data are separated from presentation. They take account of privacy and security requirements when selecting and validating data and use digital systems to analyse, visualise and model salient aspects of data. Students share and collaborate online, establishing protocols for the legal and safe use, transmission and maintenance of data and projects. Students define and decompose complex problems in terms of functional and non-functional requirements. They design and evaluate user experiences and algorithms, and develop and test modular programs, including an object-oriented program. Students evaluate their solutions and information systems in terms of risk, sustainability and potential for innovation.</p>