Digital Technologies: Sequence of content F-10 Digital Technologies *Strand Knowledge and understanding*

	F	1–2	3–4	5–6	7–8	9–10
Digital Systems	recognise & explore digital systems (hardware & software) for a purpose **AC9TDIFK01**	identify & explore digital systems & their components for a purpose **AC9TDI2K01**	explore & describe a range of digital systems & their peripherals for a variety of purposes **AC9TDI4K01** explore transmitting different types of data between digital systems **AC9TDI4K02**	investigate the main internal components of common digital systems & their function **AC9TDI6K01** examine how digital systems form networks to transmit data **AC9TDI6K02**	explain how hardware specifications affect performance & select appropriate hardware for tasks & workloads **AC9TDI8K01** investigate how data is transmitted & secured in wired & wireless networks including the internet **AC9TDI8K02**	investigate how hardware & software manage, control & secure access to data in networked digital systems **AC9TDI10K01**
Data representation	represent data as objects, pictures & symbols **AC9TDIFK02**	represent data as pictures, symbols, numbers & words **AC9TDI2K02**	recognise different types of data & explore how the same data can be represented differently depending on the purpose **AC9TDI4K03**	explain how digital systems represent all data using numbers **AC9TDI6K03** explore how data can be represented by off & on states (zeros & ones in binary) **AC9TDI6K04**	investigate how digital systems represent text, image & audio data using integers **AC9TDI8K03** explain how & why digital systems represent integers in binary **AC9TDI8K04**	represent documents online as content (text), structure (markup) & presentation (styling) & explain why such representations are important **AC9TDI10K02** investigate simple data compression techniques **AC9TDI10K03**

Digital Technologies: Sequence of Content F–10 *Strand Processes and production skills*

	F	1–2	3–4	5–6	7–8	9–10
Acquiring, managing and analysing data					acquire, store & validate data from a range of sources using software, including spreadsheets & databases **AC9TDI8P01** analyse & visualise data using a range of software, including spreadsheets & databases, to draw conclusions & make predictions by identifying trends **AC9TDI8P02** model & query the attributes of objects & events using structured data **AC9TDI8P03**	develop techniques to acquire, store and validate data from a range of sources using software, including spreadsheets and databases **AC9TDI10P01** 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 **AC9TDI10P02** model & query entities & their relationships using structured data **AC9TDI10P03**
Investigating and defining		investigate simple problems for known users that can be solved with digital systems **AC9TDI2P01**	define problems with given design criteria & by co-creating user stories **AC9TDI4P01**	define problems with given or co-developed design criteria & by creating user stories **AC9TDI6P01**	define & decompose real-world problems with design criteria & by creating user stories **AC9TDI8P04**	define & decompose real-world problems with design criteria & by interviewing stakeholders to create user stories **AC9TDI10P04**

	F	1–2	3–4	5–6	7–8	9–10
Generating and designing		follow & describe algorithms involving a sequence of steps, branching (decisions) & iteration (repetition) **AC9TDI2P02**	follow & describe algorithms involving sequencing, comparison operators (branching) & iteration **AC9TDI4P02** generate, communicate & compare designs **AC9TDI4P03**	algorithms design involving multiple alternatives (branching) & iteration **AC9TDI6P02** design a user interface for a digital system **AC9TDI6P03** generate, modify, communicate & evaluate designs **AC9TDI6P04**	design algorithms involving nested control structures & represent them using flowcharts & pseudocode **AC9TDI8P05** trace algorithms to predict output for a given input & to identify errors **AC9TDI8P06** design the user experience of a digital system **AC9TDI8P07** generate, modify, communicate & evaluate alternative designs **AC9TDI8P08**	design algorithms involving logical operators & represent them as flowcharts & pseudocode **AC9TDI10P05** validate algorithms & programs by comparing their output against a range of test cases **AC9TDI10P06** design & prototype the user experience of a digital system **AC9TDI10P07** generate, modify, communicate & critically evaluate alternative designs **AC9TDI10P08**
Producing and implementing			implement simple algorithms as visual programs involving control structures & input **AC9TDI4P04**	implement algorithms as visual programs involving control structures, variables & input **AC9TDI6P05**	implement, modify & debug programs involving control structures & functions in a general-purpose programming language **AC9TDI8P09**	implement, modify & debug modular programs, applying selected algorithms & data structures, including in an object-oriented programming language **AC9TDI10P09**
Evaluating		discuss how existing digital systems satisfy identified needs for known users **AC9TDI2P03**	discuss how existing & student solutions satisfy the design criteria & user stories **AC9TDI4P05**	evaluate existing & student solutions against the design criteria & user stories & their broader community impact A**C9TDI6P06**	evaluate existing & student solutions against the design criteria, user stories & possible future impact A**C9TDI8P10**	evaluate existing & student solutions against the design criteria, user stories, possible future impact & opportunities for enterprise **AC9TDI10P10**

	F	1–2	3–4	5–6	7–8	9–10
Collaborating and managing		use the basic features of common digital tools to create, locate and communicate content **AC9TDI2P04** use the basic features of common digital tools to share content & collaborate demonstrating agreed behaviours, guided by trusted adults **AC9TDI2P05**	use the core features of common digital tools to create, locate & communicate content, following agreed conventions **AC9TDI4P06** use the core features of common digital tools to share content, plan tasks, & collaborate, following agreed behaviours, supported by trusted adults **AC9TDI4P07**	select & use appropriate digital tools effectively to create, locate & communicate content, applying common conventions **AC9TDI6P07** select & use appropriate digital tools effectively to share content online, plan tasks & collaborate on projects, demonstrating agreed behaviours **AC9TDI6P08**	select & use a range of digital tools efficiently, including unfamiliar features, to create, locate & communicate content, consistently applying common conventions **AC9TDI8P11** select & use a range of digital tools efficiently & responsibly to share content online, & plan & manage individual & collaborative agile projects **AC9TDI8P12**	select & use emerging digital tools & advanced features to create & communicate interactive content for a diverse audience **AC9TDI10P11** use simple project management tools to plan & manage individual & collaborative agile projects, accounting for risks & responsibilities **AC9TDI10P12**
Privacy and security	identify some data that is personal & owned by them **AC9TDIFP01**	access their school account with a recorded username and password **AC9TDI2P06** discuss that some websites & apps store their personal data online **AC9TDI2P07**	access their school account using a memorised password & explain why it should be easy to remember, but hard for others to guess **AC9TDI4P08** identify what personal data is stored & shared in their online accounts & discuss any associated risks **AC9TDI4P09**	access multiple personal accounts using unique passphrases & explain the risks of password re-use **AC9TDI6P09** explain the creation & permanence of their digital footprint & consider privacy when collecting user data **AC9TDI6P10**	explain how multi-factor authentication protects an account when the password is compromised & identify phishing & other cyber security threats **AC9TDI8P13** investigate & manage the digital footprint existing systems & student solutions collect, & assess if the data is essential to their purpose **AC9TDI8P14**	develop cyber security threat models, & explore a software, user or software supply chain vulnerability **AC9TDI10P13** apply the Australian Privacy Principles to critique & manage the digital footprint that existing systems & student solutions collect **AC9TDI10P14**