



DESIGN AND TECHNOLOGIES – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge and understanding							
Technologies and society	People produce familiar products to meet personal and community needs	People produce familiar products and services to meet personal and community needs	People design and produce familiar products, services and environments to meet local and community needs	Role of people in design and technologies occupations Ways products, services and environments are designed to meet community needs	Role of people in design and technologies occupations Ways products, services and environments are designed to meet community needs, including consideration of sustainability	How people address competing considerations when designing products, services and environments	How people address competing considerations, including sustainability when designing products, services and environments for current and future use
Technologies contexts	<i>In Pre-primary, students will have opportunities to create designed solutions in at least one of the technologies contexts below (Food and fibre production includes Food specialisations in Pre-primary)</i>	<i>In Year 1, students will have opportunities to create designed solutions in at least one of the technologies contexts below (Food and fibre production includes Food specialisations in Year 1)</i>	<i>In Year 2, students will have opportunities to create designed solutions in at least one of the technologies contexts below (Food and fibre production includes Food specialisations in Year 2)</i>	<i>In Year 3, students will have opportunities to create designed solutions in at least one of the technologies contexts below (Food and fibre production includes Food specialisations in Year 3)</i>	<i>In Year 4, students will have opportunities to create designed solutions in at least one of the technologies contexts below (Food and fibre production includes Food specialisations in Year 4)</i>	<i>In Year 5, students will have opportunities to create designed solutions in at least one of the technologies contexts below</i>	<i>In Year 6, students will have opportunities to create designed solutions in at least one of the technologies contexts below</i>
Engineering principles and systems	Ways in which objects move: push, pull, bounce, slide, fall, spin, float	Ways objects can be moved using technology	Forces create movement in objects	Forces, and the properties of materials, affect the behaviour of objects	Forces, and the properties of materials, affect the behaviour of a product or system	Forces can control movement, sound or light in a product or system	Electrical energy and forces can control movement, sound or light in a product or system
Food and fibre production	Plant and animal products are used in everyday life for food, clothing and shelter	Plants and animals used for production have basic needs, such as food/nutrients, water, space, protection	Food and fibre choices for healthy living	Types of food and fibre produced in different environments, cultures or time periods, including the equipment used to produce or prepare them	Types of technologies used in food and fibre production or processing, including how they are used to help meet consumer needs	People in design and technologies occupations aim to increase efficiency of production systems, or consumer satisfaction of food and natural fibre products	Past performance, and current and future needs are considered when designing sustainable food and fibre systems for products

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	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food specialisations						Food safety and hygiene practices	Principles of food preparation for healthy eating
Materials and technologies specialisations	Characteristics of materials can be explored using senses	Characteristics and behaviours of individual materials used in products	Characteristics and properties of materials and individual components that are used to produce design solutions	Suitability and safe practice when using materials, tools and equipment for a range of purposes	Suitability and safe practice when using materials, systems and components for a range of purposes	Characteristics and properties of a range of materials and components, and the suitability and safe practice of their use	Characteristics, properties and safe practice of a range of materials, systems, tools and equipment; and evaluate the suitability of their use
Processes and production skills							
Creating solutions by:							
Investigating and defining	Explore needs for design	Explore opportunities for design	Explore design to meet needs or opportunities	Create a sequence of steps to solve a given task	Define a sequence of steps to design a solution for a given task Identify and choose the appropriate resources from a given set	Define a problem, and set of sequenced steps, with users making a decision to create a solution for a given task Identify available resources	Define a problem, and set of sequenced steps, with users making decisions to create a solution for a given task Identify available resources
Designing	Generate and record design ideas through describing, drawing, modelling and/or a sequence of written or spoken steps	Develop and communicate design ideas through describing, drawing, modelling and/or a sequence of written or spoken steps	Develop, communicate and discuss design ideas through describing, drawing, modelling and/or a sequence of steps	Develop and communicate ideas using labelled drawings and appropriate technical terms	Develop and communicate design ideas and decisions using annotated drawings and appropriate technical terms	Develop and communicate alternative solutions, and follow design ideas, using annotated diagrams, storyboards and appropriate technical terms	Design, modify, follow and represent both diagrammatically, and in written text, alternative solutions using a range of techniques, appropriate technical terms and technology
Producing and implementing	Use given components and equipment to safely make simple solutions	Use given components and equipment to safely make solutions	Use components and given equipment to safely make solutions	Select, and safely use, appropriate components with given equipment to make a solution	Select, and safely use, appropriate components and equipment to make solutions	Select, and apply, safe procedures when using components and equipment to make solutions	Select, and apply, safe procedures when using a variety of components and equipment to make solutions
Evaluating	Use personal preferences to evaluate the success of simple solutions	Use personal preferences to evaluate the success of design processes	Use simple criteria to evaluate the success of design processes and solutions	Use criteria to evaluate design processes and solutions developed	Use criteria to evaluate and justify simple design processes and solutions	Develop negotiated criteria to evaluate and justify design processes and solutions	Develop collaborative criteria to evaluate and justify design processes and solutions

DESIGN AND TECHNOLOGIES – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Collaborating and managing	Work independently, or with others when required, for solutions	Work independently, or with others when required, to safely create and share sequenced steps for solutions	Work independently, or collaboratively when required, to organise information and ideas to safely create and share sequenced steps for solutions	Work independently, or collaboratively when required, to plan, safely create and communicate sequenced steps	Work independently, or collaboratively when required, to plan, safely create and communicate ideas and information for solutions	Work independently, or collaboratively when required, to plan, safely develop and communicate ideas and information for solutions	Work independently, or collaboratively when required, considering resources and safety, to plan, develop and communicate ideas and information for solutions

DESIGN AND TECHNOLOGIES – Scope and sequence 7–10

	Year 7	Year 8	Year 9	Year 10
Knowledge and understanding				
Technologies and society	<p>Competing factors, including social, ethical and sustainability considerations, in the development of technologies</p> <p>Ways in which products, services and environments evolve locally, regionally and globally</p>	<p>Social, ethical and sustainability considerations, in the development of technologies and designed solutions, to meet community needs for economic, environmental and social sustainability</p> <p>Development of products, services and environments through the creativity, innovation and enterprise of individuals and groups</p>	<p>Social, ethical and sustainability considerations that impact on designed solutions</p> <p>Development of products, services and environments, with consideration of economic, environmental and social sustainability</p>	<p>Social, ethical and sustainability considerations that impact on designed solutions, complexity of design, and production processes involved</p> <p>Impact of emerging technologies on design decisions, and/or economic, environmental and social sustainability</p>
Technologies contexts	<i>In Year 7, students will have opportunities to create designed solutions in at least one of the technologies contexts below</i>	<i>In Year 8, students will have opportunities to create designed solutions in at least one of the technologies contexts below</i>	<i>In Year 9, students will have opportunities to create designed solutions in at least one of the technologies contexts below</i>	<i>In Year 10, students will have opportunities to create designed solutions in at least one of the technologies contexts below</i>
Engineering principles and systems	The use of motion, force and energy to manipulate and control electromechanical and mechanical systems	The design of simple solutions using motion, force and energy, to manipulate and control electromechanical and mechanical systems	The characteristics and properties of materials, combined with force, motion and energy, to create solutions	The process of materials being combined with force, motion and energy to create solutions
Food and fibre production	Production systems for food and fibre or their products, including key features of their design	Sustainable production systems are subject to competing demands (social, environmental, economic) and how these factors influence their design	Food and fibre production and/or marketing, and the generation of sustainable solutions	The role of emerging research and technology in the design of ethical and sustainable products
Food specialisations	Nutritional value and physical properties of food determine preparation techniques and presentation	Sensory properties of food to create healthy eating solutions	Principles of food including safety, nutrition, preservation, preparation, presentation, physical and sensory properties and perceptions	Healthy eating through the skills and knowledge of nutrients and the application of the principles of food safety, preservation, preparation, presentation and sensory perceptions
Materials and technologies specialisations	Material and technology decisions and processes influence the selection and combination of materials, systems, components, tools and equipment	The process for the selection and combination of materials, systems, components, tools and equipment	<p>Characteristics and properties of materials, systems, components, tools and equipment used to create designed solutions</p> <p>Technologies can be combined and used to create designed solutions</p>	<p>The combination of a range of characteristics and properties of materials, systems, components, tools and equipment to create designed solutions</p> <p>Designed solutions within a range of technologies specialisations, using combined technologies</p>

DESIGN AND TECHNOLOGIES – Scope and sequence 7–10

	Year 7	Year 8	Year 9	Year 10
Processes and production skills				
Creating solutions by:				
Investigating and defining	Define and break down a given task, identifying the purpose	Investigate a given need or opportunity for a specific purpose	Identify and define the needs of a stakeholder, to create a brief, for a solution	Identify the needs of the client/stakeholder to determine the basis for a solution
	Consider components/resources to develop solutions, identifying constraints	Evaluate and apply a given brief Consider components/resources to develop solutions, identifying constraints	Investigate a selection of components/resources to develop solution ideas, identifying and considering constraints	Create and critique briefs to solutions Investigate components/resources to develop increasingly sophisticated solutions, identifying and considering associated constraints
Designing	Design, develop, review and communicate design ideas, plans and processes within a given context, using a range of techniques, appropriate technical terms and technology	Design, develop, evaluate and communicate alternative solutions, using appropriate technical terms and technology	Apply design thinking, creativity and enterprise skills	Apply design thinking, creativity, enterprise skills and innovation to develop, modify and communicate design ideas of increasing sophistication
	Follow a plan designed to solve a problem, using a sequence of steps	Produce a simple plan designed to solve a problem, using a sequence of steps	Design solutions assessing alternative designs against given criteria, using appropriate technical terms and technology	Design possible solutions, analysing designs against criteria, including functionality, accessibility, usability and aesthetics, using appropriate technical terms and technology
Producing and implementing	Safely make solutions using a range of components, equipment and techniques	Safely apply appropriate techniques to make solutions using a range of components and equipment	Select, and safely implement and test appropriate technologies and processes, to make solutions	Select, justify, and safely implement and test appropriate technologies and processes, to make solutions
Evaluating	Independently apply given contextual criteria to evaluate design processes and solutions	Develop contextual criteria independently to assess design processes and solutions	Evaluate design processes and solutions against student-developed criteria	Analyse design processes and solutions against student-developed criteria
Collaborating and managing	Work independently, and collaboratively when required, to plan, develop and communicate ideas and information, using management processes	Work independently, and collaboratively when required, to plan, develop and communicate ideas and information when managing projects	Work independently, and collaboratively to manage projects, using digital technology and an iterative and collaborative approach. Considers time, cost, risk and safety	Work independently, and collaboratively to manage projects, using digital technology and an iterative and collaborative approach. Considers time, cost, risk, safety, production processes, sustainability and legal responsibilities

DIGITAL TECHNOLOGIES – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge and understanding							
Digital systems	Digital systems (hardware and software) are used at home, in the school and in the community	Digital systems (hardware and software) are used in everyday life and have specific features	Digital systems (hardware and software) are used for an identified purpose	Digital systems and peripheral devices are used for different purposes	Digital systems and peripheral devices are used for different purposes and can store and transmit different types of data	Digital systems have components with basic functions that may connect together to form networks which transmit data	Digital systems have components with basic functions and interactions that may be connected together to form networks which transmit different types of data
Representations of data	Data can have patterns and can be represented as pictures and symbols	Data can have patterns and can be represented as pictures, symbols and diagrams	Data can have patterns and can be represented and used to make simple conclusions	Different types of data can be represented in different ways	Data can be represented in different ways	Data is represented using codes	Whole numbers are used to represent data in a digital system
Processes and production skills							
Collecting managing and analysing data	Collect and use data of any kind	Present data of any kind using a variety of digital tools	Present data using a variety of digital tools	Collect and present different types of data using simple software to create useful information	Collect and present different types of data for a specific purpose using software	Collect, store and present different types of data for a specific purpose using software	Collect, sort, interpret and visually present different types of data using software to manipulate data for a range of purposes
Digital implementation	Use data to complete a task Engage with information known people have shared in an online environment, and model strategies to stay safe online	Use data to solve a simple task/problem Share and publish information with known people in an online environment, modelling strategies to stay safe online	Use data to solve similar tasks/problems Share and publish information in a safe online environment, with known people	Use visually represented sequenced steps (algorithms), including steps with decisions made by the user (branching) Create and communicate ideas and information safely	Use simple visual programming environments that include a sequence of steps (algorithm) involving decisions made by the user (branching) Create and communicate ideas and information safely, using agreed protocols (netiquette)	Design solutions to a user interface for a digital system Design, follow and represent diagrammatically, a simple sequence of steps (algorithm), involving branching (decisions) and iteration (repetition) Implement and use simple programming environments that include branching (decisions) and iteration (repetition)	Design, modify, follow and represent both diagrammatically, and in written text, simple algorithms (sequence of steps) involving branching (decisions) and iteration (repetition) Implement and use simple visual programming environments that include branching (decisions), iteration (repetition) and user input

DIGITAL TECHNOLOGIES – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital implementation						Create and communicate information, including online collaborative projects, using agreed social, ethical and technical protocols (codes of conduct)	Manage the creation and communication of information, including online collaborative projects, using agreed social, ethical and technical protocols
Creating solutions by:							
Investigating and defining	Explore needs for design	Explore opportunities for design	Explore design to meet needs or opportunities	Create a sequence of steps to solve a given task	Define a sequence of steps to design a solution for a given task Identify and choose the appropriate resources from a given set	Define a problem, and a set of sequenced steps, with users making a decision to create a solution for a given task Identify available resources	Define a problem, and a set of sequenced steps, with users making decisions to create a solution for a given task Identify available resources
Designing	Generate and record design ideas through describing, drawing, modelling and/or a sequence of written or spoken steps	Develop and communicate design ideas through describing, drawing, modelling and/or a sequence of written or spoken steps	Develop, communicate and discuss design ideas through describing, drawing, modelling and/or a sequence of steps	Develop and communicate ideas using labelled drawings and appropriate technical terms	Develop and communicate design ideas and decisions using annotated drawings and appropriate technical terms	Develop and communicate alternative solutions, and follow design ideas, using annotated diagrams, storyboards and appropriate technical terms	Design, modify, follow and represent both diagrammatically, and in written text, alternative solutions using a range of techniques, appropriate technical terms and technology
Producing and implementing	Use given components and equipment to safely make simple solutions	Use given components and equipment to safely make solutions	Use components and given equipment to safely make solutions	Select, and safely use, appropriate components with given equipment to make a solution	Select, and safely use, appropriate components and equipment to make solutions	Select, and apply, safe procedures when using components and equipment to make solutions	Select, and apply, safe procedures when using a variety of components and equipment to make solutions
Evaluating	Use personal preferences to evaluate the success of simple solutions	Use personal preferences to evaluate the success of design processes	Use simple criteria to evaluate the success of design processes and solutions	Use criteria to evaluate design processes and solutions developed	Use criteria to evaluate and justify simple design processes and solutions	Develop negotiated criteria to evaluate and justify design processes and solutions	Develop collaborative criteria to evaluate and justify design processes and solutions

Collaborating and managing	Work independently, or with others when required, for solutions	Work independently, or with others when required, to create and safely share sequenced steps for solutions	Work independently, or collaboratively when required, to organise information and ideas to create and safely share sequenced steps for solutions	Work independently, or collaboratively when required, to plan, create and communicate sequenced steps	Work independently, or collaboratively when required, to plan, create and communicate ideas and information for solutions	Work independently, or collaboratively when required, to plan, develop and communicate ideas and information for solutions	Work independently, or collaboratively when required, considering resources, to plan, develop and communicate ideas and information for solutions
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DIGITAL TECHNOLOGIES – Scope and sequence 7–10

	Year 7	Year 8	Year 9	Year 10
Knowledge and understanding				
Digital systems	Different types of networks, including wired, wireless and mobile networks Hardware components of a network	Methods of data transmission and security in wired, wireless and mobile networks Specifications of hardware components and their impact on network activities	Role of hardware and software in managing, controlling and securing the movement of data in a digital system	Role of hardware and software in managing, controlling and securing access to data, in networked digital systems
Representation of data	Digital systems represent text, image and audio data	Binary is used to represent data in digital systems	Different methods of manipulation, storage and transmission of data	Simple compression of data and how content data is separated from presentation data
Processes and production skills				
Collecting, managing and analysing data	Explore how to acquire data from a range of digital sources Create information using relevant software, and create data to model objects and/or events	Evaluate the authenticity, accuracy and timeliness of acquired data Evaluate and visualise data, using a range of software, to create information, and use structured data to model objects or events	Explore techniques for acquiring, storing and validating quantitative and qualitative data Analyse and visualise data to create information and address complex problems	Apply techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements Analyse, visualise and model processes and entities, and their relationships, using structured data
Digital implementation	Design the user experience of a digital system Create digital solutions that include a user interface where choices can be made Create and communicate information collaboratively online, taking into account social contexts	Design the user experience of a digital system Design plans, using a sequence of steps, and represent them diagrammatically and in English, to solve a problem and to predict output for a given input to identify errors Implement and modify solutions, that include user interfaces within a programming environment, including the need for choice of options and/or repeating options Create and communicate interactive ideas collaboratively online, taking into account social contexts	Design the user experience of a digital system Design algorithms, represented diagrammatically and in structured English, and validate plans and programs through tracing Implement and apply data storage and organisation techniques Create and use interactive solutions for sharing ideas and information online, taking into account social contexts	Design algorithms represented diagrammatically and in structured English, including iteration Validate algorithms and programs using common acceptable methods Implement data storage and organisation techniques within a programming environment Create interactive solutions for sharing ideas and information online, taking into account social contexts and legal responsibilities

DIGITAL TECHNOLOGIES – Scope and sequence 7–10

	Year 7	Year 8	Year 9	Year 10
Creating solutions by:				
Investigating and defining	<p>Define and break down a given task, identifying the purpose</p> <p>Consider components/resources to develop solutions, identifying constraints</p>	<p>Investigate a given need or opportunity for a specific purpose</p> <p>Evaluate and apply a given brief</p> <p>Consider components/resources to develop solutions, identifying constraints</p>	<p>Identify and define the needs of a stakeholder, to create a brief, for a solution</p> <p>Investigate a selection of components/resources to develop solution ideas, identifying and considering constraints</p>	<p>Identify the needs of the client/stakeholder to determine the basis for a solution</p> <p>Create and critique briefs to solutions</p> <p>Investigate components/resources to develop increasingly sophisticated solutions, identifying and considering associated constraints</p>
Designing	<p>Design, develop, review and communicate design ideas, plans and processes within a given context, using a range of techniques, appropriate technical terms and technology</p> <p>Follow a plan designed to solve a problem, using a sequence of steps</p>	<p>Design, develop, evaluate and communicate alternative solutions, using appropriate technical terms and technology</p> <p>Produce a simple plan designed to solve a problem, using a sequence of steps</p>	<p>Apply design thinking, creativity and enterprise skills</p> <p>Design solutions assessing alternative designs against given criteria, using appropriate technical terms and technology</p>	<p>Apply design thinking, creativity, enterprise skills and innovation to develop, modify and communicate design ideas of increasing sophistication</p> <p>Design possible solutions, analysing designs against criteria, including functionality, accessibility, usability and aesthetics, using appropriate technical terms and technology</p>
Producing and implementing	<p>Safely make solutions using a range of components, equipment and techniques</p>	<p>Safely apply appropriate techniques to make solutions using a range of components and equipment</p>	<p>Select, and safely implement and test appropriate technologies and processes, to make solutions</p>	<p>Select, justify, and safely implement and test appropriate technologies and processes, to make solutions</p>
Evaluating	<p>Independently apply given contextual criteria to evaluate design processes and solutions</p>	<p>Develop contextual criteria independently to assess design processes and solutions</p>	<p>Evaluate design processes and solutions against student developed criteria</p>	<p>Analyse design processes and solutions against student developed criteria</p>
Collaborating and managing	<p>Work independently, and collaboratively when required, to plan, develop and communicate ideas and information when using management processes</p>	<p>Work independently, and collaboratively when required, to plan, develop and communicate ideas and information when managing projects</p>	<p>Work independently, and collaboratively to manage projects, using digital technology and an iterative and collaborative approach. Considers time, cost, risk and safety</p>	<p>Work independently, and collaboratively to manage projects, using digital technology and an iterative and collaborative approach. Considers time, cost, risk, safety, production processes, sustainability and legal responsibilities</p>