

TECHNOLOGIES

CONSULTATION CURRICULUM

Design and Technologies – Comparative information F–10

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COMPARISON OF CURRENT AND REVISED CURRICULUM IN TECHNOLOGIES: DESIGN AND TECHNOLOGIES

Content descriptions: Foundation to Year 4

Strand: Knowledge and understanding

Sub-strand: Technologies and society	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original	Identify how people design and produce familiar products, services and environments and consider sustainability to meet personal and local community needs (ACTDEK001)		Recognise the role of people in design and technologies occupations and explore factors, including sustainability that impact on the design of products, services and environments to meet community needs (ACTDEK010)
Proposed	explore how local products, services and environments are designed by people (AC9TDEFK01)	identify how people design and produce familiar products, services and environments and consider sustainability to meet personal and local community needs (AC9TDE2K01)	describe design and technologies occupations and explore factors including sustainability that impact on the design of products, services and environments to meet community needs (AC9TDE4K01)

Sub-strand: Technologies contexts	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original	By the end of Year 2 students will have had the opportunity to create designed solutions addressing the three technologies contexts below		By the end of Year 4 students will have had the opportunity to create designed solutions addressing the three technologies contexts below

Proposed	By the end of Foundation students will have had the opportunity to design and make a solution for a school-selected context.	By the end of Year 2 students will have had the opportunity to create designed solutions at least once in each of the two combined technologies contexts.	By the end of Year 4 students will have had the opportunity to create designed solutions at least once in each of the two combined technologies contexts.
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Sub-strand: Engineering principles and systems; Materials and technologies specialisations	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original: Engineering principles and systems	Explore how technologies use forces to create movement in products (ACTDEK002)		Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)
Original: Materials and technologies specialisations	Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)		Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)
Proposed	<i>Removed</i>	explore how technologies including materials affect movement in products (AC9TDE2K02)	describe how forces and the properties of materials affect function in a product or system (AC9TDE4K02)

Sub-strand: Food and fibre production; Food specialisations	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original	Explore how plants and animals are grown for food, clothing and shelter and how food is selected and prepared for healthy eating (ACTDEK003)		Investigate food and fibre production and food technologies used in modern and traditional societies (ACTDEK012)
Proposed	<i>Removed</i>	explore how plants and animals are grown for food, clothing and shelter (AC9TDE2K03)	describe the ways of producing food and fibre (AC9TDE4K03)
Proposed	<i>Removed</i>	explore how food can be selected and prepared for healthy eating (AC9TDE2K04)	describe the ways food can be selected and prepared for healthy eating (AC9TDE4K04)

Strand: Processes and production skills

Sub-strand: Investigating and defining	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original	Explore needs or opportunities for designing, and the technologies needed to realise designed solutions (ACTDEP005)		Critique needs or opportunities for designing and explore and test a variety of materials, components, tools and equipment and the techniques needed to produce designed solutions (ACTDEP014)
Proposed	<i>Removed</i>	<i>Removed</i>	explore needs or opportunities for designing, and test materials, components, tools,

			equipment and processes needed to create designed solutions (AC9TDE4P01)
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Sub-strand: Generating and designing	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original	Generate, develop and record design ideas through describing, drawing and modelling (ACTDEP006)		Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques (ACTDEP015)
Proposed	generate ideas and manipulate materials and equipment to safely make a solution for a purpose (AC9TDEFP01)	generate, develop and record design ideas through describing, drawing or modelling (AC9TDE2P01)	generate, develop and communicate design ideas and decisions using technical terms and graphical representation techniques (AC9TDE4P02)

Sub-strand: Producing and implementing	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original	Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)		Select and use materials, components, tools, equipment and techniques and use safe work practices to make designed solutions (ACTDEP016)
Proposed	See (AC9TDEFP01)	use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE2P02)	select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE4P03)

Sub-strand: Evaluating	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original	Use personal preferences to evaluate the success of design ideas, processes and solutions including their care for the environment (ACTDEP008)		Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment (ACTDEP017)
Proposed	See (AC9TDEFP01)	evaluate the success of design ideas and solutions based on personal preferences and including care for the natural environment (AC9TDE2P03)	develop criteria for success including care for the environment to evaluate design ideas and solutions (AC9TDE4P04)

Sub-strand: Collaborating and managing	Foundation <i>Students learn to:</i>	Years 1 and 2 <i>Students learn to:</i>	Years 3 and 4 <i>Students learn to:</i>
Original	Sequence steps for making designed solutions and working collaboratively (ACTDEP009)		Plan a sequence of production steps when making designed solutions individually and collaboratively (ACTDEP018)
Proposed	<i>Removed</i>	sequence steps for making designed solutions (AC9TDE2P04)	sequence steps to individually and collaboratively make designed solutions (AC9TDE4P05)

Achievement standards Foundation to Year 4

Design and Technologies achievement standard			
	Foundation	Years 1 and 2	Years 3 and 4
Original	By the end of Year 2, students describe the purpose of familiar products, services and environments and how they meet the needs of users and affect others and environments. They identify the features and uses of technologies for each of the prescribed technologies contexts. With guidance, students create designed solutions for each of the prescribed technologies contexts. They describe given needs or opportunities. Students create and evaluate their ideas and designed solutions based on personal preferences. They communicate design ideas for their designed products, services and environments using modelling and simple drawings. Following sequenced steps, students demonstrate safe use of tools and equipment when producing designed solutions.		By the end of Year 4, students explain how products, services and environments are designed to best meet needs of communities and their environments. They describe contributions of people in design and technologies occupations. Students describe how the features of technologies can be used to produce designed solutions for each of the prescribed technologies contexts. Students create designed solutions for each of the prescribed technologies contexts. They explain needs or opportunities and evaluate ideas and designed solutions against identified criteria for success, including environmental sustainability considerations. They develop and expand design ideas and communicate these using models and drawings including annotations and symbols. Students plan and sequence major steps in design and production. They identify appropriate technologies and techniques and demonstrate safe work practices when producing designed solutions.
Proposed	By the end of Foundation students explore familiar products, services and environments. They use materials and equipment to safely make a solution for a school-selected context.	By the end of Year 2 students identify the purpose of familiar products, services and environments. For each of the two prescribed technologies contexts they explore the features and uses of technologies and create designed solutions. Students evaluate their ideas based on their personal preferences. They communicate design ideas using models	By the end of Year 4 students describe how people design products, services and environments to meet the needs of people and consider sustainability. For each of the two prescribed technologies contexts they describe the features and uses of technologies and create designed solutions. Students evaluate ideas against criteria for success. They use models and drawings including annotations and symbols to plan, sequence and communicate steps in

		and simple drawings and follow sequenced steps to safely produce designed solutions.	design and production. Students use technologies and techniques to safely produce designed solutions.
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Technologies achievement standard			
	Foundation	Years 1 and 2	Years 3 and 4
Original	<p>By the end of Year 2, students describe the purpose of familiar products, services and environments and how they meet a range of present needs. They list the features of technologies that influence design decisions and identify how digital systems are used.</p> <p>Students identify needs, opportunities or problems and describe them. They collect, sort and display familiar data from a range of sources and recognise patterns in data. Students record design ideas using techniques including labelled drawings, lists and sequenced instructions. They design solutions to simple problems using a sequence of steps and decisions. With guidance, students produce designed solutions for each of the prescribed technologies contexts. Students evaluate their ideas, information and solutions on the basis of personal preferences and provided criteria including care for the environment. They safely create solutions and communicate ideas and information face-to-face and online.</p>		<p>By the end of Year 4, students describe how social, technical and sustainability factors influence the design of solutions to meet present and future needs. They describe features of technologies that influence design decisions and how a range of digital systems can be used.</p> <p>Students outline and define needs, opportunities or problems. They collect, manipulate and interpret data from a range of sources to support decisions. Students generate and record design ideas for an audience using technical terms and graphical and non-graphical representation techniques including algorithms. They plan a sequence of steps (algorithms) to create solutions, including visual programs. Students plan and safely produce designed solutions for each of the prescribed technologies contexts. They use identified criteria for success, including sustainability considerations, to judge the suitability of their ideas, solutions and processes. Students use agreed protocols when collaborating, and creating and communicating ideas, information and solutions face-to-face and online.</p>

<p>Proposed</p>	<p>By the end of Foundation students identify familiar products, services and environments and develop familiarity with and show confidence in using digital systems. They use materials and equipment to safely make a solution for a school-selected context and show how digital systems can be used to solve problems. Students use objects, pictures and symbols to represent data. They identify if data is personal and owned by them.</p>	<p>By the end of Year 2 students describe the purpose of familiar products, services and environments and use basic computational thinking to create simple digital solutions to known problems or opportunities. For each of the two prescribed technologies contexts they identify the features and uses of technologies and create designed solutions. They evaluate their ideas, based on their personal preferences. Students communicate design ideas using models and simple drawings, describe and represent algorithms that involve repetition and decisions, and follow sequenced steps to safely produce designed solutions. They identify examples of personal data that may be stored online.</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, and use computational thinking to create scaffolded digital solutions. They recognise different types of data and identify how they are transmitted by digital systems. For each of the two prescribed technologies contexts they describe the features of technologies and create designed solutions. Students evaluate ideas against identified criteria for success. They define problems and identify opportunities, then design and implement solutions using algorithms and visual programming that involve decision-making, repetition and user input. Students use models and drawings including annotations and symbols to plan, sequence and communicate major steps in design and production. They use technologies and techniques to safely produce solutions. Students use passphrases and agreed behaviours to safely access and explore digital systems, tools and online or networked environments independently and with others.</p>
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Content descriptions: Years 5 to 10

Strand: Knowledge and understanding

Sub-strand: Technologies and society	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Examine how people in design and technologies occupations address competing considerations, including sustainability in the design of products, services, and environments for current and future use (ACTDEK019)	Investigate the ways in which products, services and environments evolve locally, regionally and globally and how competing factors including social, ethical and sustainability considerations are prioritised in the development of technologies and designed solutions for preferred futures (ACTDEK029)	Critically analyse factors, including social, ethical and sustainability considerations, that impact on designed solutions for global preferred futures and the complex design and production processes involved (ACTDEK040)
			Explain how products, services and environments evolve with consideration of preferred futures and the impact of emerging technologies on design decisions (ACTDEK041)
Proposed	explain how people in design and technologies occupations consider competing factors including sustainability in the design of products, services and environments for current and future use (AC9TDE6K01)	analyse ways in which products, services and environments evolve locally, regionally and globally (AC9TDE8K01)	analyse and make judgements about factors, including social, ethical, security and sustainability, that impact on designed solutions for global preferred futures and the complex design and production processes involved (AC9TDE10K01)
		analyse how social, ethical and sustainability factors impact on the development of technologies and designed solutions for preferred futures (AC9TDE8K02)	analyse and make judgements about how products, services and environments evolve with consideration of preferred futures and the impact of emerging technologies on design decisions (AC9TDE10K02)

Sub-strand: Technologies contexts	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	By the end of Year 6 students will have had the opportunity to create designed solutions addressing the three technologies contexts below	By the end of Year 8 students will have had the opportunity to create designed solutions addressing the four technologies contexts below	By the end of Year 8 students will have had the opportunity to create designed solutions addressing the four technologies contexts below
Proposed	By the end of Year 6 students will have had the opportunity to create designed solutions at least once in each of these three technologies contexts	By the end of Year 8 students will have had the opportunity to create designed solutions at least once in each of the four technologies contexts	By the end of Year 10 students will have had the opportunity to create designed solutions for one or more of the four technologies contexts

Sub-strand: Engineering principles and systems	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020)	Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)	Investigate and make judgments on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions (ACTDEK043)
Proposed	explain how electrical energy can be transformed into movement, sound or light in a product or system (AC9TDE6K02)	analyse how force, motion and energy are used to manipulate and control simple, engineered systems (AC9TDE8K03)	analyse and make judgements on how the characteristics and properties of materials are combined with force, motion and energy to control engineered systems (AC9TDE10K03)

Sub-strand: Materials and technologies specialisations	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)	Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment (ACTDEK034)	Investigate and make judgments on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (ACTDEK046) Investigate and make judgments, within a range of technologies specialisations, on how technologies can be combined to create designed solutions (ACTDEK047)
Proposed	explain how characteristics and properties of materials, systems, components, tools and equipment affect their use when producing designed solutions (AC9TDE6K03)	analyse how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (AC9TDE8K04)	analyse and make judgements on how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (AC9TDE10K04)
Sub-strand: Food and fibre production	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Investigate how and why food and fibre are produced in managed environments and prepared to enable people to grow and be healthy (ACTDEK021)	Analyse how food and fibre are produced when designing managed environments and how these can become more sustainable (ACTDEK032)	Investigate and make judgments on the ethical and sustainable production and marketing of food and fibre (ACTDEK044)
Proposed Sub-strand:	explain how and why food and fibre are produced in managed environments (AC9TDE6K04)	analyse how food and fibre are produced in managed environments and how these can become sustainable (AC9TDE8K05)	analyse and make judgements on the ethical, secure and sustainable production

Food and fibre production; Food specialisations (Years 5 and 6)	explain how the characteristics of foods influence selection and preparation for healthy eating (AC9TDE6K05)		and marketing of food and fibre enterprises (AC9TDE10K05)
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Sub-strand: Food specialisations	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	See (ACTDEK021)	Analyse how characteristics and properties of food determine preparation techniques and presentation when designing solutions for healthy eating (ACTDEK033)	Investigate and make judgments on how the principles of food safety, preservation, preparation, presentation and sensory perceptions influence the creation of food solutions for healthy eating (ACTDEK045)
Proposed	See (AC9TDE6K05)	analyse how properties of foods determine preparation and presentation techniques when designing solutions for healthy eating (AC9TDE8K06)	analyse and make judgements on how the principles of food preparation, preservation, safety, presentation and sensory and functional properties influence the creation of food solutions for healthy eating (AC9TDE10K06)

Strand: Processes and production skills

Sub-strand: Investigating and defining	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)	Critique needs or opportunities for designing and investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas (ACTDEP035)	Critique needs or opportunities to develop design briefs and investigate and select an increasingly sophisticated range of materials, systems, components, tools and equipment to develop design ideas (ACTDEP048)

Proposed	analyse needs or opportunities for designing, and investigate the materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE6P01)	analyse needs or opportunities for designing, and investigate and select materials, components, tools, equipment and processes to create designed solutions (AC9TDE8P01)	analyse needs or opportunities for designing and develop design briefs, and investigate, analyse and select materials, systems, components, tools and equipment to create designed solutions (AC9TDE10P01)
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Sub-strand: Generating and designing	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)	Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)	Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication (ACTDEP049)
Proposed	generate, develop and communicate design ideas, decisions and processes using technical terms and graphical representation techniques (AC9TDE6P02)	generate, develop, test and communicate design ideas, plans and processes using technical terms and technologies including graphical representation techniques (AC9TDE8P02)	generate, develop, test and communicate design ideas, plans and processes by applying design thinking, creativity, innovation and enterprise skills (AC9TDE10P02)

Sub-strand: Producing and implementing	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)	Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)	Work flexibly to effectively and safely test, select, justify and use appropriate technologies and processes to make designed solutions (ACTDEP050)
Proposed	select suitable materials, components, tools, equipment and techniques and use safe	select and justify choices of materials, components, tools, equipment and techniques	work flexibly to effectively and safely test, select, justify and use appropriate

	procedures to make designed solutions (AC9TDE6P03)	and apply safe procedures to effectively make designed solutions (AC9TDE8P03)	technologies and processes to make designed solutions (AC9TDE10P03)
Sub-strand: Evaluating	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions (ACTDEP027)	Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability (ACTDEP038)	Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051)
Proposed	develop criteria for success collaboratively that include sustainability to evaluate design ideas, processes and solutions (AC9TDE6P04)	develop criteria for success independently that include sustainability to evaluate design ideas, processes and solutions (AC9TDE8P04)	develop criteria for success that include sustainability to iteratively evaluate design ideas, processes and solutions (AC9TDE10P04)
Sub-strand: Collaborating and managing	Years 5 and 6 <i>Students learn to:</i>	Years 7 and 8 <i>Students learn to:</i>	Years 9 and 10 <i>Students learn to:</i>
Original	Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)	Use project management processes when working individually and collaboratively to coordinate production of designed solutions (ACTDEP039)	Develop project plans using digital technologies to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes (ACTDEP052)
Proposed	develop project plans that include consideration of resources to individually and collaboratively make designed solutions (AC9TDE6P05)	develop project plans to individually and collaboratively manage time, cost and production of designed solutions (AC9TDE8P05)	develop project plans for intended purposes and audiences to individually and collaboratively manage projects, taking into consideration time, cost, risk, processes and production of designed solutions (AC9TDE10P05)

Achievement standards Years 5 to 10

Design and Technologies achievement standard			
	Years 5 and 6	Years 7 and 8	Years 9 and 10
Original	<p>By the end of Year 6, students describe competing considerations in the design of products, services and environments, taking into account sustainability. They describe how design and technologies contribute to meeting present and future needs. Students explain how the features of technologies impact on designed solutions for each of the prescribed technologies contexts. Students create designed solutions for each of the prescribed technologies contexts suitable for identified needs or opportunities. They suggest criteria for success, including sustainability considerations, and use these to evaluate their ideas and designed solutions. They combine design ideas and communicate these to audiences using graphical representation techniques and technical terms. Students record project plans including production processes. They select and use appropriate technologies and</p>	<p>By the end of Year 8, students explain factors that influence the design of products, services and environments to meet present and future needs. They explain the contribution of design and technology innovations and enterprise to society. Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts. Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities. They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes. They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques. Students apply project management skills to document and use project plans to manage production processes. They independently and safely produce effective designed solutions for the intended purpose.</p>	<p>By the end of Year 10, students explain how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used to produce products, services and environments. They identify the changes necessary to designed solutions to realise preferred futures they have described. When producing designed solutions for identified needs or opportunities, students evaluate the features of technologies and their appropriateness for purpose for one or more of the technologies contexts. Students create designed solutions for one or more of the technologies contexts based on a critical evaluation of needs or opportunities. They establish detailed criteria for success, including sustainability considerations, and use these to evaluate their ideas and designed solutions and processes. They create and connect design ideas and processes of increasing complexity and justify decisions. Students communicate and document projects, including marketing for a range of audiences. They independently and collaboratively apply sequenced production and management plans when producing designed solutions, making adjustments to plans when necessary. They select and use appropriate technologies skilfully and</p>

	techniques correctly and safely to produce designed solutions.		safely to produce high-quality designed solutions suitable for the intended purpose.
Proposed	<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 three prescribed technologies contexts they explain how the features of technologies impact on design decisions and they create designed solutions. Students evaluate ideas and solutions against criteria for success. They use technical terms and graphical representation techniques to communicate ideas to an audience. Students develop project plans including production processes and select appropriate technologies and techniques to safely produce designed solutions.</p>	<p>By the end of Year 8 students analyse how people design products, services and environments to meet present and future needs. For each of the four prescribed technologies contexts they analyse how the features of technologies influence and impact design decisions, and create designed solutions based on evaluation of needs or opportunities. Students develop criteria for success including sustainability and use these to evaluate the suitability of ideas, processes and designed solutions. They create, adapt, justify and iterate design ideas and communicate to audiences using suitable technologies, technical terms and graphical representation techniques. Students independently and collaboratively document and manage production processes to safely produce effective designed solutions for the intended purpose.</p>	<p>By the end of Year 10 students analyse how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used to produce products, services and environments. They analyse the contribution of emerging technologies, innovation and enterprise skills to society. For one or more of the technologies contexts, students create designed solutions based on an evaluation of needs or opportunities and evaluate the features of technologies and their appropriateness for purpose. They identify the requirements for designed solutions to realise the preferred futures they have described. Students develop criteria for success, including sustainability, and use these to evaluate and refine their ideas, processes and designed solutions. They create, adapt and iterate design ideas and processes of increasing complexity and justify their decisions. They communicate and document projects for a range of audiences. Students independently and collaboratively develop and apply production and project management plans when producing designed solutions, adjusting processes when necessary. They select and use appropriate technologies skilfully and safely to produce quality designed solutions suitable for the intended purpose.</p>

Technologies achievement standard		
	Years 5 and 6	Years 7 and 8
Original	<p>By the end of Year 6, students explain how social, ethical, technical and sustainability considerations influence the design of solutions to meet a range of present and future needs. They explain how the features of technologies influence design decisions and how digital systems are connected to form networks.</p> <p>Students describe a range of needs, opportunities or problems and define them in terms of functional requirements. They collect and validate data from a range of sources to assist in making judgements. Students generate and record design ideas for specified audiences using appropriate technical terms, and graphical and non-graphical representation techniques including algorithms. They plan, design, test, modify and create digital solutions that meet intended purposes including user interfaces and a visual program. Students plan and document processes and resources and safely produce designed solutions for each of the prescribed technologies contexts. They negotiate criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas, solutions and processes. Students use ethical, social and technical protocols when collaborating, and creating and communicating ideas, information and solutions face-to-face and online.</p>	<p>By the end of Year 8, students explain how social, ethical, technical and sustainability considerations influence the design of innovative and enterprising solutions to meet a range of present and future needs. They explain how the features of technologies influence design and production decisions. Students make choices between different types of networks for defined purposes.</p> <p>Students explain a range of needs, opportunities or problems and define them in terms of functional requirements and constraints. They collect, authenticate and interpret data from a range of sources to assist in making informed judgements. Students generate and document in digital and non-digital form, design ideas for different audiences using appropriate technical terms, and graphical representation techniques including algorithms. They independently and safely plan, design, test, modify and create a range of digital solutions that meet intended purposes including user interfaces and the use of a programming language. They plan, document and effectively manage processes and resources to produce designed solutions for each of the prescribed technologies contexts. They develop criteria for success, including innovation and sustainability considerations, and use these to judge the suitability of their ideas, solutions and processes. Students use appropriate protocols when collaborating, and creating and communicating ideas, information and solutions face-to-face and online.</p>
Proposed	<p>By the end of Year 6 students describe how people design products, services and environments to meet the needs and opportunities of communities, including sustainability. For each of the three prescribed technologies contexts students explain how the features of</p>	<p>By the end of Year 8 students explain how people design products, services and environments to meet present and future needs. For each of the four prescribed technologies contexts students explain how the features of technologies influence and impact on design</p>

	<p>technologies impact on design decisions and they create designed solutions. They use computational thinking to design and create digital solutions by developing algorithms to address problems or opportunities and implement them as visual programs. They evaluate ideas and solutions against criteria for success. Students use technical terms and graphical representation techniques to communicate ideas to an audience. They record project plans, including production processes, and select appropriate technologies and techniques to safely produce designed solutions. Students understand and describe how data is transmitted, how behaviours and ethics help protect data and describe what effect supplied data can have on their digital footprint.</p>	<p>decisions, and they create designed solutions based on evaluation of needs or opportunities. They use computational thinking to independently and collaboratively design and create effective digital solutions to real-world problems and opportunities by creating a variety of algorithmic designs and implementing them using a general-purpose programming language. They use a range of tools to make predictions and draw conclusions based on acquired, stored and validated data. Students develop criteria for success including sustainability and use these to judge the suitability of ideas, processes and solutions. They create, adapt and iterate design ideas and communicate to audiences using suitable technologies, technical terms and graphical representation techniques. Students explain how digital systems represent, transmit and secure data. They independently and collaboratively plan to document and manage production processes and to safely produce effective designed solutions for the intended purpose. Students identify cyber security threats and risks and explain how to protect against threats and manage the risks of sharing and curating their digital footprint.</p>
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