

Introducing the Victorian Curriculum: Design and Technologies F–6

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VICTORIAN CURRICULUM
AND ASSESSMENT AUTHORITY



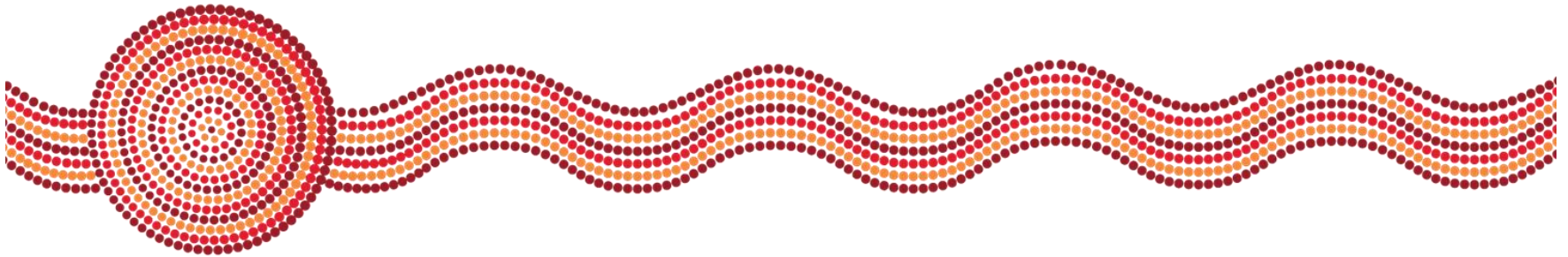
Acknowledgment of Country

I would like to acknowledge the traditional custodians of the many lands across Victoria on which each of you are living, learning and working from today.

For myself and those of us in the Melbourne metropolitan area, we acknowledge the traditional custodians of the Kulin Nations.

When acknowledging country, we recognise Aboriginal and Torres Strait Islander peoples' spiritual and cultural connection to country and acknowledge their continued care of the lands and waterways over generations, while celebrating the continuation of a living culture that has a unique role in this region.

I would like to pay my respects to Elders past, present and emerging, for they hold the memories, traditions, culture and hopes of all Aboriginal and Torres Strait Islander peoples across the nation, and hope they will walk with us on our journey.



Learning intentions

- **unpacking the Victorian Curriculum: F–6, Design and Technologies**
- **using the Victorian Curriculum F–6 to deliver content in Design and Technologies**
- **resources available on the VCAA website to support the Victorian Curriculum F–6, Design and Technologies**

Learning Areas

- The Arts
 - Dance
 - Drama
 - Media Arts
 - Music
 - Visual Communication Design (7–10)
 - Visual Arts
- English
- Humanities
 - Civics and Citizenship
 - Economics and Business
 - Geography
 - History
- Languages
- Health and Physical Education
- Mathematics
- Science
- Technologies
 - **Design and Technologies**
 - Digital Technologies

Capabilities

- Critical and creative thinking
- Intercultural
- Ethical
- Personal and social

Terminology



- Curriculum areas
- Strands and sub-strands
- Content descriptions
- Elaborations
- Achievement standards



Components

Introduction

- Rationale and aims
- Structure
 - strands/sub-strands
 - placement of standards
- Learning in ...
- Scope and sequence
- Glossary

Curriculum

- Level/band description
- Content descriptions
 - (+ elaborations)
- Achievement standards



Structure

Band descriptions	provides an overview to the content descriptions and achievement standard within the band
Content Descriptions	specifies the knowledge, understandings and skills students are expected to learn
Elaborations	illustrations or examples of Content Descriptions (not mandated)
Achievement Standards	describe what students are typically able to understand and able to do. They describe expected achievement and emphasise the depth of conceptual understanding and the sophistication of skills Starts at Foundation – Level 2, and then at Levels 4, 6, 8 and 10.

Unpacking Design and Technologies

- About how we can **create** products, environments and services (designed solutions) that build on **user experiences** to meet current and future needs in **sustainable ways**



Unpacking Design and Technologies

- **Not just about making appealing, aesthetic or functional things**
- **Focus on creative design thinking and critical design thinking**



Unpacking Design and Technologies

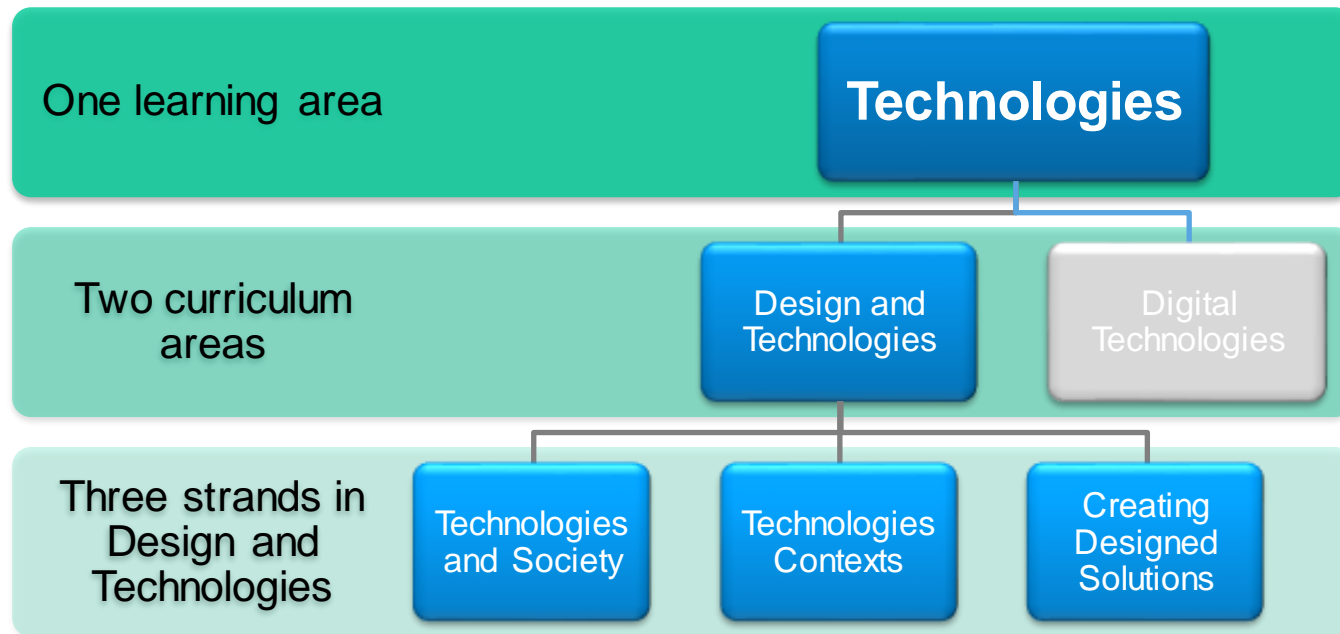
- Responding to design brief
- Addressing a problem, need or opportunity



Unpacking Design and Technologies

- How did the kingfisher inspire designers to solve an issue with the design of the Japanese fast trains?





Three strands

Technologies and Society	Technologies Contexts	Creating Designed Solutions
Focuses on how people use and develop technologies	Based on design thinking, design processes and production processes, typically addressed through a design brief	Focuses on the characteristics and properties of each of the four Technologies Contexts

Strand: Technologies and Society

- No sub-strands

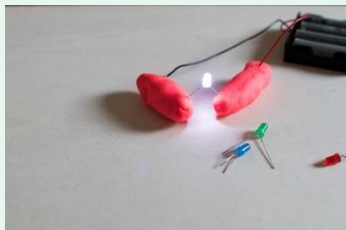


Strand: Technologies Contexts

Sub-strands

Engineering systems and principles

explores how forces can be used to create light, sound, heat, movement, control or support in systems



Food and fibre production



focuses on food and fibre as human-produced or harvested resources, and how food and fibre are produced in managed environments such as farms or plantations, or harvested from wild stocks.

Food specialisations

explores the application of nutrition principles and the characteristics and properties of food, food selection and preparation, and contemporary food issues



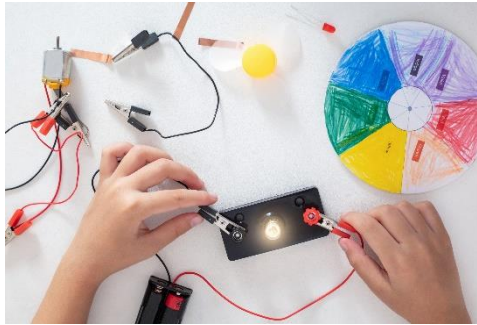
Materials and technologies specialisations

explores a broad range of traditional, contemporary and emerging materials that involve an extensive use of technologies.



Technologies Contexts

- Involves students creating quality designed solutions across four different technologies contexts



Strand: Creating Designed Solutions

Sub-strands

Investigating

involves critiquing, exploring and investigating needs and opportunities



Generating



developing and communicating ideas for a range of audiences

Planning and managing

learning to plan and manage time, along with other resources, to effectively create design solutions



Producing

applying a variety of skills and techniques to make designed solutions to meet specific purposes and user needs

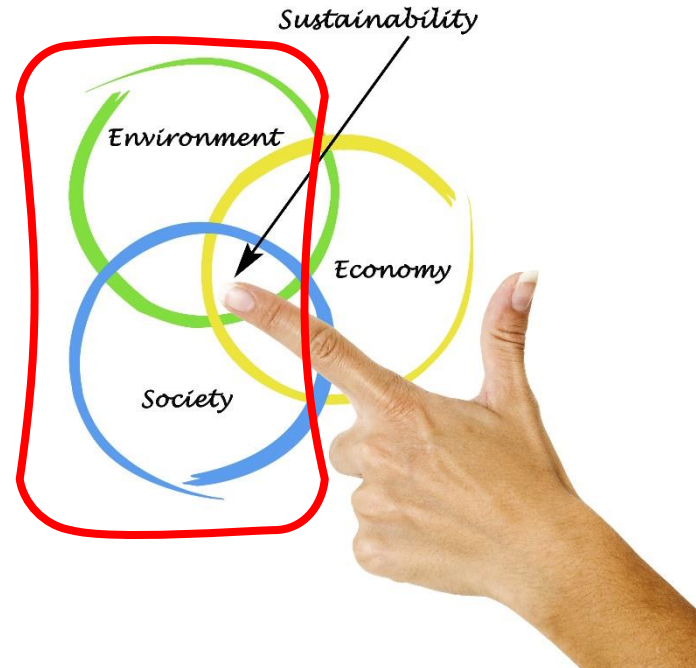


Evaluating

making judgements through a design process about the quality and effectiveness of designed solutions



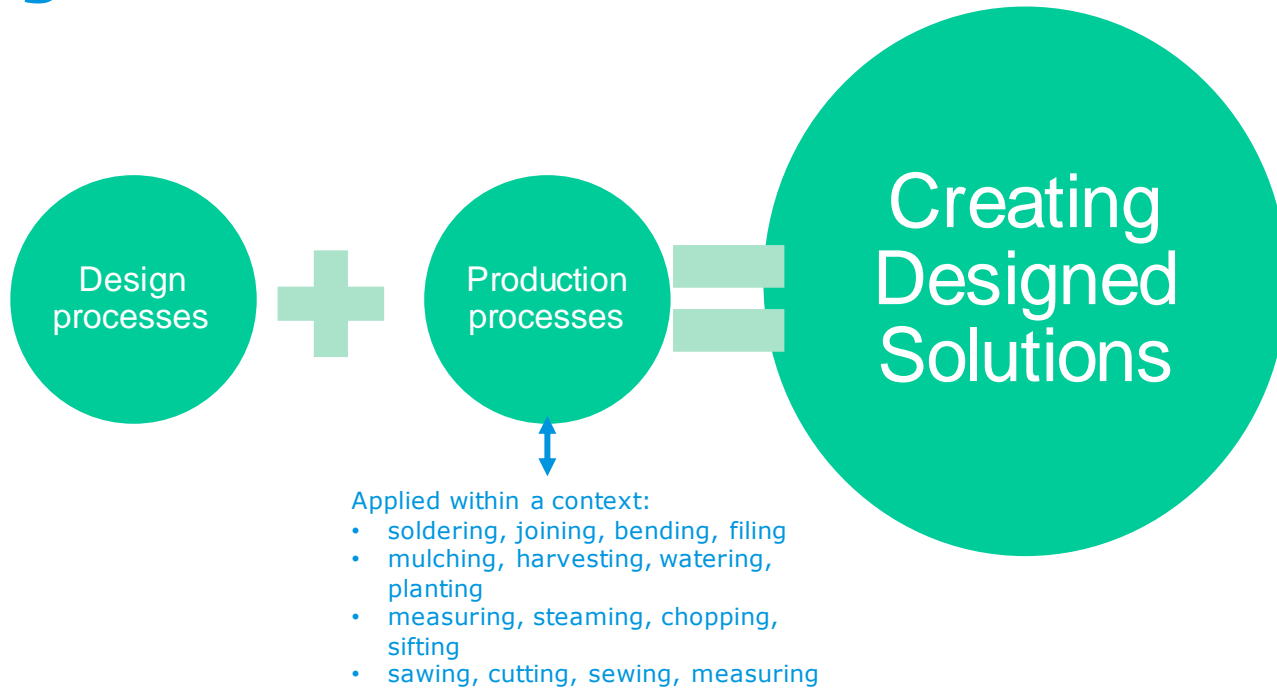
Focus on sustainability



Types of thinking

Design thinking	Systems thinking	Computational thinking
Use of strategies for understanding design needs and opportunities	Generation of ideas and decisions made throughout the design processes; recognition of the connectedness and interactions	Problem-solving used e.g. calculating costs, testing materials

Responding to a design brief



Organisation

Design and Technologies

Strands	Technologies and Society	Technologies Contexts	Creating Designed Solutions
Sub-strands	–	Engineering principles and systems	Investigating
		Food and fibre production	Generating
		Food specialisations	Planning and managing
		Materials and technologies specialisations	Producing
			Evaluating

What does this look like in the classroom?



Soft circuits lessons

Design and Technologies			
Strands	Technologies and Society	Technologies Contexts	Creating Designed Solutions
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		Food specialisations	Planning and managing
		Materials and technologies specialisations	Producing
			Evaluating

sustainability

design thinking

computational thinking

The diagram features a table with three main columns: 'Technologies and Society', 'Technologies Contexts', and 'Creating Designed Solutions'. A red box highlights the 'Technologies and Society' column. A red arrow points from this box to the 'Technologies Contexts' column. Another red arrow points from the 'Technologies Contexts' column to the 'Creating Designed Solutions' column. Within the 'Creating Designed Solutions' column, three sub-rows ('Investigating', 'Generating', 'Planning and managing') are each enclosed in a red box. A red arrow points from the 'Investigating' box to the 'Generating' box, and another red arrow points from the 'Generating' box to the 'Planning and managing' box. Additionally, a red arrow points from the 'Technologies Contexts' column to the 'Investigating' box.

Setting up a school garden lessons

Design and Technologies

Strands	Technologies and Society	Technologies Contexts	Creating Designed Solutions
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		Food specialisations	Planning and managing
		Materials and technologies specialisations	Producing
			Evaluating

sustainability

design thinking

systems thinking

Growing, harvesting and cooking food lessons

Design and Technologies

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			Evaluating

sustainability

design thinking

systems thinking

computational thinking

Navigating the Victorian Curriculum F–10 website

<https://victoriancurriculum.vcaa.vic.edu.au/>



VCAA resources to support you

Scope and Sequence

<https://victoriantcurriculum.vcaa.vic.edu.au/technologies/design-and-technologies/introduction/scope-and-sequence>

Victorian Curriculum Foundation-10		Design and Technologies: Foundation – Level 6		VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY	
Foundation – Level 2		Levels 3 and 4		Levels 5 and 6	
Technologies and Society Identify how people create familiar designed solutions and consider sustainability to meet personal and local community needs		Recognise the role of people in design and technologies occupations and explore factors, including sustainability, that impact on the design of solutions to meet community needs		Investigate how people in design and technologies occupations address competing considerations, including sustainability, in the design of solutions for current and future use	
Technologies Contexts					
Engineering principles and systems					
Explore how technologies use forces to create movement in designed solutions		Investigate how forces and the properties of materials affect the behaviour of a designed solution		Investigate how forces or electrical energy can control movement, sound or light in a designed product or system	
Food and fibre production					
Explore how plants and animals are grown for food, clothing and shelter		Investigate food and fibre production used in modern or traditional societies		Investigate how and why food and fibre are produced in managed environments	
Food specialisations					
Explore how food is selected and prepared for healthy eating		Investigate food preparation techniques used in modern or traditional societies		Investigate the role of food preparation in maintaining good health and the importance of food safety and hygiene	
Materials and technologies specialisations					
Explore the characteristics and properties of materials and components that are used to create designed solutions		Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes		Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use	
Creating Designed Solutions					
Investigating					
Explore needs or opportunities for designing, and the technologies needed to realise designed solutions		Critique needs or opportunities for designing and explore and test a variety of materials, components, tools and equipment and the techniques needed to create designed solutions		Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions	
Generating					

VCAA resources to support you



<https://www.vcaa.vic.edu.au/curriculum/foundation-10/resources/design-and-technologies/Pages/default.aspx>

- Curriculum planning templates
- Sample teaching planners including links to FUSE resources page for each Technologies Context
- Cross curriculum resources including STEM and Home Economics

Questions?

Do I have to teach Design and Technologies every year?

- School-based decision as to when and how the Design and Technologies curriculum is delivered.

Do I have to teach all the Technologies Contexts?

- Students need to be taught each of the four contexts across each two-year band from Levels 3–8.

Contacts

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For further advice about the implementation of the F–10 curriculum in Victorian schools, including developments, resources and professional learning opportunities, please subscribe to the F–10 Curriculum Update:

<https://www.vision6.com.au/e.m/forms/subscribe.php?db=399327&s=112201&a=18689&k=799b5d6>