

Food and wellbeing: Design and Technologies

Design and Technologies

In Design and Technologies, students learn how to apply knowledge of the characteristics of food, along with nutrition principles (as described in HPE) to food selection and preparation through the design and preparation of food for specific purposes and consumers. They will also develop understandings of contemporary technology-related food issues such as 'convenience' foods, highly processed foods, food packaging and food transport. The knowledge and understanding strand and processes and production strand are integrated to enhance learning.

The technologies contexts content descriptions provide a framework within which students can gain knowledge and understanding about technologies and design. These content descriptions focus on the characteristics and properties of technologies and how they can be used to create innovative designed solutions.

The technologies contexts in Design and Technologies related to food and wellbeing are:

F–6: Food and fibre production and food specialisations

7–10: Food specialisations, and materials and technologies specialisations.

They provide a progression of learning from Foundation to Year 8 and optionally to Year 9–10 or lead to more specialised Technologies subjects in Years 9 and 10. They also reflect national priorities including workforce needs, food security and sustainable food and fibre production and health and wellbeing priorities.

When learning about food specialisations, students will progressively develop knowledge and understanding about: the characteristics and properties of food to and apply these to food selection and preparation; and contemporary technology-related food issues through creating designed solutions.

Food and wellbeing dimensions

Design and Technologies - Years 3 and 4

Year 4

Design and technologies knowledge and understanding

Content descriptions with elaborations

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)

- critiquing designed products, services and environments to establish the factors that influence the design and use of common technologies (for example, the characteristics that contribute to energy-efficient cooking such as wok cooking; the suitability and sustainable use of particular timbers)

Investigate food and fibre production and food technologies used in modern and traditional societies (ACTDEK012)

- recognising the benefits food technologies provide for health and food safety and ensuring that a wide variety of food is available and can be prepared for healthy eating
- investigating the labels on food products to determine how the information provided contributes to

healthy eating, for example ingredients and nutrition panels

Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)

- investigating the mass production of products to ensure standardisation (for example, students setting up a production line to produce a product for a school fete)

Design and technologies processes and production skills

Content descriptions with elaborations

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)

- exploring the different uses of materials in a range of products, including those from Aboriginal and Torres Strait Islander communities and countries of Asia
- critiquing and selecting appropriate joining techniques for materials to produce working models
- exploring and testing a range of materials under different conditions for suitability including sustainability considerations and identifying appropriate tools, equipment and techniques
- examining the structure and production of everyday products, services and environments to enhance their own design ideas
- exploring the properties of materials to determine suitability (for example, the absorbency of different fabrics or the strength of different resistant materials)

Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques (ACTDEP015)

- exploring ways of joining, connecting and assembling components that ensure success
- generating a range of design ideas for intended products, services, environments
- identifying the properties of materials needed for the designed solution
- visualising and exploring innovative design ideas by producing thumbnail drawings, models and labelled drawings to explain features and modifications
- planning, sharing and documenting creative ideas and processes using digital tools such as a class blog or collaborative document

Select and use materials, components, tools equipment and techniques and use safe work practices to make designed solutions (ACTDEP016)

- using appropriate technologies terms to confidently describe and share with others procedures and techniques for making (for example cutting and joining materials)
- exploring ways of joining, connecting and assembling components that ensure success, and the impact digital technologies have had on these processes
- using tools and equipment accurately when measuring, marking and cutting; and explaining the importance of accuracy when designing and making, for example creating a template, measuring ingredients in a recipe, sowing seeds
- selecting and using materials, components, tools, equipment and processes with consideration of the environmental impact at each stage of the production process
- demonstrating safe, responsible and cooperative work practices when making designed solutions

Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment (ACTDEP017)

- negotiating criteria for success with class or group members
- evaluating, revising and selecting design ideas, based on criteria for success and including consideration of ethics, social values and sustainability
- evaluating the functional and aesthetic qualities of a designed solution
- reflecting on the sustainability implications of selected designed solutions
- comparing the amount of waste that would be produced from different design and development

options and the potential for recycling waste

- reflecting on designed solutions to critique and assess suitability, sustainability and enterprise opportunities and determine how well they meet success criteria

Plan a sequence of production steps when making designed solutions individually and collaboratively (ACTDEP018)

- determining planning processes as a class, for example recording a procedure or creating time plans
- managing time and resource allocation throughout production, for example materials, tools, equipment and people
- identifying the steps in a mass production process
- sequencing steps to collaboratively produce a designed solution