

Food and fibre: Design and Technologies

Design and Technologies

The technologies contexts content descriptions in Design and Technologies provide a framework within which students can gain knowledge and understanding about technologies and design across a range of technologies contexts. 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 provide a progression of learning from Foundation to Year 8 and optionally to Years 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.

Food and fibre production is one of the prescribed technologies contexts. Students will progressively develop knowledge and understanding about the managed systems that produce food and fibre through creating designed solutions. (Food and fibre production includes food specialisations from Foundation to Year 6.) The knowledge and understanding strand and processes and production strand are integrated to enhance learning.

Food and fibre dimensions

Design and Technologies - Foundation to Year 2

Foundation

Knowledge and understanding

Content descriptions with elaborations:

Identify how people design and produce familiar products, services and environments and consider sustainability to meet personal and local community needs (ACTDEK001)

- asking questions about natural and managed environments and impacts on them when selecting materials, tools and equipment when designing and making products, for example harvesting products from the school garden and using recycled clothing
- exploring and critiquing products, services and environments for their impact on sustainability, for example the environmental risks and benefits of a system for organically or hydroponically growing a vegetable crop from seed or seedling to harvest

Explore how plants and animals are grown for food, clothing and shelter and how food is selected and prepared for healthy eating (ACTDEK003)

- exploring which plants and animals can provide food or materials for clothing and shelter and what basic needs those plants and animals have
- identifying products that can be designed and produced from plants and animals, for example food products, paper and wood products, fabrics and yarns, and fertilisers
- considering the suitability of a range of tools when cultivating gardens, mulching and building garden structures and preparing and cooking food from recipes
- identifying and categorising a wide range of foods, including Aboriginal bush foods, into food groups and describing tools and equipment needed to prepare these for healthy eating

Processes and production skills

Content descriptions with elaborations:

Explore needs or opportunities for designing, and the technologies needed to realise designed solutions (ACTDEP005)

- discussing possible designed solutions based on experience and some research, for example asking adults for advice

Generate, develop and record design ideas through describing, drawing and modelling (ACTDEP006)

- communicating design ideas by modelling, and producing and labelling two-dimensional drawings using a range of technologies to show different views (top view and side view), for example a new environment such as a cubby house or animal shelter

Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)

- learning and safely practising a range of technical skills using tools and equipment, for example joining techniques when making products, watering and mulching gardens, preparing food, using software to design an environment

Use personal preferences to evaluate the success of design ideas, processes and solutions including their care for environment (ACTDEP008)

- developing criteria for success with teacher guidance including consideration of impact on environment

Sequence steps for making designed solutions and working collaboratively (ACTDEP009)

- checking that planned features have been included in design plans and drawings by referring to identified criteria for success including care for the environment
- using lists or storyboarding when planning and making, for example when planning an electronic planting calendar

Year 1

Knowledge and understanding

Content descriptions with elaborations:

Identify how people design and produce familiar products, services and environments and consider sustainability to meet personal and local community needs (ACTDEK001)

- asking questions about natural and managed environments and impacts on them when selecting materials, tools and equipment when designing and making products, for example harvesting products from the school garden and using recycled clothing
- exploring and critiquing products, services and environments for their impact on sustainability, for example the environmental risks and benefits of a system for organically or hydroponically growing a vegetable crop from seed or seedling to harvest

Explore how plants and animals are grown for food, clothing and shelter and how food is selected and prepared for healthy eating (ACTDEK003)

- exploring which plants and animals can provide food or materials for clothing and shelter and what basic needs those plants and animals have
- identifying products that can be designed and produced from plants and animals, for example food products, paper and wood products, fabrics and yarns, and fertilisers
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Year 2

Knowledge and understanding

Content descriptions with elaborations:

Identify how people design and produce familiar products, services and environments and consider sustainability to meet personal and local community needs (ACTDEK001)

Elaborations:

- asking questions about natural and managed environments and impacts on them when selecting materials, tools and equipment when designing and making products, for example harvesting products from the school garden and using recycled clothing
- exploring and critiquing products, services and environments for their impact on sustainability, for example the environmental risks and benefits of a system for organically or hydroponically growing a vegetable crop from seed or seedling to harvest

Content description:

Explore how plants and animals are grown for food, clothing and shelter and how food is selected and prepared for healthy eating (ACTDEK003)

Elaborations:

- exploring which plants and animals can provide food or materials for clothing and shelter and what basic needs those plants and animals have
- identifying products that can be designed and produced from plants and animals, for example food products, paper and wood products, fabrics and yarns, and fertilisers
- considering the suitability of a range of tools when cultivating gardens, mulching and building garden structures and preparing and cooking food from recipes
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