https://forestlearning.edu.au/find-a-resource/article/116/design-and-technologies-the-sustainable-seating-project.html

Design and Technologies - The Sustainable Seating Project

Lesson Overview:

ForestLearning and the Design and Technologies Teachers Association of Victoria (DATTA Vic) have developed this eight-lesson resource to align with Version 9.0 Australian Curriculum Years 7-8 Design and Technologies.

Students will investigate the properties and sustainability of materials including cardboard and explore the importance of sustainable forest management to produce wood pulp for the manufacture of cardboard. Using ForestVR 360o videos, students go on virtual excursions to an Australian pine plantation and paper mill to experience the cycle of growing sustainable wood fibre and how it is processed into paperboard.

Following the design thinking process, students investigate, design, produce and evaluate a sustainable seat made from upcycled cardboard.

Year Level/s:

7, 8

Key Curriculum Areas / Subject:

Design and Technologies

National Curriculum Codes:

AC9TDE8K01, AC9TDE8K04, AC9TDE8K06, AC9TDE8P01, AC9TDE8P02, AC9TDE8P03, AC9TDE8P04, AC9TDE8P05

Strand Content Description:

Design and Technologies

- **AC9TDE8K01** - analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments
- **AC9TDE8K04** - analyse how food and fibre are produced in managed environments and how these can become sustainable
- **AC9TDE8K06** - analyse how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions
- **AC9TDE8P01** - analyse needs or opportunities for designing, and investigate and select materials, components, tools, equipment and processes to create designed solutions

- **AC9TDE8P02** - generate, test, iterate and communicate design ideas, processes and solutions using technical terms and graphical representation techniques, including using digital tools
- **AC9TDE8P03** - select, justify and use suitable materials, components, tools, equipment, skills and processes to safely make designed solutions
- **AC9TDE8P04** - develop design criteria collaboratively including sustainability to evaluate design ideas, processes and solutions
- **AC9TDE8P05** - develop project plans to individually and collaboratively manage time, cost and production of designed solutions

General Capabilities:

Critical and Creative Thinking, Ethical Understanding, Information and Communication Technology (ICT) Capability, Intercultural Understanding, Personal and Social Capabilities

Cross Curriculum Priorities:

Sustainability

Curriculum Connections:

Design and Technologies

ScOT Catalogue Terms:

Carbon, Design, Environmental Sustainability, Materials, Sustainability

Theme/s:

Forestry - Sustainability and Certification, Forestry Products - Processing and Technology, Forest Futures - Carbon Renewable Resources and Innovation

Resource Type/s:

Primary: 7

Secondary: 1