Make+Meld

Leaders in Primary School Design Tech Incursions

Engaging for students, effortless for teachers!

Curriculum Linked Design Tech Incursions Led by Industry Professionals

Make+Meld 2024 School Program Summary

Project and Inquiry based learning, linking design technologies + design thinking across curriculum areas for Prep to Year 6.

We provide all the equipment, tools, materials, resources and expertise to guide your students to bring their projects to life!

You Provide: An undercover area + some trestle tables. **Email: info@makeandmeld.com.au or ph: 0435110866 for a detailed quote**

Year Level	Incursion Program	$ per head
Prep	Outdoor Sculptures	$19.00
Prep + 1	Native Bee Hotels	$19.20
Year 1	Cloud Lamps	$24.90
Prep - Year 1	Mini Wooden Towns	$19.20
Year 1	Animal Habitat/Enclosure Design	$18.80
Prep - Year 4	Playground Designs	$18.80
Year 1 + 2	It's Showtime! Puppets	$20.90
Prep - Year 2	Forces in motion - Push/Pull Toys	$21.20

Year Level	Incursion Program	$ per head
Year 1+2	Design + Make a Musical Instrument	$19.20
Year 3	Design + Make a Clock	$24.90
Year 4	Pinball Machines - Fast Forces	$26.90
Year 4 + 5	Papercrete and moulds	$19.20
Year 4 + 5	Re-purpose it!	$18.90
Year 5	Design for Nature - Scale Models	$18.80
Year 5 + 6	Cam Toys/Automata	$22.90
Year 6	Circuits in design	$18.20 / $21.20
Year 4 - 6	Designs for Climate Change	$18.80

Provocation available! Make+Meld can visit your class in the weeks prior to incursion Day to present the Design Challenge and get students excited!

Thank you so much again for this wonderful experience for our students that has linked so beautifully to our term 3 science unit. ***Yr 1 Teacher, West End State School***

You did an amazing job of bringing the subject to life for the students.
Deputy Principal, Dutton Park State School

Prep

DESIGN+SCIENCE

Properties of Materials - Outdoor collaborative class sculptures!

Students are guided in the safe use of basic hand tools while creating an outdoor sculpture as they explore materials that not only last outdoors but also reflect light and move with the wind.

Learning Areas and Curriculum Links

Science

Chemical sciences
Recognise that objects can be composed of different materials and describe the observable properties of those materials (AC9SFU03) *(ACSSU003)*

Physical sciences
Describe how objects move and how factors including their size, shape or material influence their movement (AC9SFU02) *(ACSSU003)*

Science Inquiry
Questioning, Predicting, Planning and Conducting, Processing, modelling and analysing, Evaluating, Communicating.

Design and Technologies

Technologies and Society
Explore how familiar products, services and environments are designed by people (AC9TDEFK01) *(ACTDEK002, ACTDEK004)*

Designing and Making
Generate, communicate and evaluate design ideas, and use materials, equipment and steps to safely make a solution for a purpose (AC9TDEFP01) *(ACTDEP006, ACTDEP007, ACTDEP008, ACTDEP009)*

Visual Art

Exploring and responding
explore how and why the arts are important for people and communities (AC9AVAFE01) *(ACAVAM107)*

Prep - Year 1

DESIGN+SCIENCE

Living Things - Making Native Bee Hotels!

Students explore the importance of native bees as pollinators and discuss ways we can help to provide food and shelter to support native bees. They are then guided in the safe use of tools as they build, assemble and decorate their own native bee hotel.

Learning Areas and Curriculum Links

Science

Biological Sciences

Observe external features of plants and animals and describe ways they can be grouped based on these features (AC9SFU01).

Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs (AC9S1U01) *(ACSSU002)*

Chemical sciences

Recognise that objects can be composed of different materials and describe the observable properties of those materials (AC9SFU03) *(ACSSU003) (ACSSU018)*

Use and influence of science

Describe how people use science in their daily lives, including using patterns to make scientific predictions (AC9S1H01)

Science Inquiry

Questioning and Predicting, Planning and conducting, processing, modelling and analysing, Evaluating and Communicating

Design and Technologies

Technologies and Society

Explore how familiar products, services and environments are designed by people (AC9TDEFK01) *(ACTDEK002, ACTDEK004)*

Designing and Making

Generate, communicate and evaluate design ideas, and use materials, equipment and steps to safely make a solution for a purpose (AC9TDEFP01) (AC9TDE2P02, AC9TDE2P03, AC9TDE2P04) *(ACTDEP006, ACTDEP007, ACTDEP008, ACTDEP009)*

Visual Art

Developing practices and skills

Use play, imagination, arts knowledge, processes and/or skills to discover possibilities and develop ideas AC9AVAFD01) *(ACAVAM107)*

Creating and making

Create arts works that communicate ideas (AC9AVAFC01)

Year 1 - Year 2

DESIGN+SCIENCE

Weather - Make your own cloud lamp!




Which type of cloud will you make? Stratus, cumulus, cirrus? Students use production techniques and tools safely as they assemble their own cloud lamps from timber, re-purposed and everyday materials.

Learning Areas and Curriculum Links

Science

Earth and space sciences
Describe daily and seasonal changes in the environment and explore how these changes affect everyday life (AC9S1U02)
Observable changes occur in the sky and landscape *(ACSSU019)*

Chemical Sciences
Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces (AC9S2U03) *(ACSSU003) (ACSSU018) (ACSSU031)*

Use and influence of science
Describe how people use science in their daily lives, including using patterns to make scientific predictions (AC9S1H01)

Science Inquiry Questioning and Predicting, Planning and conducting, processing, modelling and analysing, Evaluating and Communicating

Design and Technologies

Technologies and society
Identify how familiar products, services and environments are designed and produced by people to meet personal or local community needs and sustainability (AC9TDE2K01) *(ACTDEK001)*

Engineering principles and systems; Materials and technologies
Explore how technologies including materials affect movement in products (AC9TDE2K02) *(ACTDEK004)*

Processes and production skills
Producing and implementing - use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE2P02) *(ACTDEP007)*
Evaluating - evaluate the success of design ideas and solutions based on personal preferences and including sustainability (AC9TDE2P03) *(ACTDEP008)*
Collaborating and managing - sequence steps for making designed solutions cooperatively (AC9TDE2P04) *(ACTDEP009)*

Prep - Year 1

DESIGN+HASS

Places in your community - Design and build a mini wooden town!

Students explore places in their community as they design and then construct their own mini wooden town using real woodworking tools to create their own people, vehicles, buildings and other key features.

Learning Areas and Curriculum Links

HASS

Geography

The features of familiar places they belong to, why some places are special and how places can be looked after (AC9HSFK03)

The natural, managed and constructed features of local places, and their location (AC9HS1K03) *(ACHASSK031, ACHASSK033)*

How places change and how they can be cared for by different groups including First Nations Australians (AC9HS1K04)

HASS Skills

Questioning and researching (AC9HSFS01) (AC9HS1S01) (AC9HSFS02 (AC9HS1S02) *(ASHASSI019, ACHASSI020, ACHASSI021)*

Interpreting, analysing and evaluating (AC9HSFS03) (AC9HS1S03) (AC9HS1S04) *(ASHASSI022, ACHASSI023, ACHASSI024)*

Communicating (AC9HSFS05) (AC9HS1S06) *(ASHASSI027)*

Design and Technologies

Technologies and society

Identify how familiar products, services and environments are designed and produced by people to meet personal or local community needs and sustainability (AC9TDE2K01) *(ACTDEK001)*

Engineering principles and systems; Materials and technologies

Explore how technologies including materials affect movement in products (AC9TDE2K02) *(ACTDEK004)*

Processes and production skills

Generating and Designing - Generate and communicate design ideas through describing, drawing or modelling, including using digital tools (AC9TDE2P01) *(ACTDEP009)*

Producing and implementing - use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE2P02) *(ACTDEP007)*

Evaluating - evaluate the success of design ideas and solutions based on personal preferences and including sustainability (AC9TDE2P03) *(ACTDEP008)*

Collaborating and managing - sequence steps for making designed solutions cooperatively (AC9TDE2P04) *(ACTDEP009)*

Prep - Year 2

Provocation available!

DESIGN+SCIENCE

Playground Design Challenge - Design a playground + build a scale model!

Students explore playground design and push/pull forces as they design and build a model playground with moving parts.

Learning Areas and Curriculum Links

Science

Physical Science

Describe how objects move and how factors including their size, shape or material influence their movement (AC9SFU02) *(ACSSU005)*
Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape (AC9S1U03) *(ACSSU033)*

HASS

Geography

The features of familiar places they belong to, why some places are special and how places can be looked after (AC9HSFK03)
The natural, managed and constructed features of local places, and their location (AC9HS1K03) *(ACHASSK031, ACHASSK033)*

Design and Technologies

Technologies and society

Identify how familiar products, services and environments are designed and produced by people to meet personal or local community needs and sustainability (AC9TDE2K01) *(ACTDEK001)*

Engineering principles and systems; Materials and technologies

Explore how technologies including materials affect movement in products (AC9TDE2K02) *(ACTDEK002, ACTDEK004)*

Processes and production skills

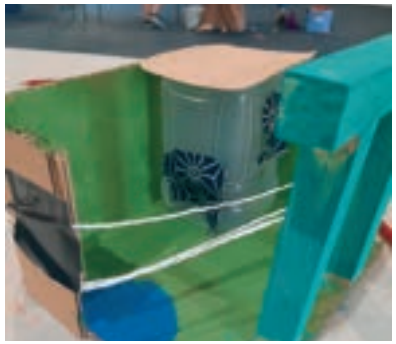
Generating and Designing - Generate and communicate design ideas through describing, drawing or modelling, including using digital tools (AC9TDE2P01) *(ACTDEP006)*
Producing and implementing - use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE2P02) *(ACTDEP007)*
Evaluating - evaluate the success of design ideas and solutions based on personal preferences and including sustainability (AC9TDE2P03) *(ACTDEP008)*
Collaborating and managing - sequence steps for making designed solutions cooperatively (AC9TDE2P04) *(ACTDEP009)*

Prep - Year 2

Provocation available!

DESIGN+SCIENCE

Animal Habitat + Zoos - Design an animal enclosure + build a scale model!



Students explore the needs of animals in zoos and animal sanctuaries. They consider the habitat and behavioural needs of animals and then design + build a scale model of the best animal enclosure for their chosen animal.

Learning Areas and Curriculum Links

Science

Biological Sciences

Observe external features of plants and animals and describe ways they can be grouped based on these features (AC9SFU01).

Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs (AC9S1U01) *(ASCSSU002)*

Chemical sciences

Recognise that objects can be composed of different materials and describe the observable properties of those materials (AC9SFU03) *(ACSSU003) (ACSSU031)*

Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces (AC9S2U03) *(ACSSU018)*

HASS - Geography

The features of familiar places they belong to, why some places are special and how places can be looked after (AC9HSFK03)

Design and Technologies

Technologies and society

Identify how familiar products, services and environments are designed and produced by people to meet personal or local community needs and sustainability (AC9TDE2K01) *(ACTDEK001)*

Engineering principles and systems; Materials and technologies

Explore how technologies including materials affect movement in products (AC9TDE2K02) *(ACTDEK002, ACTDEK004)*

Processes and production skills

Generating and Designing - Generate and communicate design ideas through describing, drawing or modelling, including using digital tools (AC9TDE2P01) *(ACTDEP006)*

Producing and implementing - use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE2P02) *(ACTDEP007)*

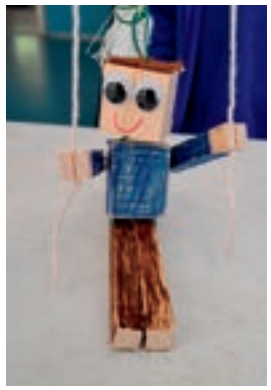
Evaluating - evaluate the success of design ideas and solutions based on personal preferences and including sustainability (AC9TDE2P03) *(ACTDEP008)*

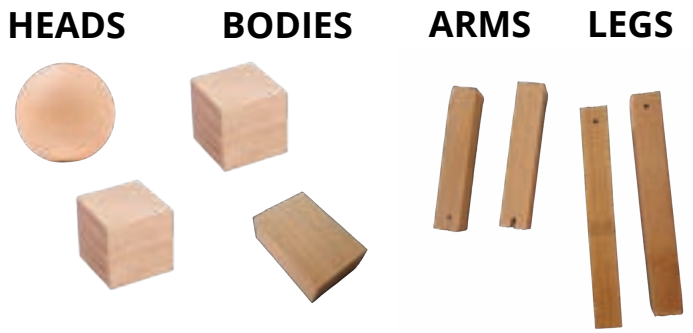
Collaborating and managing - sequence steps for making designed solutions cooperatively (AC9TDE2P04) *(ACTDEP009)*

Year 1 - Year 2

DESIGN+SCIENCE

It's Showtime - Design + make your own character puppet!





Students explore properties of materials, movement and joining techniques as they design their own character puppet and construct it using a range of materials, tools and techniques.

Learning Areas and Curriculum Links

Science

Physical sciences
describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape (AC9S1U03)

Chemical sciences
recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces (AC9S2U03) *(ACSSU031) (ACSSU018)*

Use and influence of science
Describe how people use science in their daily lives, including using patterns to make scientific predictions (AC9S1H01)

Science Inquiry
Questioning and Predicting, Planning and conducting, processing, modelling and analysing, Evaluating and Communicating

Design and Technologies

Technologies and society
Identify how familiar products, services and environments are designed and produced by people to meet personal or local community needs and sustainability (AC9TDE2K01) *(ACTDEK001)*

Engineering principles and systems; Materials and technologies
Explore how technologies including materials affect movement in products (AC9TDE2K02) *(ACTDEK002, ACTDEK004)*

Processes and production skills
Generating and Designing - Generate and communicate design ideas through describing, drawing or modelling, including using digital tools (AC9TDE2P01) *(ACTDEP006)*
Producing and implementing - use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE2P02) *(ACTDEP007)*
Evaluating - evaluate the success of design ideas and solutions based on personal preferences and including sustainability (AC9TDE2P03) *(ACTDEP008)*
Collaborating and managing - sequence steps for making designed solutions cooperatively (AC9TDE2P04) *(ACTDEP009)*

Prep to Year 2

Provocation available!

DESIGN+SCIENCE

Forces in Motion - Design and build a push and pull toy!





This program focuses on exploring push-pull forces as students are challenged to design their own toy with moving parts! Using the design process students imagine, plan and then construct their toy using the tools, materials and parts provided on incursion day!

Learning Areas and Curriculum Links

Science

Physical sciences

Describe how objects move and how factors including their size, shape or material influence their movement (AC9SFU02) *(ACSSU005)*
Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape (AC9S1U03)*(ACSSU033)*

Chemical Sciences

Recognise that objects can be composed of different materials and describe the observable properties of those materials (AC9SFU03) *(ACSSU003)*
Recognise that materials can be changed physically without changing their material composition (AC9S2U03) *(ACSSU018)(ACSSU031)*

Use and influence of science

Describe how people use science in their daily lives, including using patterns to make scientific predictions (AC9S1H01) *(AC9S2H01)*

Science Inquiry

Questioning and Predicting; Planning and conducting; Processing, modelling and analysing: Evaluating; Communicating

Design and Technologies

Technologies and society

Identify how familiar products, services and environments are designed and produced by people to meet personal or local community needs and sustainability (AC9TDE2K01) *(ACTDEK001)*

Engineering principles and systems; Materials and technologies

Explore how technologies including materials affect movement in products (AC9TDE2K02) *(ACTDEK002, ACTDEK004)*

Processes and production skills

Generating and Designing - Generate and communicate design ideas through describing, drawing or modelling, including using digital tools (AC9TDE2P01) *(ACTDEP006)*
Producing and implementing - use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE2P02) *(ACTDEP007)*
Evaluating - evaluate the success of design ideas and solutions based on personal preferences and including sustainability (AC9TDE2P03) *(ACTDEP008)*
Collaborating and managing - sequence steps for making designed solutions cooperatively (AC9TDE2P04) *(ACTDEP009)*

Year 1 - Year 2

Provocation available!

DESIGN+SCIENCE

Making Sounds - Build a musical instrument (Make your own Kazoo)

This program focuses on exploring sound energy as students build their own 'vibrating' musical instrument! Students are guided to use real wood working tools and a range of components, materials and equipment safely to make their own Wooden Kazoo!

Learning Areas and Curriculum Links

Science

Physical sciences
Explore different actions to make sounds and how to make a variety of sounds, and recognise that sound energy causes objects to vibrate (AC9S2U02) *(ACSSU020)*

Chemical Sciences
Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces (AC9S2U03) *(ACSSU018)(ACSSU031)*

Use and influence of science
Describe how people use science in their daily lives, including using patterns to make scientific predictions (AC9S1H01) (AC9S2H01)

Science Inquiry
Questioning and Predicting; Planning and conducting; Processing, modelling and analysing: Evaluating; Communicating

Design and Technologies

Technologies and society
Identify how familiar products, services and environments are designed and produced by people to meet personal or local community needs and sustainability (AC9TDE2K01) *(ACTDEK001)*

Engineering principles and systems; Materials and technologies
Explore how technologies including materials affect movement in products (AC9TDE2K02) *(ACTDEK002, ACTDEK004)*

Processes and production skills
Producing and implementing - use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE2P02) *(ACTDEP007)*
Evaluating - evaluate the success of design ideas and solutions based on personal preferences and including sustainability (AC9TDE2P03) *(ACTDEP008)*
Collaborating and managing - sequence steps for making designed solutions cooperatively (AC9TDE2P04) *(ACTDEP009)*

Year 3

DESIGN+MATHS

CLOCKS - Design a clock to help you tell the time



In this project, each student builds and assembles their own working analogue clock. They learn to draw a perfect circle and explore angles using basic tools and techniques. Students decorate the clock face with their own unique designs, using numbers, colours and symbols that help them to practice telling the time.

Learning Areas and Curriculum Links

Maths

Measurement
Recognise and use the relationship between formal units of time including days, hours, minutes and seconds to estimate and compare the duration of events (AC9M3M03)
Describe the relationship between the hours and minutes on analog and digital clocks, and read the time to the nearest minute (AC9M3M04) *(ACMMG062)*
Identify angles as measures of turn and compare angles with right angles in everyday situations (AC9M3M05) *(ACMMG064)*

Design and Technologies

Technologies and society
Examine design and technologies occupations and factors including sustainability that impact on the design of products, services and environments to meet community needs (AC9TDE4K01).

Engineering principles and systems; Materials and technologies
Describe how forces and the properties of materials affect function in a product or system (AC9TDE4K02) *(ACTDEK013)*

Processes and production skills
Investigating and defining - explore needs or opportunities for designing, and test materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE4P01) *(ACTDEP014)*
Generating and designing - generate and communicate design ideas and decisions using appropriate attributions, technical terms and graphical representation techniques, including using digital tools (AC9TDE4P02) *(ACTDEP015)*
Producing and implementing - select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE4P03) *(ACTDEP016)*
Evaluating - use given or co-developed design criteria including sustainability to evaluate design ideas and solutions (AC9TDE4P04) *(ACTDEP017)*
Collaborating and managing - sequence steps to individually and collaboratively make designed solutions (AC9TDE4P05) *(ACTDEP018)*

Year 4

Provocation available!

DESIGN+SCIENCE
Forces - Design and build a wooden pinball machine!




Students apply their understanding of contact and non-contact forces as they design and build their own pinball game. Using a range of materials and tools, students construct tricks and other obstacles, within a provided base.

Learning Areas and Curriculum Links

Science

Physical sciences
Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects (AC9S4U03) *(ACSSU076)*

Chemical Science
Examine the properties of natural and made materials including fibres, metals, glass and plastics and consider how these properties influence their use (AC9S4U04)

Nature and development of science
Examine how people use data to develop scientific explanations (AC9S4H01)

Use and influence of science
Consider how people use scientific explanations to meet a need or solve a problem (AC9S4H02)

Science Inquiry
Questioning and predicting, Planning and conducting, Processing, modelling and analysing, Evaluating, Communicating

Design and Technologies

Technologies and society
Examine design and technologies occupations and factors including sustainability that impact on the design of products, services and environments to meet community needs (AC9TDE4K01).

Engineering principles and systems; Materials and technologies
Describe how forces and the properties of materials affect function in a product or system (AC9TDE4K02) *(ACTDEK013)*

Processes and production skills
Investigating and defining - explore needs or opportunities for designing, and test materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE4P01) *(ACTDEP014)*
Generating and designing - generate and communicate design ideas and decisions using appropriate attributions, technical terms and graphical representation techniques, including using digital tools (AC9TDE4P02) *(ACTDEP015)*
Producing and implementing - select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE4P03) *(ACTDEP016)*
Evaluating - use given or co-developed design criteria including sustainability to evaluate design ideas and solutions (AC9TDE4P04) *(ACTDEP017)*
Collaborating and managing - sequence steps to individually and collaboratively make designed solutions (AC9TDE4P05) *(ACTDEP018)*

Year 4 to Year 6 ★ Provocation available!

DESIGN+SCIENCE

Paper products in design - Designing moulds and making papercrete!




This program gives students an opportunity to learn about the process of mould-making, recycling and the changing states of materials. Students will be challenged to design and and then construct and and make papercrete to fill their mould during a 1.25hr workshop incursion.

Learning Areas and Curriculum Links

Science

Chemical science

Examine the properties of natural and made materials including fibres, metals, glass and plastics and consider how these properties influence their use (AC9S4U04)

Explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles (AC9S5U04)

Compare reversible changes, including dissolving and changes of state, and irreversible changes, including cooking and rusting that produce new substances (AC9S6U04)

Nature and development of science

Examine why advances in science are often the result of collaboration or build on the work of others (AC9S5H01)

Use and influence of science

Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions (AC9S5H02)

Design and Technologies

Technologies and society

Examine design and technologies occupations and factors including sustainability that impact on the design of products, services and environments to meet community needs (AC9TDE4K01) (AC9TDE6K01)

Food and fibre production

Describe the ways of producing food and fibre (AC9TDE4K03) (AC9TDE6K03)

Processes and production skills

Investigating and defining - explore needs or opportunities for designing, and test materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE4P01) (AC9TDE6P01) *(ACTDEP014)*

Generating and designing - generate and communicate design ideas and decisions using appropriate attributions, technical terms and graphical representation techniques, including using digital tools (AC9TDE4P02) (AC9TDE6P02) *(ACTDEP015)*

Producing and implementing - select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE4P03) (AC9TDE6P03) *(ACTDEP016)*

Evaluating - use given or co-developed design criteria including sustainability to evaluate design ideas and solutions (AC9TDE4P04) (AC9TDE6P04) *(ACTDEP017)*

Collaborating and managing - sequence steps to individually and collaboratively make designed solutions (AC9TDE4P05) (AC9TDE6P05) *(ACTDEP018)*

Year 4 - Year 5

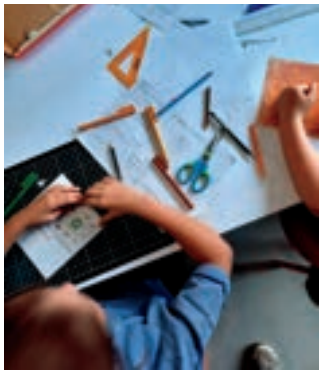
Provocation available!

DESIGN+SCIENCE

Re-purpose it - Repurpose an item of used clothing to design and produce a new useful item!








Students explore the suitability of different materials for different purposes by considering their physical and chemical properties. They are exposed to a range of joining methods (including sewing and woodwork techniques) and students apply this knowledge as they are challenged to design and produce their own new useful item out of re-purposed fabric and other materials.

Learning Areas and Curriculum Links

Science

Chemical science
Examine the properties of natural and made materials including fibres, metals, glass and plastics and consider how these properties influence their use (AC9S4U04) *(ACSSU074)*

Nature and development of science
Examine why advances in science are often the result of collaboration or build on the work of others (AC9S5H01)

Use and influence of science
Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions (AC9S5H02) *(ACSHE062)*

Design and Technologies

Technologies and society
Examine design and technologies occupations and factors including sustainability that impact on the design of products, services and environments to meet community needs (AC9TDE4K01) (AC9TDE6K01)

Food and fibre production
Describe the ways of producing food and fibre (AC9TDE4K03) (AC9TDE6K03)

Processes and production skills
Investigating and defining - explore needs or opportunities for designing, and test materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE4P01) (AC9TDE6P01) *(ACTDEP014)*
Generating and designing - generate and communicate design ideas and decisions using appropriate attributions, technical terms and graphical representation techniques, including using digital tools (AC9TDE4P02) (AC9TDE6P02) *(ACTDEP015)*
Producing and implementing - select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE4P03) (AC9TDE6P03) *(ACTDEP016)*
Evaluating - use given or co-developed design criteria including sustainability to evaluate design ideas and solutions (AC9TDE4P04) (AC9TDE6P04) *(ACTDEP017)*
Collaborating and managing - sequence steps to individually and collaboratively make designed solutions (AC9TDE4P05) (AC9TDE6P05) *(ACTDEP018)*

Year 5 - Year 6

Provocation available!

DESIGN+SCIENCE

Design for Nature - Prototypes and model making




Students are challenged to solve real world problems as they consider the impacts of drought on native animals and design a solution that assists animals to access shelter, food or water. Students given the opportunity to bring their designs to life as they use a variety of tools and materials to create scale models (or Prototypes) of their designs.

Learning Areas and Curriculum Links

Science

Biological sciences
Examine how particular structural features and behaviours of living things enable their survival in specific habitats (AC9S5U01)
investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions (AC9S6U01)

Nature and development of science
Examine why advances in science are often the result of collaboration or build on the work of others (AC9S5H01)

Use and influence of science
Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions (AC9S5H02)

Science Inquiry
Questioning and predicting, Planning and conducting, Processing, modelling and analysing, Evaluating, Communicating

Design and Technologies

Technologies and society
Explain how people in design and technologies occupations consider competing factors including sustainability in the design of products, services and environments (AC9TDE6K01)

Processes and production skills
Investigating and defining - investigate needs or opportunities for designing, and the materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE6P01) *(ACTDEP014)*
Generating and designing - generate, iterate and communicate design ideas, decisions and processes using technical terms and graphical representation techniques, including using digital tools (AC9TDE6P02) *(ACTDEP015)*
Producing and implementing - select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE6P03) *(ACTDEP016)*
Evaluating - negotiate design criteria including sustainability to evaluate design ideas, processes and solutions (AC9TDE6P04) *(ACTDEP017)*
Collaborating and managing - develop project plans that include consideration of resources to individually and collaboratively make designed solutions (AC9TDE6P05) *(ACTDEP018)*

Year 5 - Year 6

DESIGN + TECHNOLOGIES

Design and build your own Cam Toy Automata!



Students explore engineering principles and simple mechanics as they design and build a Cam Toy with moving parts and scenery that represent concepts related to a specific learning area (i.e. extreme weather events and geological changes). As part of the production process students are exposed to a range of materials, tools and techniques to construct their design.

Learning Areas and Curriculum Links

<u>Cross Curriculum Links - choose a design challenge to link with classroom learning, for example -</u>

Science
Design a cam toy/automata to depict a sudden geological change or extreme weather event (earthquakes, volcanic eruptions and tsunamis).

OR

English
Design a Cam Toy/Automata to depict a scene from literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander Peoples

<u>Design and Technologies</u>

Technologies and society
Explain how people in design and technologies occupations consider competing factors including sustainability in the design of products, services and environments (AC9TDE6K01)

Materials and technologies specialisations
Explain how characteristics and properties of materials, systems, components, tools and equipment affect their use when producing designed solutions (AC9TDE6K05)

Processes and production skills
<u>Investigating and defining</u> - investigate needs or opportunities for designing, and the materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE6P01) *(ACTDEP014)*
<u>Generating and designing</u> - generate, iterate and communicate design ideas, decisions and processes using technical terms and graphical representation techniques, including using digital tools (AC9TDE6P02) *(ACTDEP015)*
<u>Producing and implementing</u> - select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE6P03) *(ACTDEP016)*
<u>Evaluating</u> - negotiate design criteria including sustainability to evaluate design ideas, processes and solutions (AC9TDE6P04) *(ACTDEP017)*
<u>Collaborating and managing</u> - develop project plans that include consideration of resources to individually and collaboratively make designed solutions (AC9TDE6P05) *(ACTDEP018)*

Year 6

Provocation available!

DESIGN+SCIENCE

Secure environment challenge! - Circuits in design and model making




Using their knowledge of electrical circuits, students are challenged to design a working security system within an environment of their choosing (such as a bank, bedroom). Students work in pairs to design + build a model of their secure environment giving consideration to aesthetics, story and appropriate selection of tools and materials.

Learning Areas and Curriculum Links

Science

Physical sciences
Investigate the transfer and transformation of energy in electrical circuits, including the role of circuit components, insulators and conductors (AC9S6U03)

Nature and development of science
Examine why advances in science are often the result of collaboration or build on the work of others (AC9S5H01) (AC9S6H01)

Science Inquiry
Questioning and predicting, Planning and conducting, Processing, modelling and analysing, Evaluating, Communicating

Design and Technologies

Engineering principles and systems
Explain how electrical energy can be transformed into movement, sound or light in a product or system
(AC9TDE6K02)

Materials and technologies specialisations
Explain how characteristics and properties of materials, systems, components, tools and equipment affect their use when producing designed solutions (AC9TDE6K05)

Processes and production skills
Investigating and defining - investigate needs or opportunities for designing, and the materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE6P01) *(ACTDEP014)*
Generating and designing - generate, iterate and communicate design ideas, decisions and processes using technical terms and graphical representation techniques, including using digital tools (AC9TDE6P02) *(ACTDEP015)*
Producing and implementing - select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE6P03) *(ACTDEP016)*
Evaluating - negotiate design criteria including sustainability to evaluate design ideas, processes and solutions (AC9TDE6P04) *(ACTDEP017)*
Collaborating and managing - develop project plans that include consideration of resources to individually and collaboratively make designed solutions (AC9TDE6P05) *(ACTDEP018)*

Year 4 to Year 6

Provocation available!

DESIGN+SCIENCE

Designs for Climate Change - designing solutions and prototyping!

Students are asked the question - What impacts might climate change have for the future? Students explore impacts, including extreme weather, rising temperatures and sea level rise and are challenged to design a solution to assist humans to survive in an imagined future.

Learning Areas and Curriculum Links

Science

Biological sciences
Investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions (AC9S6U01)

Nature and development of science
Examine why advances in science are often the result of collaboration or build on the work of others (AC9S5H01) (AC9S6H01)

Use and influence of science
Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions (AC9S6H02)

Science Inquiry
Questioning and predicting, Planning and conducting, Processing, modelling and analysing, Evaluating, Communicating

Design and Technologies

Materials and technologies specialisations
Explain how characteristics and properties of materials, systems, components, tools and equipment affect their use when producing designed solutions (AC9TDE6K05)

Processes and production skills
Investigating and defining - investigate needs or opportunities for designing, and the materials, components, tools, equipment and processes needed to create designed solutions (AC9TDE6P01) *(ACTDEP014)*
Generating and designing - generate, iterate and communicate design ideas, decisions and processes using technical terms and graphical representation techniques, including using digital tools (AC9TDE6P02) *(ACTDEP015)*
Producing and implementing - select and use materials, components, tools, equipment and techniques to safely make designed solutions (AC9TDE6P03) *(ACTDEP016)*
Evaluating - negotiate design criteria including sustainability to evaluate design ideas, processes and solutions (AC9TDE6P04) *(ACTDEP017)*
Collaborating and managing - develop project plans that include consideration of resources to individually and collaboratively make designed solutions (AC9TDE6P05) *(ACTDEP018)*

A local Brisbane based business supporting local schools!

Incursions starting from $15 per student, plus materials

We'll work with you to provide the best incursion fit for your school

- Programs can be customised to complement the needs of your school.
- We work with the Head of Curriculum and Teachers to ensure we meet the specific learning needs of your group.
- Extension resources are provided to include learning in the classroom beyond the incursion.
- Extensive insurance and full risk assessments are provided for all sessions.

For more information and bookings please email
info@makeandmeld.com.au
call 0435 110 866
or visit our workshop 23/133 Hyde Rd, Yeronga 4104

Helen and Emily