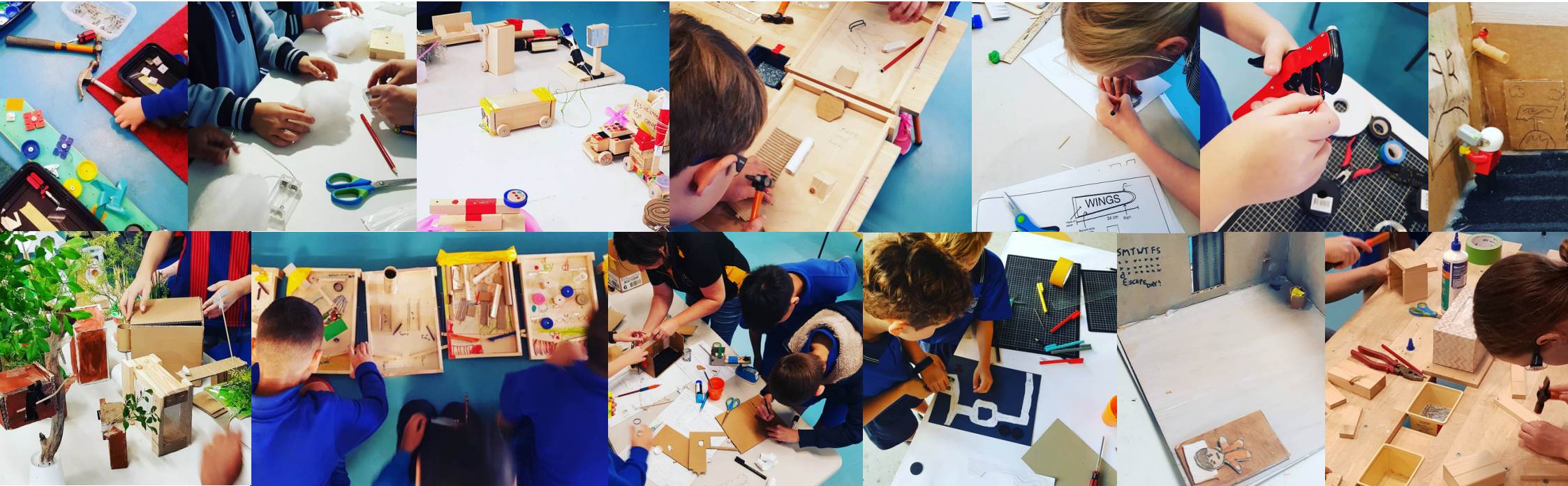


# Make&Meld

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 TECH and design thinking across curriculum areas for Prep to Year 6.**  
**Make&Meld's Mobile Makerspace provides all of the equipment, tools, materials, resources and expertise for your class project.**

**You Provide:** An undercover area, some trestle tables and a few parent helpers. We partner with you to deliver your students' prototypes.

**email: [info@makeandmeld.com.au](mailto:info@makeandmeld.com.au) or ph: 0435110866 for a detailed quote**

Year Level (suggestion only)	Incursion Program	Cost per student	Year Level (suggestion only)	Incursion Program	Cost per student
Prep	Collaborative Outdoor Sculptures	\$19.00	Year 4	Pinball Machines	\$26.90
Prep	Native Bee Hotels	\$19.20	Year 4	Papercrete and moulds	\$19.20
Year 1	Cloud Lamps	\$24.90	Year 4/5	Re-purpose it!	\$18.90
Year 1	Mini Towns	\$19.20	Year 5	Design for Nature - Scale Models	\$18.20
Year 1/2	It's Showtime!	\$20.90	Year 5/6	Cam Toys/Automata	\$22.90
Year 2	Forces in motion	\$21.20	Year 6	Circuits in design	\$18.20 (return packs) or \$21.20
Year 3	Design and Make a Clock	\$24.90			

**Provocation available!** As an optional extra, Make&Meld can visit your class in the weeks prior to Maker Day, to present the Design Challenge and get students excited!

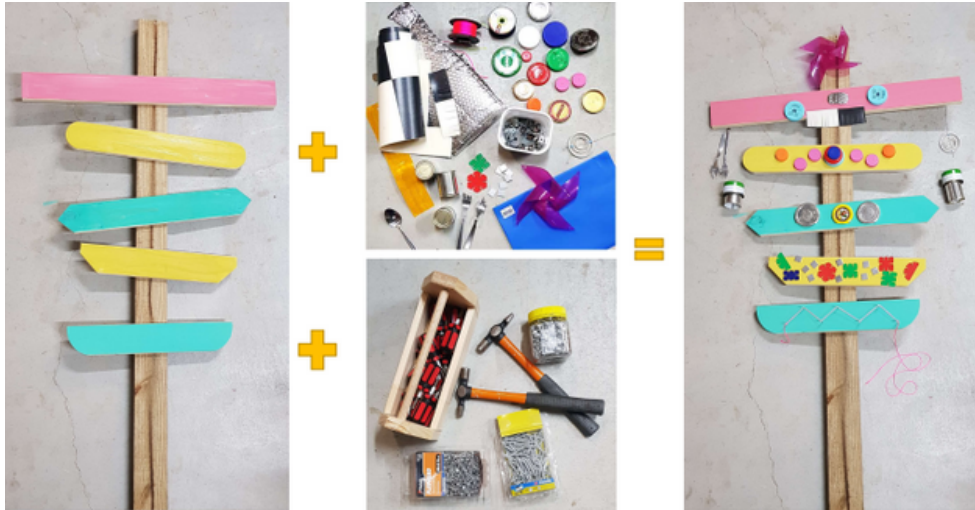
Thank you so much again for this wonderful experience for our students that has linked so beautifully to our term 3 science unit. **Yr 1 Teacher, West End State School**

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



*Children 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.*

#### Curriculum Links

##### Science

###### **Chemical sciences**

Objects are made of materials that have observable properties (ACSSU003)

###### **Physical sciences**

The way objects move depends on a variety of factors, including their size and shape (ACSSU005)

###### **Nature and development of science**

Science involves observing, and asking questions about, and describing changes in, objects and events (ACSHE013)

###### **Questioning and predicting**

Pose and respond to questions, and make predictions about familiar objects and events (AC SIS024)

##### Design and Technologies

###### **Engineering principles and systems**

Explore how technologies use forces to create movement in products (ACTDEK002)

###### **Materials and technologies**

Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)

###### **Generating and designing**

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

###### **Producing and implementing**

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

###### **Evaluating**

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

###### **Collaborating and managing**

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

##### Visual Art

###### **Understand how visual art works**

Use and experiment with different materials, techniques, technologies and processes to make artworks (ACAVAM107)

***Choose from a selection of permanent and relocatable outdoor sculpture designs***



# Prep

## 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.*

#### Curriculum Links

##### Science

###### Biological Sciences

Living things have basic needs, including food and water (ACSSU002)

###### Chemical sciences

Objects are made of materials that have observable properties (ACSSU003)

###### Nature and development of science

Science involves observing, and asking questions about, and describing changes in, objects and events (ACSHE013)

##### Design and Technologies

###### Engineering principles and systems

Explore how technologies use forces to create movement in products (ACTDEK002)

###### Materials and technologies

Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)

###### Generating and designing

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

###### Producing and implementing

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

###### Evaluating

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

###### Collaborating and managing

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

##### Visual Art

###### Understand how visual art works

Use and experiment with different materials, techniques, technologies and processes to make artworks (ACAVAM107)

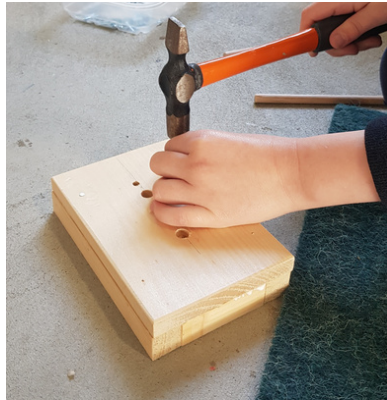


***Choose to build individual bee hotels or build a bee hotel for the school grounds as a collaborative class project.***

# Year 1

## 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.*

#### Curriculum Links

##### Science

###### **Earth and space sciences**

Observable changes occur in the sky and landscape (ACSSU019)

###### **Physical sciences**

Light and sound are produced by a range of sources and can be sensed (ACSSU020)

###### **Nature and development of science**

Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE021)

###### **Use and influence of science**

People use science in their daily lives, including when caring for their and living things (ACSHE022)

##### Design and Technologies

###### **Technologies and society**

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

###### **Materials and technologies**

Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)

###### **Processes and production skills**

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

# Year 1

## DESIGN+HASS

### Places in your neighbourhood - Design and build a mini wooden town



*Students explore places in their neighbourhood 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.*

#### Curriculum Links

##### HASS - Geography

The natural, managed and constructed features of places, their location, how they change and how they can be cared for (ACHASSK031)

Activities in the local place and reasons for their location (ACHASSK033)

##### Hass inquiry skills

Questioning (ACHASSI019)

Researching (ASHASSI019, ACHASSI020, ACHASSI021)

Analysing (ASHASSI022, ACHASSI023, ACHASSI024)

Evaluating and reflecting (ASHASSI025, ACHASSI026)

Communicating (ASHASSI027)

#### Design and Technologies

##### Technologies and society

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

##### Materials and technologies

Explore the characteristics and properties and components that are used to produce designed solutions (ACTDEK004)

##### Investigation and defining

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

##### Generating and designing

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

##### Producing and Implementing

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

##### Evaluating

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

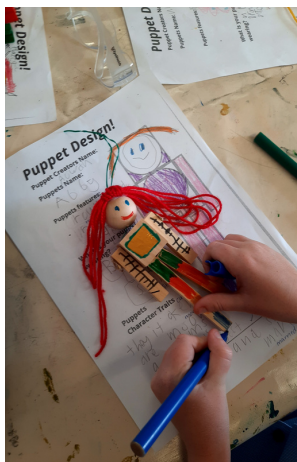
##### Collaborating and managing

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

# Year 1/2

## DESIGN+SCIENCE

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



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

### Curriculum Links

#### Science

##### **Chemical sciences**

Objects are made of materials that have observable properties (ACSSU003)

##### **Physical sciences**

The way objects move depends on a variety of factors, including their size and shape (ACSSU005)

##### **Nature and development of science**

Science involves observing, and asking questions about, and describing changes in, objects and events (ACSHE013)

##### **Questioning and predicting**

Pose and respond to questions, and make predictions about familiar objects and events (AC SIS024)

### HEADS



### BODIES



### ARMS



### LEGS



### Design and Technologies

#### **Technologies and society**

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

#### **Materials and technologies**

Explore the characteristics and properties and components that are used to produce designed solutions (ACTDEK004)

#### **Investigation and defining**

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

#### **Generating and designing**

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

#### **Producing and Implementing**

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

#### **Evaluating**

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

#### **Collaborating and managing**

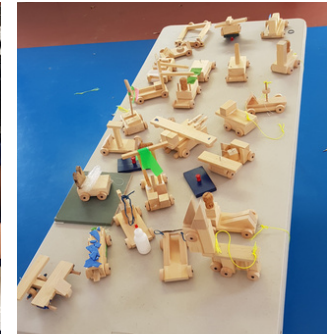
Sequence steps for making design solutions and working collaboratively (ACTDEP009)

# Year 2

★ ProvoCation available!

## DESIGN+SCIENCE

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



***This program focuses on learning about different push-pull forces. Make&Meld provide a design brief for the design of a toy with moving parts. The brief sets requirements and limitations and lists tools and materials which will be made available during a 1.5hr construction workshop.***

#### Curriculum Links

##### Science

###### **Physical sciences**

A push or pull affects how an object moves or changes shape (ACSSU033)

###### **Nature and development of science**

Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE034)

###### **Science inquiry skills**

Questioning and Predicting (ACSHE037)

Planning and Conducting (ACSHE038) (ACSHE039)

Processing and analysing data and information (ACSHE040)

Evaluating (ACSHE041)

Communicating (ACSHE041)

##### Science inquiry skills

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

##### **Engineering principles and systems**

Explore how technologies use forces to create movement in products (ACTDEK002)

##### **Materials and technologies**

Explore the characteristics and properties and components that are used to produce designed solutions (ACTDEK004)

##### **Investigation and defining**

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

##### **Generating and designing**

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

##### **Producing and implementing**

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

##### **Evaluating**

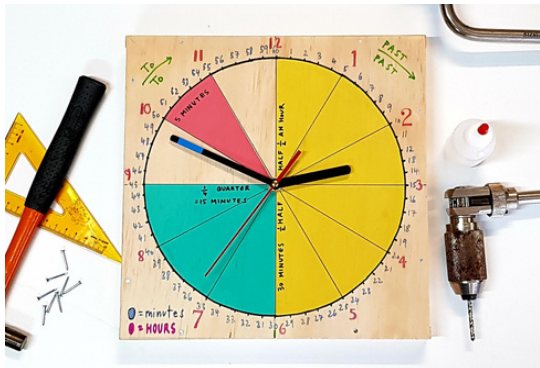
Use personal preferences to evaluate the success of design ideas, processes and solutions including their care for the environment (ACTDEP008)



# 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.*

#### Curriculum Links

##### Maths

##### **Using units of measurement**

Tell time to the minute and investigate the relationship between units of time (ACMMG062)

##### **Geometric reasoning**

Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)

#### Design and Technologies

##### **Materials and technologies specialisation**

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

##### **Investigation and defining**

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)

##### **Generating and designing**

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

##### **Producing and implementing**

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

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

##### **Collaborating and managing**

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

# Year 4

## 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 given a design brief prior to maker day, and then construct their mould and make papercrete to fill them during a 1.5hr workshop incursion.*

#### Curriculum Links

##### Science

###### **Chemical science**

Natural and processed materials have a range of physical properties that can influence their use (ACSSU074)

###### **Nature and development of science**

Science involves making predictions and describing patterns and relationships (ACSHE061)

###### **Use and influence of science**

Science knowledge helps people to understand the effect of their actions (ACSHE062)

##### Design and Technologies

###### **Technologies and society**

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)

###### **Materials and technologies specialisation**

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

###### **Investigation and defining**

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)

###### **Generating and designing**

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

###### **Producing and implementing**

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

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

###### **Collaborating and managing**

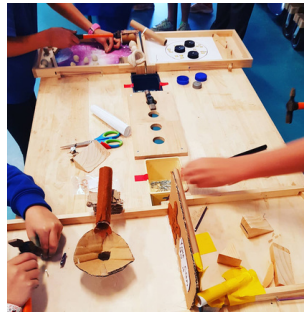
Plan a sequence of production steps when making designed solutions individually and collaboratively (ACTDEP018)

# Year 4

★ Provocation available!

## DESIGN+SCIENCE

### Fast-Forces - Design and build a wooden pinball machine



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

#### Curriculum Links

##### Science

###### **Physical sciences:**

Forces can be exerted by one object on another through direct contact or from a distance (ACSSU076)

###### **Nature and development of science**

Science involves making predictions and describing patterns and relationships (ACSHE061)

###### **Use and influence of science**

Science knowledge helps people to understand the effect of their actions (ACSHE062)

###### **Questioning and predicting**

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS064)

##### Design and Technologies

###### **Technologies and society**

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)

###### **Engineering principles and systems**

Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)

###### **Materials and technologies specialisation**

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

###### **Investigation and defining**

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)

###### **Generating and designing**

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

###### **Producing and implementing**

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

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

###### **Collaborating and managing**

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

# Year 4

★ 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.*

### Curriculum Links

#### Science

##### **Chemical Science**

Natural and processed materials have a range of physical properties that can influence their use (ACSSU074).

##### **Nature and development of science**

Science involves making predictions and describing patterns and relationships (ACSHE061)

##### **Use and influence of science**

Science knowledge helps people to understand the effect of their actions (ACSHE062)

#### Design and Technologies

##### **Technologies and society**

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)

##### **Engineering principles and systems**

Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)

##### **Materials and technologies specialisation**

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

##### **Investigation and defining**

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)

##### **Generating and designing**

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

##### **Producing and implementing**

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

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

##### **Collaborating and managing**

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

# Year 5

★ 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 are then given the opportunity to bring their designs to life as they use a variety of tools and materials to create Scale Models (Prototypes) of their designs.*

#### Curriculum Links

##### Science

##### **Biological sciences**

Living things have structural features and adaptations that help them to survive in their environment (ACSSU043)

##### **Nature and development of science**

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE081)

##### **Use and Influence of science**

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083)

##### **Questioning and predicting**

With guidance, pose clarifying questions and make predictions about scientific investigations (ACSIS231)

##### Design and Technologies

##### **Technologies and society**

Examine how people in design and technologies occupations address competing considerations, including sustainability in the design of products, services, and environments for current and future use (ACTDEK019)

##### **Materials and technologies specialisation**

Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)

##### **Investigation and defining**

Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)

##### **Generating and designing**

Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)

##### **Producing and implementing**

Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)

##### **Evaluating**

Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions (ACTDEP027)

##### **Collaborating and managing**

Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)

# Year 5/6

## DESIGN and 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.**

#### Curriculum Links

##### Design and Technologies - Knowledge and Understanding

##### Materials and technologies specialisation

Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)

##### Design and Technologies - Processes and Production Skills

##### Investigation and defining

Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)

##### Generating and designing

Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)

##### Producing and implementing

Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)

##### Evaluating

Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions (ACTDEP027)

##### Collaborating and managing

Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)

##### Cross Curriculum Links - choose a design challenge to link with Curriculum areas -

##### Science

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

Sudden geological changes and extreme weather events can affect Earth's surface (ACSSU096).

OR

##### English

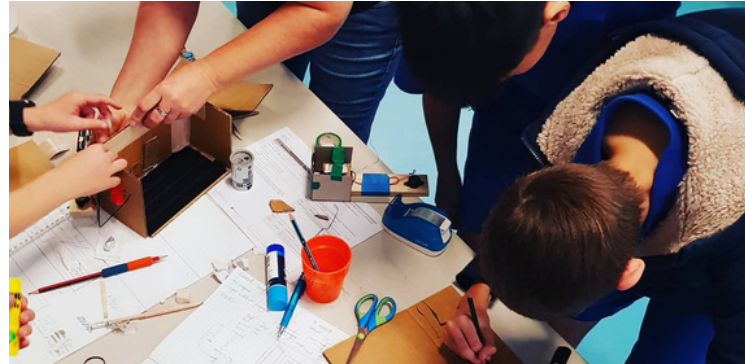
**Literature - Design a Cam Toy/Automata to depict a scene from literature, including the oral narrative traditions of Aboriginal and Torres Strait Islander Peoples**

# Year 6

★ Provoocation available!

## DESIGN+SCIENCE

### Secure environment challenge! - Circuits in design and model making



*Using their knowledge of electronic circuits, students are challenged to design a working security system within an environment of their choosing such as a bank, bedroom, or within an object such as a car or a treasure chest. Students work in pairs and are asked to consider aesthetics, story setting, time limits and materials as they design and build a model of their secure environment.*

#### Curriculum Links

##### Science

##### **Physical sciences**

Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097)

##### **Nature and development of science**

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE098)

##### **Use and influence of science**

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE100)

##### Design and Technologies

##### **Engineering principles and systems**

Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020)

##### **Materials and technologies specialisation**

Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023).

##### **Investigation and defining**

Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)

##### **Generating and Designing**

Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)

##### **Producing and Implementing**

Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)

##### **Evaluating**

Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions (ACTDEP027)

##### **Collaborating and managing**

Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)

**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 can also be 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](mailto:info@makeandmeld.com.au)**  
**call 0435 110 866**  
**or visit our workshop 23/133 Hyde Rd, Yeronga 4104**



*Helen and Emily*