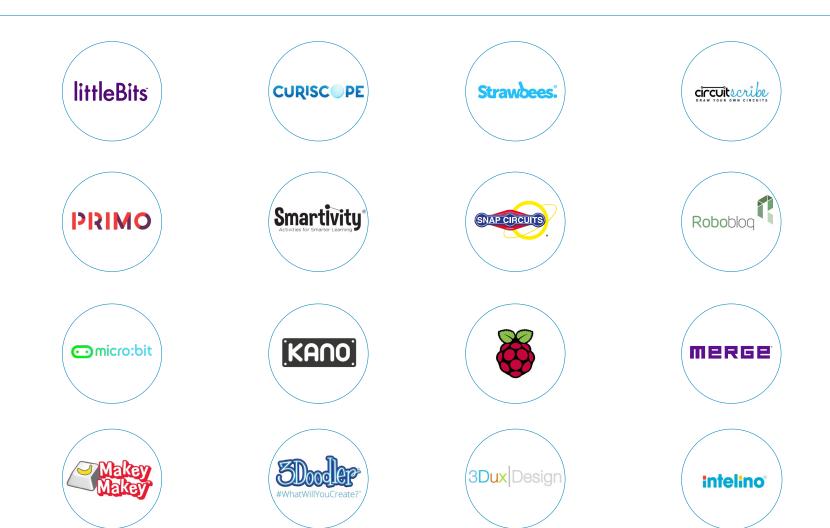




# AUSTRALIAN STEAM RESOURCES CATALOGUE



# BRANDS ALIGNED TO THE AUSTRALIAN CURRICULUM



AUSTRALIAN STEAM RESOURCES CATALOGUE





#### Critical and Creative Thinking learning continuum

Sub-element	Level 1 Typically, by the end of	Level 2 Typically, by the end of	Level 3 Typically, by the end of	Level 4 Typically, by the end of	Level 5 Typically, by the end of	Level 6 Typically, by the end of
	Foundation Year, students:	Year 2, students: Inquiring – identifying, e	Year 4, students:  xploring and organising	Year 6, students: information and ideas e	Year 8, students:	Year 10, students:
Pose questions	pose factual and exploratory questions based on personal interests and experiences	pose questions to identify and clarify issues, and compare information in their world	pose questions to expand their knowledge about the world	pose questions to clarify and interpret information and probe for causes and consequences	pose questions to probe assumptions and investigate complex issues	pose questions to critically analyse complex issues and abstract ideas
Identify and clarify information and ideas	identify and describe familiar information and ideas during a discussion or investigation	identify and explore information and ideas from source materials	identify main ideas and select and clarify information from a range of sources	identify and clarify relevant information and prioritise ideas	clarify information and ideas from texts or images when exploring challenging issues	clarify complex information and ideas drawn from a range of sources
Organise and process information	gather similar information or depictions from given sources	organise information based on similar or relevant ideas from several sources	collect, compare and categorise facts and opinions found in a widening range of sources	analyse, condense and combine relevant information from multiple sources	critically analyse information and evidence according to criteria such as validity and relevance	critically analyse independently sourced information to determine bias and reliability
		Generatin	g ideas, possibilities and	d actions element		
Imagine possibilities and connect ideas	use imagination to view or create things in new ways and connect two things that seem different	build on what they know to create ideas and possibilities in ways that are new to them	expand on known ideas to create new and imaginative combinations	combine ideas in a variety of ways and from a range of sources to create new possibilities	draw parallels between known and new ideas to create new ways of achieving goals	create and connect complex ideas using imagery, analogies and symbolism
Consider alternatives	suggest alternative and creative ways to approach a given situation or task	identify and compare creative ideas to think broadly about a given situation or problem	explore situations using creative thinking strategies to propose a range of alternatives	identify situations where current approaches do not work, challenge existing ideas and generate alternative solutions	generate alternatives and innovative solutions, and adapt ideas, including when information is limited or conflicting	speculate on creative options to modify ideas when circumstances change
Seek solutions and put ideas into action	predict what might happen in a given situation and when putting ideas into action	investigate options and predict possible outcomes when putting ideas into action	experiment with a range of options when seeking solutions and putting ideas into action	assess and test options to identify the most effective solution and to put ideas into action	predict possibilities, and identify and test consequences when seeking solutions and putting ideas into action	assess risks and explain contingencies, taking account of a range of perspectives, when seeking solutions and putting complex ideas into action





#### Critical and Creative Thinking learning continuum

Sub-element	Level 1 Typically, by the end of Foundation Year, students:	Level 2 Typically, by the end of Year 2, students:	Level 3 Typically, by the end of Year 4, students:	Level 4 Typically, by the end of Year 6, students:	Level 5 Typically, by the end of Year 8, students:	Level 6 Typically, by the end of Year 10, students:
		Reflect	ing on thinking and proc	esses element		
Think about thinking (metacognition)	describe what they are thinking and give reasons why	describe the thinking strategies used in given situations and tasks	reflect on, explain and check the processes used to come to conclusions	reflect on assumptions made, consider reasonable criticism and adjust their thinking if necessary	assess assumptions in their thinking and invite alternative opinions	give reasons to support their thinking, and address opposing viewpoints and possible weaknesses in their own positions
Reflect on processes	identify the main elements of the steps in a thinking process	outline the details and sequence in a whole task and separate it into workable parts	identify pertinent information in an investigation and separate into smaller parts or ideas	identify and justify the thinking behind choices they have made	evaluate and justify the reasons behind choosing a particular problemsolving strategy	balance rational and irrational components of a complex or ambiguous problem to evaluate evidence
Transfer knowledge into new contexts	connect information from one setting to another	use information from a previous experience to inform a new idea	transfer and apply information in one setting to enrich another	apply knowledge gained from one context to another unrelated context and identify new meaning	justify reasons for decisions when transferring information to similar and different contexts	identify, plan and justify transference of knowledge to new contexts
		Analysing, synthesisir	ng and evaluating reason	ning and procedures ele	ment	
Apply logic and reasoning	identify the thinking used to solve problems in given situations	identify reasoning used in choices or actions in specific situations	identify and apply appropriate reasoning and thinking strategies for particular outcomes	assess whether there is adequate reasoning and evidence to justify a claim, conclusion or outcome	identify gaps in reasoning and missing elements in information	analyse reasoning used in finding and applying solutions, and in choice of resources
Draw conclusions and design a course of action	share their thinking about possible courses of action	identify alternative courses of action or possible conclusions when presented with new information	draw on prior knowledge and use evidence when choosing a course of action or drawing a conclusion	scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action	differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions	use logical and abstract thinking to analyse and synthesise complex information to inform a course of action
Evaluate procedures and outcomes	check whether they are satisfied with the outcome of tasks or actions	evaluate whether they have accomplished what they set out to achieve	explain and justify ideas and outcomes	evaluate the effectiveness of ideas, products, performances, methods and courses of action against given criteria	explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified	evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified



# IDEAL LEVELS FOR PRODUCT USE IN SCHOOLS AUSTRALIA

STEAM PRODUCT	FOUNDATION	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
LITTLEBITS								•			
SNAP CIRCUITS											
3 DUX DESIGN											
3DOODLER	•										
SMARTIVITY											
MAKEY MAKEY											
STRAWBEES	•										
CIRCUIT SCRIBE											
PRIMO - CUBETTO	•										
INTELINO	•										
OZOBOT											
ROBOBLOQ	•										
MICROBITS											
KANO											
RASBERRY PI											
MERGE VR/AR	•										
CURISCOPE							•				





# SNAP SHOT CURRICULUM ALIGNMENT ACARA

#### STEAM PRODUCT

#### **CURRICULUM ALIGNMENT**

LITTLE BITS	DESIGN AND TECHNOLOGY	DIGITAL TECHNOLOGIES	SCIENCE	
SNAP CIRCUIT	DESIGN AND TECHNOLOGY	DIGITAL TECHNOLOGIES	SCIENCE	
3 DUX DESIGN	DESIGN AND TECHNOLOGY	MATHEMATICS		
3 DOODLER	DESIGN AND TECHNOLOGY	MATHEMATICS	VISUAL ART	
STRAWBEES	DESIGN AND TECHNOLOGIES	SCIENCE	MATHEMATICS	
SMARTIVITY	DESIGN AND TECHNOLOGY	SCIENCE		
CIRCUIT SCRIBE	DESIGN AND TECHNOLOGY	SCIENCE		
MAKEY MAKEY	DESIGN AND TECHNOLOGY	SCIENCE		
PRIMO - CUBETTO	MATHEMATICS	DIGITAL TECHNOLOGIES	DESIGN AND TECHNOLOGIES	
INTELINO	MATHEMATICS	DIGITAL TECHNOLOGIES	SCIENCE	MATHEMATICS
ROBOBLOQ	DESIGN AND TECHNOLOGY	DIGITAL TECHNOLOGIES		
MICROBITS	DESIGN AND TECHNOLOGY	DIGITAL TECHNOLOGIES		
KANO	DESIGN AND TECHNOLOGY	DIGITAL TECHNOLOGIES		
RASPBERRY PI	DESIGN AND TECHNOLOGY	DIGITAL TECHNOLOGIES		
MERGE VR/AR	MATHEMATICS	HUMANITIES AND SOCIAL STUDIES	DESIGN AND TECHNOLOGY	DIGITAL TECHNOLOGY
CURSICOPE	SCIENCE			





# AUSTRALIAN STEAM RESOURCES CATALOGUE

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LITTLEBITS SNAP CIRCUITS 3 DUX DESIGN 3 DOODLER STRAWBEES SMARTIVITY CIRCUIT SCRIBE MAKEY MAKEY PRIMO - CUBETTO ROBOBLOQ MICROBITS KANO RASBERRY PI MERGE VR/AR CURISCOPE INTELINO	8 10 11 13 15 18 19 21 23 24 25 27 29 31 34 35





CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DIGITAL TECHNOLOGIES	Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001)	Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data (ACTDIK007)	Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)
		Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)	Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)
DESIGN & TECHNOLOGIES	Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)	Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)	Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020)
	Use martials, components, tools, equipment and Techniques to safely make designed solutions (ACTDEP007)	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)	Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)
	Sequence steps for making designed solutions and	Canada dayalar and sammunicate design ideas and	Critique needs or opportunities for designing, and

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

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

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

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

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

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

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

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

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





CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
SCIENCE	Physical Science- Year 1 Light and sound are produced by a range of sources and can be sensed (ACSSU020)		Physical Science Year 6 Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097)
	Science as a Human Endeavour F-2 Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)	Science as a Human Endeavour 3-4 Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)	Science as a Human Endeavour 5-6 Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)

#### Science Inquiry Skills F- 2

Engage in discussions about observations and represent ideas (ACSIS233), (ACSIS213), (ACSIS041)

Participate in guided investigations to explore and answer questions (ACSIS011), (ACSIS025), (ACSIS038)

#### Science Inquiry Skills 3-4

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS053), (ACSIS064)

Compare results with predictions, suggesting possible reasons for findings (ACSIS215), (ACSIS216)

#### Science Inquiry Skills 5-6

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS086), (ACSIS103)

Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (ACSIS087), (ACSIS104)

Reflect on and suggest improvements to scientific investigations (ACSIS091), (ACSIS108)





CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DIGITAL TECHNOLOGIES	Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001)	Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data (ACTDIK007)	Examine the main components of common digital systems and how they may connect together to form networks to transmit data ACTDIK014
		Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them <u>ACTDIP010</u>	Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) ACTDIP019
DESIGN & TECHNOLOGIES	Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004	Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes ACTDEK013	Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use <a href="https://example.com/ACTDEK023">ACTDEK023</a>
	Use martials, components, tools, equipment and Techniques to safely make designed solutions (ACTDEP007 Sequence steps for making designed solutions and	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	Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions ACTDEP024
	working collaboratively ACTDEP009	Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques <a href="ACTDEP015">ACTDEP015</a>	Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques ACTDEP025
		Select and use materials, components, tools, equipment and techniques and use safe work practices to make designed solutions <a href="https://example.com/ACTDEP016">ACTDEP016</a>	Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions <a href="https://example.com/ACTDEP026">ACTDEP026</a>
		Plan a sequence of production steps when making designed solutions individually and collaboratively (ACTDEP018 Investigate how electrical energy can control movement,	Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions ACTDEP027
		sound or light in a designed product or system ACTDEK020	Develop project plans that include consideration of resources when making designed solutions individually and collaboratively ACTDEP028

#### SCIENCE

#### Physical Science- Year 1

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

#### Science as a Human Endeavour F-2

Science involves observing, asking questions about, and describing changes in, objects and events <u>ACSHE013</u> <u>ACSHE021 ACSHE034</u>

#### Science Inquiry Skills F- 2

Engage in discussions about observations and represent ideas ACSIS233 ACSIS213 ACSIS041

Participate in guided investigations to explore and answer questions ACSIS011 ACSIS025 ACSIS038

#### Science as a Human Endeavour 3-4

Science involves making predictions and describing patterns and relationships <u>ACSHE050 ACSHE061</u>

#### Science Inquiry Skills 3-4

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge ACSIS053 ACSIS064

Compare results with predictions, suggesting possible reasons for findings ACSIS215 ACSIS216

#### Physical Science Year 6

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

#### Science as a Human Endeavour 5-6

Scientific knowledge is used to solve problems and inform personal and community decisions <u>ACSHE083</u> <u>ACSHE100</u>

#### Science Inquiry Skills 5-6

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS086), (ACSIS103) Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate ACSIS087 ACSIS104 Reflect on and suggest improvements to scientific investigations ACSIS091 ACSIS108





**DESIGN & TECHNOLOGIES** 

#### **FOUNDATION – YEAR 2**

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

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

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

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

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

#### YEAR 3 & 4

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

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)

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

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

#### YEAR 5 & 6

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)

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

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

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

#### **MATHEMATICS**

#### Foundation

Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment (ACMMG009)

#### Year 1

Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022)

#### Year 2

Describe the features of three-dimensional objects (ACMMG043)

Make models of three-dimensional objects and describe key features (ACMMG063)

#### Year 4

Compare the areas of regular and irregular shapes by informal means (ACMMG087)

Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)

#### Year 5

Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)

Calculate perimeter and area of rectangles using familiar metric units (ACMMG109)

Calculate perimeter and area of rectangles using familiar metric units (ACMMG109)

#### Year 6

Construct simple prisms and pyramids (ACMMG140)





**DESIGN & TECHNOLOGIES** 

#### YEAR 7 & 8

Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment (ACTDEK034)

Critique needs or opportunities for designing and investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas (ACTDEP035)

Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)

#### YEAR 9 & 10

Investigate and make judgments on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (ACTDEK046)

Develop, modify and communicate design ideas by applying design thinking, creativity. innovation and enterprise skills of increasing sophistication (ACTDEP049)

Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051)

#### MATHEMATICS

#### Year 7

Establish the formulas for areas of rectangles, triangles and parallelograms, and use these in problem-solving (ACMMG159)

Calculate volumes of rectangular prisms (ACMMG160)

#### Year 8

Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)

Develop formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198)

#### Year 9

Calculate areas of composite shapes (ACMMG216)

Solve problems using ratio and scale factors in similar figures (ACMMG221)

#### Year 10

Solve problems involving surface area and volume for a range of prisms, cylinders and composite solids (ACMMG242)





**DESIGN & TECHNOLOGIES** 

#### **FOUNDATION – YEAR 2**

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

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

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

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

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

#### YEAR 3 & 4

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

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)

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

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

#### YEAR 5 & 6

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)

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

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

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

#### **MATHEMATICS**

#### Foundation

Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment (ACMMG009)

#### Year 1

Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022)

#### Year 2

Describe the features of three-dimensional objects (ACMMG043)

Make models of three-dimensional objects and describe key features (ACMMG063)

#### Year 4

Compare the areas of regular and irregular shapes by informal means (ACMMG087)

Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)

#### Year 5

Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)

Calculate perimeter and area of rectangles using familiar metric units (ACMMG109)

Calculate perimeter and area of rectangles using familiar metric units (ACMMG109)

#### Year 6

Construct simple prisms and pyramids (ACMMG140)

#### VISUAL ART

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

Create and display artworks to communicate ideas to an audience (ACAVAM108)

Use materials, techniques and processes to explore visual conventions when making artworks (ACAVAM111)

Present artworks and describe how they have used visual conventions to represent their ideas (ACAVAM112)

Develop and apply techniques and processes when making their artworks (ACAVAM115)

Plan the display of artworks to enhance their meaning for an audience (ACAVAM116)





**DESIGN & TECHNOLOGIES** 

#### YEAR 7 & 8

and equipment (ACTDEK034)

#### Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools

Critique needs or opportunities for designing and investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas (ACTDEP035)

Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)

#### YEAR 9 & 10

Investigate and make judgments on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (ACTDEK046)

Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication (ACTDEP049)

Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051)

#### **MATHEMATICS**

#### Year 7

Establish the formulas for areas of rectangles, triangles and parallelograms, and use these in problem-solving (ACMMG159)

Calculate volumes of rectangular prisms (ACMMG160)

#### Year 8

Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)

Develop formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198)

#### Year 9

Calculate areas of composite shapes(ACMMG216)

Solve problems using ratio and scale factors in similar figures (ACMMG221)

#### Year 10

Solve problems involving surface area and volume for a range of prisms, cylinders and composite solids (ACMMG242)

#### VISUAL ART

Develop ways to enhance their intentions as artists through exploration of how artists use materials, techniques, technologies and processes (ACAVAM119)

Develop planning skills for art-making by exploring techniques and processes used by different artists (ACAVAM120)

Practise techniques and processes to enhance representation of ideas in their art-making (ACAVAM121)

Present artwork demonstrating consideration of how the artwork is displayed to enhance the artist's intention to an audience (ACAVAM122)

Manipulate materials, techniques, technologies and processes to develop and represent their own artistic intentions (ACAVAM126)

Develop and refine techniques and processes to represent ideas and subject matter (ACAVAM127)

Plan and design artworks that represent artistic intention (ACAVAM128)

Present ideas for displaying artworks and evaluate displays of artworks (ACAVAM129)

Evaluate how representations communicate artistic intentions in artworks they make and view to inform their future art making (ACAVAR130)





#### **FOUNDATION - YEAR 2**

#### YEAR 3 & 4

#### YEAR 5 & 6

#### **DESIGN & TECHNOLOGIES**

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

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

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

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

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

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)

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

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

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

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

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

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

#### **MATHEMATICS**

#### FOUNDATION

Sort, describe and name familiar twodimensional shapes and three-dimensional objects in the environment (ACMMG009)

Describe position and movement (ACMMG010)

#### VEAR 1

Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022)

#### YEAR 2

Describe the features of three-dimensional objects (ACMMG043)

#### YEAR 3

Make models of three-dimensional objects and describe key features (ACMMG063)

#### YEAR 4

Compare the areas of regular and irregular shapes by informal means (ACMMG087)

Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)

#### YEAR 5

Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111)

Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)

#### YEAR 6

Construct simple prisms and pyramids (ACMMG140)

Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)





#### **FOUNDATION - YEAR 2**

#### YEAR 3 & 4

#### YEAR 5 & 6

#### **SCIENCE**

#### PHYSICAL SCIENCE- FOUNDATION

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

#### **CHEMICAL SCIENCE- YEAR 1**

Everyday materials can be physically changed in a variety of ways (ACSSU018)

#### **CHEMICAL SCIENCE- YEAR 2**

Different materials can be combined for a particular purpose (ACSSU031) (Just add cardboard)

#### PHYSICAL SCIENCE- YEAR 2

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

#### **PHYSICAL SCIENCE- YEAR 4**

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

#### **CHEMICAL SCIENCE- YEAR 4**

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

#### SCIENCE AS A HUMAN ENDEAVOUR F-2

Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)

#### **SCIENCE AS A HUMAN ENDEAVOUR 3-4**

Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)

#### **SCIENCE AS A HUMAN ENDEAVOUR 5-6**

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083, ACSHE100)

#### **SCIENCE INQUIRY SKILLS F-2**

Pose and respond to questions, and make predictions about familiar objects and events (ACSIS014, ACSIS024, ACSIS037)

Engage in discussions about observations and represent ideas (ACSIS233), (ACSIS213), (ACSIS041)

Participate in guided investigations to explore and answer questions (ACSIS011), (ACSIS025), (ACSIS038)

Compare observations with those of others (ACSIS213, ACSIS041)

#### **SCIENCE INQUIRY SKILLS 3-4**

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS053), (ACSIS064)

Compare results with predictions, suggesting possible reasons for findings (ACSIS215), (ACSIS216)

Reflect on investigations, including whether a test was fair or not (ACSIS058, ACSIS069)

Represent and communicate observations, ideas and findings using formal and informal representations (ACSIS060, ACSIS071)

#### **SCIENCE INQUIRY SKILLS 5-6**

With guidance, pose clarifying questions and make predictions about scientific investigations (ACSIS231, ACSIS232)

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS086), (ACSIS103)

Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (ACSIS087), (ACSIS104)

Reflect on and suggest improvements to scientific investigations (ACSIS091), (ACSIS108)





#### YEAR 7 & 8

#### YEAR 9 & 10

#### **DESIGN & TECHNOLOGIES**

Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)

Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment (ACTDEK034)

Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)

Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability (ACTDEP038)

Investigate and make judgments on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions (ACTDEK043)

#### **MATHEMATICS**

#### Year 7

Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)

#### Year 8

Define congruence of plane shapes using transformations(ACMMG200)

Develop the conditions for congruence of triangles (ACMMG201)

#### Year 9

Use the enlargement transformation to explain similarity and develop the conditions for triangles to be similar (ACMMG220)

Solve problems using ratio and scale factors in similar figures (ACMMG221)

#### Year 10

Apply logical reasoning, including the use of congruence and similarity, to proofs and numerical exercises involving plane shapes (ACMMG244)

#### Science Inquiry Skills 7-8

Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (ACSIS124, ACSIS139)

Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (ACSIS125, ACSIS140)

Measure and control variables, select equipment appropriate to the task and collect data with accuracy (ACSIS126), (ACSIS141)





**DESIGN & TECHNOLOGIES** 

#### YEAR 3 & 4

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

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)

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

#### YEAR 5 & 6

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

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

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

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

#### SCIENCE

#### Physical Science- Year 4

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

#### Science as a Human Endeavour 3-4

Science involves making predictions and describing patterns and

#### Science as a Human Endeavour 5-6

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)

Scientific knowledge is used to solve problems and inform personal and community decisions(ACSHE083, ACSHE100) relationships (ACSHE050), (ACSHE061)

#### Science Inquiry Skills 3-4

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS053), (ACSIS064)

Compare results with predictions, suggesting possible reasons for findings (ACSIS215), (ACSIS216)

Reflect on investigations, including whether a test was fair or not (ACSIS058, ACSIS069)

Represent and communicate observations. ideas and findings using formal and informal representations (ACSIS060, ACSIS071)

#### Science Inquiry Skills 5-6

With guidance, pose clarifying questions and make predictions about scientific investigations (ACSIS231, ACSIS232)

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS086), (ACSIS103)

Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (ACSIS087), (ACSIS104)

Reflect on and suggest improvements to scientific investigations (ACSIS091), (ACSIS108)





CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DIGITAL & TECHNOLOGIES	Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)  Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)	Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)	Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020)  Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)
SCIENCE	PHYSICAL SCIENCE- YEAR 1 Light and sound are produced by a range of sources and can be sensed (ACSSU020)		PHYSICAL SCIENCE YEAR 6 Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097)
	SCIENCE AS A HUMAN ENDEAVOUR F-2 Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)	SCIENCE AS A HUMAN ENDEAVOUR 3-4 Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)	SCIENCE AS A HUMAN ENDEAVOUR 5-6 Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)
	SCIENCE INQUIRY SKILLS F- 2 Engage in discussions about observations and represent ideas (ACSIS233), (ACSIS213), (ACSIS041)  Participate in guided investigations to explore and answer questions (ACSIS011), (ACSIS025), (ACSIS038)	SCIENCE INQUIRY SKILLS 3-4 With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS053), (ACSIS064) Compare results with predictions, suggesting possible reasons for findings (ACSIS215), (ACSIS216)	SCIENCE INQUIRY SKILLS 5-6 Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS086), (ACSIS103)  Reflect on and suggest improvements to scientific investigations (ACSIS091), (ACSIS108)





#### YEAR 7 & 8

#### YEAR 9 & 10

# DIGITAL & TECHNOLOGIES

Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)

Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)

Investigate and make judgments on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (ACTDEK046)

#### **SCIENCE**

#### **PHYSICAL SCIENCE - YEAR 8**

Energy appears in different forms, including movement (kinetic energy), heat and potential energy, and energy transformations and transfers cause change within systems (ACSSU155)

#### **SCIENCE INQUIRY SKILLS 7-8**

Measure and control variables, select equipment appropriate to the task and collect data with accuracy (ACSIS126), (ACSIS141)

Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSIS133), (ACSIS148)

#### **PHYSICAL SCIENCE - YEAR 9**

Energy transfer through different mediums can be explained using wave and particle models (ACSSU182)

#### **SCIENCE INQUIRY SKILLS 9-10**

Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (ACSIS166), (ACSIS200)



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#### **CURRICULUM AREA**

#### **FOUNDATION – YEAR 2**

#### YEAR 3 & 4

#### YEAR 5 & 6

### DIGITAL & TECHNOLOGIES

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

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

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

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

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

#### SCIENCE

THE LEADERS IN STEM EDUCATIONAL PRODUCTS

#### Physical Science- Year 1

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

#### Science as a Human Endeavour F-2

Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)

#### Science Inquiry Skills F- 2

Engage in discussions about observations and represent ideas (ACSIS233), (ACSIS213), (ACSIS041)

Participate in guided investigations to explore and answer questions (ACSIS011), (ACSIS025), (ACSIS038)

#### Science as a Human Endeavour 3-4

Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)

#### Science Inquiry Skills 3-4

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS053), (ACSIS064)

Compare results with predictions, suggesting possible reasons for findings (ACSIS215), (ACSIS216)

#### Physical Science Year 6

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

#### Science as a Human Endeavour 5-6

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)

#### Science Inquiry Skills 5-6

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS086), (ACSIS103)

Reflect on and suggest improvements to scientific investigations (ACSIS091), (ACSIS108)



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#### **CURRICULUM AREA**

#### YEAR 7 & 8

#### YEAR 9 & 10

# DIGITAL & TECHNOLOGIES

Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)

Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)

Investigate and make judgments on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (ACTDEK046)

#### **SCIENCE**

#### Physical Science- Year 8

Energy appears in different forms, including movement (kinetic energy), heat and potential energy, and energy transformations and transfers cause change within systems (ACSSU155)

#### Science Inquiry Skills 7-8

Measure and control variables, select equipment appropriate to the task and collect data with accuracy (ACSIS126), (ACSIS141)

Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSIS133), (ACSIS148)

#### Physical Science- Year 9

Energy transfer through different mediums can be explained using wave and particle models(ACSSU182)

#### Science Inquiry Skills 9-10

Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (ACSIS166), (ACSIS200)





#### **CURRICULUM AREA FOUNDATION - YEAR 2** YEAR 3 & 4 FOUNDATION YEAR 3 **MATHEMATICS** Describe position and movement (ACMMG010) Create and interpret simple grid maps to show position and pathways (ACMMG065) YEAR 1 Identify angles as measures of turn and Give and follow directions to familiar locations (ACMMG023) compare angle sizes in everyday situations (ACMMG064) YEAR 2 YEAR 4 Interpret simple maps of familiar locations and identify the Use simple scales, legends and directions to interpret relative positions of key features (ACMMG044) information contained in basic maps (ACMMG090) Follow, describe and represent a sequence of steps Identify and explore a range of digital systems with DIGITAL and decisions (algorithms) needed to solve simple peripheral devices for different purposes, and transmit **TECHNOLOGIES** problems (ACTDIP004) different types of data (ACTDIK007) Recognise and explore digital systems (hardware and Define simple problems, and describe and follow a software components) for a purpose (ACTDIK001) sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010) Implement simple digital solutions as visual programs with algorithms involving branching(decisions) and user input (ACTDIP011) Sequence steps for making designed solutions and DESIGN Critique needs or opportunities for designing and explore working collaboratively (ACTDEP009) and test a variety of materials, components, tools and & TECHNOLOGIES equipment and the techniques needed to produce

designed solutions (ACTDEP014)

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





CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DESIGN & TECHNOLOGIES	Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)  Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)	Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)	Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)
DIGITAL TECHNOLOGIES	Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001)  Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems (ACTDIP004)	Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)  Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input (ACTDIP011)	Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)  Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)  Plan, create and communicate ideas and information, including collaboratively online, applying agreed ethical, social and technical protocols (ACTDIP022)
CURRICULUM AREA	YEAR 7 & 8		
DESIGN & TECHNOLOGIES	Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)  Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)		
DIGITAL TECHNOLOGIES	Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)  Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)  Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)		





FOUNDATION	YEAR 1	YEAR 2
Generate, develop and record design i	ideas through describing, drawing and modelling (ACTDEP006	
Collect, explore and sort data, and use	e digital systems to present the data creatively (ACTDIP003)	
YEAR 3	YEAR 4	YEAR 5
graphical representation techniques (A	ACTDEP015)	materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)
types of data (ACTDIK007)  Recognise different types of data and  Collect, access and present different ty (ACTDIP009)  Define simple problems, and describe them (ACTDIP010)	explore how the same data can be represented in different waypes of data using simple software to create information and sand follow a sequence of steps and decisions (algorithms) need	how they may connect together to form networks to transmit data (ACTDIK014)  Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016)  eded to solve  Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)
	Explore needs or opportunities for design Generate, develop and record design Sequence steps for making designed  Recognise and explore digital systems Collect, explore and sort data, and use Follow, describe and represent a sequence of production steps (ACTDEP018)  Identify and explore a range of digital types of data (ACTDIK007)  Recognise different types of data and Collect, access and present different to (ACTDIP009)  Define simple problems, and describe them (ACTDIP010)  Implement simple digital solutions as a sequence of production steps of data and collect, access and present different to (ACTDIP010)	Explore needs or opportunities for designing, and the technologies needed to realise designed solut Generate, develop and record design ideas through describing, drawing and modelling (ACTDEP00) Sequence steps for making designed solutions and working collaboratively (ACTDEP009)  Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK Collect, explore and sort data, and use digital systems to present the data creatively (ACTDIP003) Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simply the sequence of steps and decisions (algorithms) needed to solve simply the sequence of production techniques (ACTDEP015)  Plan a sequence of production steps when making designed solutions individually and collaborative (ACTDEP018)  Identify and explore a range of digital systems with peripheral devices for different purposes, and tratypes of data (ACTDIK007).  Recognise different types of data and explore how the same data can be represented in different was Collect, access and present different types of data using simple software to create information and second simple problems, and describe and follow a sequence of steps and decisions (algorithms) neithem (ACTDIP010)  Implement simple digital solutions as visual programs with algorithms involving branching (decisions)



Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)

(ACTDIP021)

Explain how student solutions and existing information systems are sustainable and meet current and future local community needs



CURRICULUM AREA	YEAR 6	YEAR 7	YEAR 8
DESIGN & TECHNOLOGIES	processes to achieve intended des	ate design ideas and processes for audiences using appropriate technical	Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)
DIGITAL & TECHNOLOGIES	transmit data (ACTDIK014)  Acquire, store and validate differer create information (ACTDIP016)  Define problems in terms of data at Design a user interface for a digitat Design, modify and follow simple at (ACTDIP019)  Implement digital solutions as simple (ACTDIP020)	common digital systems and how they may connect together to form networks to at types of data, and use a range of software to interpret and visualise data to and functional requirements drawing on previously solved problems (ACTDIP017)  I system (ACTDIP018)  algorithms involving sequences of steps, branching, and iteration (repetition)  ple visual programs involving branching, iteration (repetition), and user input  existing information systems are sustainable and meet current and future local	Investigate how digital systems represent text, image and audio data in binary (ACTDIK024).  Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026)  Design the user experience of a digital system, generating, evaluating and communicating alternative designs (ACTDIP028)  Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)  Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)  Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)
CURRICULUM AREA	YEAR 9	YEAR 10	
DESIGN & TECHNOLOGIES	combined to create designed solu Critique needs or opportunities to	within a range of technologies specialisations, on how technologies can be tions (ACTDEK047)  develop design briefs and investigate and select an increasingly sophisticated ionents, tools and equipment to develop design ideas (ACTDEP048)	
DIGITAL & TECHNOLOGIES	and their relationships using struct  Define and decompose real-world	te information and address complex problems, and model processes, entities ured data (ACTDIP037)  problems precisely, taking into account functional and non-functional	



requirements and including interviewing stakeholders to identify needs (ACTDIP038)

through tracing and test cases (ACTDIP040)

Design the user experience of a digital system by evaluating alternative designs against criteria including functionality, accessibility, usability, and aesthetics (ACTDIP039)

Design algorithms represented diagrammatically and in structured English and validate algorithms and programs



BY USING 'KANO - BUILD AND CODE DAZZLING LIGHTS, MAKE HAND-CONTROLLED APPS AND COMPUTER KITS IN YOUR CLASSROOM, YOU COULD POTENTIALLY COVER THE FOLLOWING ACHIEVEMENT OBJECTIVES FROM THE AUSTRALIAN CURRICULUM

CURRICULUM AREA	FOUNDATION	YEAR 1	YEAR 2		
DESIGN	Explore needs or opportunities for designi	ng, and the technologies needed to realise designed solutions (ACTDEPO	05)		
& TECHNOLOGIES	Generate, develop and record design ideas through describing, drawing and modelling (ACTDEP006)				
	Sequence steps for making designed solutions and working collaboratively (ACTDEP009)				
DIGITAL	Recognise and explore digital systems (ha	ardware and software components) for a purpose (ACTDIK001)			
TECHNOLOGIES	Collect, explore and sort data, and use digital systems to present the data creatively (ACTDIP003)				
	Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems (ACTDIP004)				
CURRICULUM AREA	YEAR 3	YEAR 4	YEAR 5		
DESIGN	Generate, develop, and communicate des graphical representation techniques (ACT)	ign ideas and decisions using appropriate technical terms and DEP015)	Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)		
& TECHNOLOGIES	Plan a sequence of production steps when making designed solutions individually and collaboratively (ACTDEP018)		Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)		
DIGITAL TECHNOLOGIES	Identify and explore a range of digital syst different types of data (ACTDIK007)	ems with peripheral devices for different purposes, and transmit	Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)		
	Recognise different types of data and exp (ACTDIK008)	lore how the same data can be represented in different ways	Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information		
	Collect, access and present different types problems (ACTDIP009)	s of data using simple software to create information and solve	(ACTDIP016)		
	Define simple problems, and describe and solve them (ACTDIP010)	follow a sequence of steps and decisions (algorithms) needed to	Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)		
	Implement simple digital solutions as visua input (ACTDIP011)	al programs with algorithms involving branching (decisions) and user	Design a user interface for a digital system (ACTDIP018)  Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)		



Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)

(ACTDIP021)

Explain how student solutions and existing information systems are sustainable and meet current and future local community needs

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CURRICULUM AREA	YEAR 6	YEAR 7	YEAR 8	
DESIGN & TECHNOLOGIES	Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)  Generate, develop and communicate design ideas and		nicate design ideas, plans and processes for various audiences using anologies including graphical representation techniques (ACTDEP036)	
	processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)			
DIGITAL	Examine the main components of common digital systems and how they may connect together to form	Investigate how digital systems repre	esent text, image and audio data in binary (ACTDIK024)	
TECHNOLOGIES	networks to transmit data (ACTDIK014)	Analyse and visualise data using a ra (ACTDIP026)	ange of software to create information, and use structured data to model objects or events	
	Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016)	Design the user experience of a digit	al system, generating, evaluating and communicating alternative designs (ACTDIP028)	
	Define problems in terms of data and functional	Design algorithms represented diagra identify errors (ACTDIP029)	ammatically and in English, and trace algorithms to predict output for a given input and to	
	requirements drawing on previously solved problems (ACTDIP017)	Implement and modify programs with programming language (ACTDIP030)	h user interfaces involving branching, iteration and functions in a general-purpose	
	Design a user interface for a digital system (ACTDIP018)	Evaluate how student solutions and exis	existing information systems meet needs, are innovative, and take account of future risks	
	Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)	and sustainability (ACTDIP031)		
	Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)			
	Explain how student solutions and existing information systems are sustainable and meet current and future local community needs (ACTDIP021)			
CURRICULUM AREA	YEAR 9	YEAR 10		
DESIGN	Investigate and make judgments, within a range of technologies specialisations, on how technologies can be combined to create designed solutions (ACTDEK047)			
& TECHNOLOGIES	Critique needs or opportunities to develop design briefs and investigate and select an increasingly sophisticated range of materials, systems, components, tools and equipment to develop design deas (ACTDEP048)			
DIGITAL	Analyse and visualise data to create information and address	ss complex problems, and model proces	sses, entities and their relationships using structured data (ACTDIP037)	
& TECHNOLOGIES	Define and decompose real-world problems precisely, takin	ng into account functional and non-funct	tional requirements and including interviewing stakeholders to identify needs (ACTDIP038	
& IECHNOLOGIES				





CURRICULUM AREA	FOUNDATION	YEAR 1	YEAR 2
DESIGN & TECHNOLOGIES	Generate, develop and record design ic	gning, and the technologies needed to realise designed solutions (ACT deas through describing, drawing and modelling (ACTDEP006) olutions and working collaboratively (ACTDEP009)	TDEP005)
DIGITAL TECHNOLOGIES	Collect, explore and sort data, and use	(hardware and software components) for a purpose (ACTDIK001) digital systems to present the data creatively (ACTDIP003) ence of steps and decisions (algorithms) needed to solve simple proble	ems ( <u>ACTDIP004)</u>
CURRICULUM AREA	YEAR 3	YEAR 4	YEAR 5
DESIGN & TECHNOLOGIES	graphical representation techniques (A)	design ideas and decisions using appropriate technical terms and CTDEP015)  hen making designed solutions individually and collaboratively	Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)  Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)
DIGITAL TECHNOLOGIES	different types of data (ACTDIK007)  Recognise different types of data and e (ACTDIK008)  Collect, access and present different typroblems (ACTDIP009)  Define simple problems, and describe a solve them (ACTDIP010)	explore how the same data can be represented in different ways upes of data using simple software to create information and solve and follow a sequence of steps and decisions (algorithms) needed to isual programs with algorithms involving branching (decisions) and use	Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)  Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016)  Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)  Design a user interface for a digital system (ACTDIP018) Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)  Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)  Explain how student solutions and existing information systems are sustainable and meet current and future local community needs (ACTDIP021)





CURRICULUM AREA	YEAR 6	YEAR 7	YEAR 8	
DESIGN & TECHNOLOGIES	Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)		nunicate design ideas, plans and processes for various audiences using appropriate technical graphical representation techniques (ACTDEP036)	
	Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)			
DIGITAL	Examine the main components of common digital systems and how they may connect together to form	Investigate how digital systems re	present text, image and audio data in binary (ACTDIK024)	
TECHNOLOGIES	networks to transmit data (ACTDIK014)	Analyse and visualise data using (ACTDIP026)	a range of software to create information, and use structured data to model objects or events	
	Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016)  Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)  Design a user interface for a digital system (ACTDIP018)	Design the user experience of a c	igital system, generating, evaluating and communicating alternative designs (ACTDIP028)	
		Design algorithms represented didentify errors (ACTDIP029)	agrammatically and in English, and trace algorithms to predict output for a given input and to	
		Implement and modify programs language (ACTDIP030)	with user interfaces involving branching, iteration and functions in a general-purpose program	
			nd existing information systems meet needs, are innovative, and take account of future risks a	
	Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)	sustainability (ACTDIP031)	in existing information systems meet needs, are innovative, and take account of lattice risks a	
	Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIPO20)			
	Explain how student solutions and existing information systems are sustainable and meet current and future local community needs (ACTDIP021)			
CURRICULUM AREA	YEAR 9	YEAR 10		
DESIGN	Investigate and make judgments, within a range of technology	ogies specialisations, on how technol	ogies can be combined to create designed solutions (ACTDEK047)	
& TECHNOLOGIES	Critique needs or opportunities to develop design briefs and ideas (ACTDEP048)	d investigate and select an increasing	ly sophisticated range of materials, systems, components, tools and equipment to develop de	
DIGITAL	Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data (ACTDIP037)			
TECHNOLOGIES	Define and decompose real-world problems precisely, taking	ng into account functional and non-fu	nctional requirements and including interviewing stakeholders to identify needs (ACTDIP038)	
	Design the user experience of a digital system by evaluating alternative designs against criteria including functionality, accessibility, usability, and aesthetics (ACTDIP039)			
	Design algorithms represented diagrammatically and in stru	uctured English and validate algorithn	s and programs through tracing and test cases (ACTDIP040)	





CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
MATHEMATICS	Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment (ACMMG009)	Make models of three-dimensional objects and describe key features (ACMMG063)	Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111)
	Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022)	Create and interpret simple grid maps to show position and pathways (ACMMG065)	Construct simple prisms and pyramids (ACMMG140)
	Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042)	Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)	
	Describe the features of three-dimensional objects (ACMMG043)	, and the door digital technologies (1.00m)	
HUMANITIES & SOCIAL STUDIES	Pose questions about past and present objects, people, places and events (ACHASSI001, ACHASSI018, ACHASSI034, ACHASSI052)	Pose questions to investigate people, events, places and issues (ACHASSI073)	Locate and collect relevant information and data from primary sources and secondary sources (ACHASSI095, ACHASSI123)
a dodine drobied	Compare objects from the past with those from the	Sequence information about people's lives and events (ACHASSI055, ACHASSI075)	Sequence information about people's lives, events, developments and phenomena using a variety of methods
	present and consider how places have changed over time (ACHASSI006, ACHASSI023, ACHASSI039)	Draw simple conclusions based on analysis of information and data (ACHASSI058, ACHASSI079)	including timelines (ACHASSI097, ACHASSI125)
	Draw simple conclusions based on discussions, observations and information displayed in pictures and texts and on maps (ACHASSI008, ACHASSI025,	Examine information to identify different points of view and distinguish facts from opinions (ACHASSI077)  Develop appropriate questions to guide an inquiry about	Examine primary sources and secondary sources to determine their origin and purpose (ACHASSI098, ACHASSI126)
	ACHASSI041)	people, events, developments, places, systems and challenges (ACHASSI094, ACHASSI122)	Evaluate evidence to draw conclusions (ACHASSI101, ACHASSI129)
	Reflect on learning to propose how to care for places and sites that are important or significant (ACHASSI009, ACHASSI026, ACHASSI042)		Work in groups to generate responses to issues and challenges (ACHASSI102, ACHASSI130)
DESIGN & TECHNOLOGIES	Generate, develop and record design ideas through describing, drawing and modelling (ACTDEP006)	Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques (ACTDEP015)	Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)
	Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)	Plan a sequence of production steps when making designed solutions individually and collaboratively	Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions
	Sequence steps for making designed solutions and working collaboratively (ACTDEP009)	(ACTDEP018)	(ACTDEP027)





#### **FOUNDATION - YEAR 2**

#### YEAR 3 & 4

#### **YEAR 5 & 6**

#### DIGITAL TECHNOLOGY

Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001)

Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems (ACTDIP004)

Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data (ACTDIK007)

Collect, access and present different types of data using simple software to create information and solve problems (ACTDIP009)

Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)

Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input (ACTDIP011)

Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)

Design a user interface for a digital system (ACTDIP018)

Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)

#### **SCIENCE**

#### SCIENCE AS A HUMAN ENDEAVOUR F-2

Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)

#### **SCIENCE AS A HUMAN ENDEAVOUR 3-4**

Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)

#### SCIENCE AS A HUMAN ENDEAVOUR 5-6

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)

#### SCIENCE INQUIRY SKILLS F- 2

Engage in discussions about observations and represent ideas (ACSIS233), (ACSIS213), (ACSIS041)

Participate in guided investigations to explore and answer questions (ACSIS011), (ACSIS025), (ACSIS038)

Engage in discussions about observations and represent ideas (ACSIS233)

Share observations and ideas (ACSIS012)

#### SCIENCE INQUIRY SKILLS 3-4

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS053), (ACSIS064)

Represent and communicate observations, ideas and findings using formal and informal representations (ACSIS071)

#### SCIENCE INQUIRY SKILLS 5-6

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSIS110)





CURRICULUM AREA	YEAR 7 & 8	YEAR 9 & 10
MATHEMATICS	Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)	
HUMANITIES & SOCIAL STUDIES	Apply a methodology to locate and collect relevant information and data from a range of primary sources and secondary sources (ACHASSI153)  Examine primary sources and secondary sources to determine their origin, purpose and reliability (ACHASSI156)  Analyse primary sources and secondary sources to identify values and perspectives on people, actions, events, issues and phenomena, past and present (ACHASSI157)	
DESIGN & TECHNOLOGIES	Use project management processes when working individually and collaboratively to coordinate production of designed solutions (ACTDEP039)	Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication (ACTDEP049)
DIGITAL TECHNOLOGY	Design the user experience of a digital system, generating, evaluating and communicating alternative designs (ACTDIP028)  Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)	Design the user experience of a digital system by evaluating alternative designs against criteria including functionality, accessibility, usability, and aesthetics (ACTDIP039)





#### **FOUNDATION - YEAR 2**

#### YEAR 3 & 4

#### YEAR 5 & 6

#### **SCIENCE**

#### Science as a Human Endeavour F-2

Science involves observing, asking questions about, and describing changes in, objects and events(ACSHE013), (ACSHE021), (ACSHE034)

#### Science as a Human Endeavour 3-4

Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)

#### Science as a Human Endeavour 5-6

Scientific knowledge is used to solve problems (ACSHE083), (ACSHE100)

#### Science Inquiry Skills F- 2

Engage in discussions about observations and represent ideas (ACSIS233), (ACSIS213), (ACSIS041)

Participate in guided investigations to explore and answer questions (ACSIS011), (ACSIS025), (ACSIS038)

Engage in discussions about observations and represent ideas (ACSIS233)

Share observations and ideas (ACSIS012)

#### Science Inquiry Skills 3-4

With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS053), (ACSIS064)

Represent and communicate observations, ideas and findings using formal and informal representations (ACSIS071)

#### Science Inquiry Skills 5-6

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSIS110)





#### **CURRICULUM AREA FOUNDATION - YEAR 2** YEAR 3 & 4 YEAR 5 & 6 DIGITAL Design, modify and follow simple algorithms involving Recognise and explore digital systems (hardware and Identify and explore a range of digital systems with software components) for a purpose (ACTDIK001) peripheral devices for different purposes, and transmit sequences of steps, branching, and iteration (repetition) **TECHNOLOGIES** different types of data (ACTDIK007) (ACTDIP019) Recognise and explore patterns in data and represent data as pictures, symbols and diagrams (ACTDIK002) Define simple problems, and describe and follow a Implement digital solutions as simple visual programs sequence of steps and decisions (algorithms) needed to involving branching, iteration (repetition), and user input Follow, describe and represent a sequence of steps and solve them (ACTDIP010) (ACTDIP020) decisions (algorithms) needed to solve simple problems (ACTDIP004) Implement simple digital solutions as visual programs with Plan, create and communicate ideas and information. algorithms involving branching (decisions) and user input including collaboratively online, applying agreed ethical, (ACTDIP011) social and technical protocols (ACTDIP022) Plan, create and communicate ideas and information independently and with others, applying agreed ethical and social protocols (ACTDIP013) **CURRICULUM AREA** YEAR 7 & 8 YEAR 9 & 10 Design algorithms represented diagrammatically and in Design algorithms represented diagrammatically and in DIGITAL English, and trace algorithms to predict output for a given structured English and validate algorithms and programs **TECHNOLOGIES** input and to identify errors (ACTDIP029) through tracing and test cases (ACTDIP040) Plan and manage projects that create and communicate Plan and manage projects using an iterative and ideas and information collaboratively online, taking safety collaborative approach, identifying risks and considering and social contexts into account (ACTDIP032) safety and sustainability (ACTDIP044)

#### **CURRICULUM AREA**

#### **FOUNDATION - YEAR 2**

#### YEAR 3 & 4

#### YEAR 5 & 6

### DESIGN & TECHNOLOGIES

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

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

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

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

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

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)

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

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

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

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





CURRICULUM AREA	FOUNDATION	YEAR 1	YEAR 2
SCIENCE	Pose and respond to questions about familia objects and events (ACSIS014).  Participate in guided investigations and make observations using the senses (ACSIS011) Engage in discussions about observations and represent ideas (ACSIS233)  Share observations and ideas (ACSIS012)	predictions about familiar objects and events (ACSIS024)	(ACSIS037)  Participate in guided investigations to explore and answer questions (ACSIS038) Compare observations with those of others (ACSIS041)  Represent and communicate observations and ideas in a variety of ways (ACSIS042)
CURRICULUM AREA		YEAR 4	YEAR 5
SCIENCE		Forces can be exerted by one object on another through direct contact or from a distance (ACSSU076)	Light from a source forms shadows and can be absorbed, reflected and refracted (ACSSU080)





CURRICULUM AREA	FOUNDATION	YEAR 1	YEAR 2
MATHEMATICS	Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002)  Compare and order duration of events using everyday language of time (ACMMG007) Describe position and movement (ACMMG010)	Give and follow directions to familiar locations (ACMMG023)  Identify outcomes of familiar events involving chance and describe them using everyday language such as 'will happen', 'won't happen' or 'might happen' (ACMSP024)	Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)  Identify practical activities and everyday events that involve chance. Describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' (ACMSP047)
CURRICULUM AREA	YEAR 3	YEAR 4	YEAR 5
MATHEMATICS	Create and interpret simple grid maps to show position and pathways (ACMMG065)  Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067)	Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)  Describe possible everyday events and order their chances of occurring (ACMSP092)	Use a grid reference system to describe locations.  Describe routes using landmarks and directional language (ACMMG113)  List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116)
CURRICULUM AREA	YEAR 6	YEAR 7	YEAR 8
MATHEMATICS	Describe probabilities using fractions, decimals and percentages (ACMSP144)  Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145)  Compare observed frequencies across experiments with expected frequencies (ACMSP146)	Assign probabilities to the outcomes of events and determine probabilities for events (ACMSP168)	Identify complementary events and use the sum of probabilities to solve problems (ACMSP204)  Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206)



# AUSTRALIAN STEAM RESOURCES CATALOGUE



