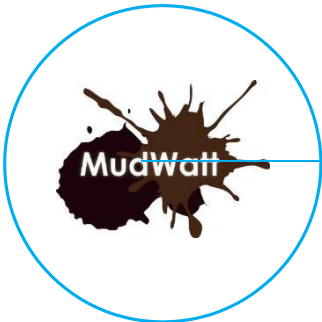
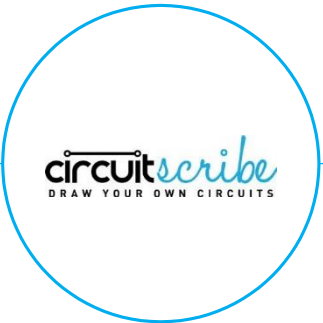


SCIENCE ⚙️ TECHNOLOGY ⚙️ ENGINEERING ⚙️ MATH

CURRICULUM ALIGNMENT





BY USING ARCKIT IN YOUR CLASSROOM, YOU COULD POTENTIALLY COVER THE FOLLOWING CONTENT DESCRIPTIONS FROM THE AUSTRALIAN CURRICULUM

CURRICULUM AREA

YEARS 3 & 4

YEARS 5 & 6

DESIGN TECHNOLOGIES

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](#))

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](#))

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

YEAR 3
Measure, order and compare objects using familiar metric units of length, mass and capacity ([ACMMG061](#))

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

YEAR 4
Use scaled instruments to measure and compare lengths, masses, capacities and temperatures ([ACMMG084](#))

Use simple scales, legends and directions to interpret information contained in basic maps ([ACMMG090](#))

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](#))

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



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CURRICULUM AREA

YEARS 7 & 8

YEARS 9 & 10

DESIGN TECHNOLOGIES

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](#))

Critically analyse factors, including social, ethical and sustainability considerations, that impact on designed solutions for global preferred futures and the complex design and production processes involved ([ACTDEK040](#))

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](#))

Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning ([ACMMG164](#))

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](#))

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

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

CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DESIGN TECHNOLOGIES [ENGINEERING]	<p>Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)</p> <p>Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)</p>	<p>Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)</p> <p>Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)</p>	<p>Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020)</p> <p>Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)</p>
SCIENCE	<p>PHYSICAL SCIENCE- YEAR 1</p> <p>Light and sound are produced by a range of sources and can be sensed (ACSSU020)</p> <p>Science as a Human Endeavour F-2 Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)</p> <p>SCIENCE INQUIRY SKILLS F- 2</p> <p>Engage in discussions about observations and represent ideas (AC SIS233), (AC SIS213), (AC SIS041)</p> <p>Participate in guided investigations to explore and answer questions (AC SIS011), (AC SIS025), (AC SIS038)</p>	<p>CHEMICAL SCIENCE- YEAR 4</p> <p>Natural and processed materials have a range of physical properties that can influence their use (ACSSU074)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR 3-4</p> <p>Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)</p> <p>SCIENCE INQUIRY SKILLS 3-4</p> <p>With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (AC SIS053), (AC SIS064)</p> <p>Compare results with predictions, suggesting possible reasons for findings (AC SIS215), (AC SIS216)</p>	<p>PHYSICAL SCIENCE YEAR 6</p> <p>Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR 5-6</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)</p> <p>SCIENCE INQUIRY SKILLS 5-6</p> <p>Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS086), (AC SIS103)</p> <p>Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (AC SIS087), (AC SIS104)</p> <p>Reflect on and suggest improvements to scientific investigations (AC SIS091), (AC SIS108)</p>
CRITICAL AND CREATIVE THINKING Analysing, synthesising and evaluating reasoning and procedures	<p>Draw conclusions and design a course of action identify alternative courses of action or possible conclusions when presented with new information</p> <p>Evaluate procedures and outcomes evaluate whether they have accomplished what they set out to achieve</p> <p>Apply logic and reasoning identify reasoning used in choices or actions in specific situations</p>	<p>Draw conclusions and design a course of action draw on prior knowledge and use evidence when choosing a course of action or drawing a conclusion</p> <p>Evaluate procedures and outcomes explain and justify ideas and outcomes</p> <p>Apply logic and reasoning identify and apply appropriate reasoning and thinking strategies for particular outcomes</p>	<p>Draw conclusions and design a course of action scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action</p> <p>Apply logic and reasoning assess whether there is adequate reasoning and evidence to justify a claim, conclusion or outcome</p> <p>Evaluate procedures and outcomes evaluate the effectiveness of ideas, products, performances, methods and courses of action against given criteria</p>

CURRICULUM AREA	YEARS 7 & 8	YEARS 9 & 10
<p>DESIGN TECHNOLOGIES (ENGINEERING)</p>	<p>Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)</p> <p>Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)</p>	<p>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)</p>
<p>SCIENCE</p>	<p>PHYSICAL SCIENCE- YEAR 8</p> <p>Energy appears in different forms, including movement (kinetic energy), heat and potential energy, and energy transformations and transfers cause change within systems (ACSSU155)</p> <p>SCIENCE INQUIRY SKILLS 7-8</p> <p>Measure and control variables, select equipment appropriate to the task and collect data with accuracy (AC SIS126), (AC SIS141)</p> <p>Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS133), (AC SIS148)</p>	<p>PHYSICAL SCIENCE- YEAR 9</p> <p>Energy transfer through different mediums can be explained using wave and particle models (ACSSU182)</p> <p>SCIENCE INQUIRY SKILLS 9-10</p> <p>Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS165), (AC SIS199)</p> <p>Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS166), (AC SIS200)</p>
<p>CRITICAL AND CREATIVE THINKING</p> <p>Analysing, synthesising and evaluating reasoning and procedures</p>	<p>Apply logic and reasoning identify gaps in reasoning and missing elements in information</p> <p>Draw conclusions and design a course of action differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions</p> <p>Evaluate procedures and outcomes explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified</p>	<p>Evaluate procedures and outcomes evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified</p> <p>Draw conclusions and design a course of action use logical and abstract thinking to analyse and synthesise complex information to inform a course of action</p> <p>Apply logic and reasoning analyse reasoning used in finding and applying solutions, and in choice of resources</p>

CURRICULUM AREA	FOUNDATION - YEAR 2	YEARS 3 & 4
MATHEMATICS	<p>FOUNDATION Describe position and movement (ACMMG010)</p> <p>YEAR 1 Give and follow directions to familiar locations (ACMMG023)</p> <p>YEAR 2 Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)</p>	<p>YEAR 3 Create and interpret simple grid maps to show position and pathways (ACMMG065)</p> <p>Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)</p> <p>YEAR 4 Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)</p>
DIGITAL TECHNOLOGIES	<p>Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems (ACTDIP004)</p> <p>Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001)</p>	<p>Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data (ACTDIK007)</p> <p>Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)</p> <p>Implement simple digital solutions as visual programs with algorithms involving branching(decisions) and user input (ACTDIP011)</p>
SCIENCE	<p>SCIENCE INQUIRY SKILLS F- 2</p> <p>Pose and respond to questions, and make predictions about familiar objects and events (ACSIS014, ACSIS024, ACSIS037)</p> <p>Engage in discussions about observations and represent ideas (ACSIS233), (ACSIS213), (ACSIS041)</p> <p>Participate in guided investigations to explore and answer questions (ACSIS011), (ACSIS025), (ACSIS038)</p> <p>Compare observations with those of others (ACSIS213, ACSIS041)</p>	<p>SCIENCE INQUIRY SKILLS 3-4</p> <p>With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSIS053), (ACSIS064)</p> <p>Compare results with predictions, suggesting possible reasons for findings (ACSIS215), (ACSIS216)</p> <p>Reflect on investigations, including whether a test was fair or not (ACSIS058, ACSIS069)</p> <p>Represent and communicate observations, ideas and findings using formal and informal representations (ACSIS060, ACSIS071)</p>

CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DITIGAL 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) Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)	Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014) Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)
SCIENCE	<p>PHYSICAL SCIENCE- FOUNDATION The way objects move depends on a variety of factors, including their size and shape (ACSSU005)</p> <p>PHYSICAL SCIENCE- YEAR 1 Light and sound are produced by a range of sources and can be sensed (ACSSU020)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR F-2 Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)</p> <p>SCIENCE INQUIRY SKILLS F- 2 Engage in discussions about observations and represent ideas (AC SIS233), (AC SIS213), (AC SIS041)</p> <p>Participate in guided investigations to explore and answer questions (AC SIS011), (AC SIS025), (AC SIS038)</p>	<p>PHYSICAL SCIENCE- YEAR 3 Heat can be produced in many ways and can move from one object to another (ACSSU049)</p> <p>PHYSICAL SCIENCE- YEAR 4 Forces can be exerted by one object on another through direct contact or from a distance (ACSSU076)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR 3-4 Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)</p> <p>SCIENCE INQUIRY SKILLS 3-4 With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (AC SIS053), (AC SIS064)</p> <p>Compare results with predictions, suggesting possible reasons for findings (AC SIS215), (AC SIS216)</p>	<p>PHYSICAL SCIENCE YEAR 5 Light from a source forms shadows and can be absorbed, reflected and refracted (ACSSU080)</p> <p>PHYSICAL SCIENCE YEAR 6 Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR 5-6 Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)</p> <p>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 (AC SIS086), (AC SIS103)</p> <p>Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (AC SIS087), (AC SIS104)</p> <p>Reflect on and suggest improvements to scientific investigations (AC SIS091), (AC SIS108)</p>
CRITICAL AND CREATIVE THINKING Analysing, synthesising and evaluating reasoning and procedures	<p>Draw conclusions and design a course of action identify alternative courses of action or possible conclusions when presented with new information</p> <p>Evaluate procedures and outcomes evaluate whether they have accomplished what they set out to achieve</p> <p>Apply logic and reasoning identify reasoning used in choices or actions in specific situations</p>	<p>Draw conclusions and design a course of action draw on prior knowledge and use evidence when choosing a course of action or drawing a conclusion</p> <p>Evaluate procedures and outcomes explain and justify ideas and outcomes</p> <p>Apply logic and reasoning identify and apply appropriate reasoning and thinking strategies for particular outcomes</p>	<p>Draw conclusions and design a course of action scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action</p> <p>Apply logic and reasoning assess whether there is adequate reasoning and evidence to justify a claim, conclusion or outcome</p> <p>Evaluate procedures and outcomes evaluate the effectiveness of ideas, products, performances, methods and courses of action against given criteria</p>

CURRICULUM AREA	YEAR 7 & 8	YEARS 9 & 10
<p>DITIGAL TECHNOLOGIES</p>	<p>Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance (ACTDIK023)</p> <p>Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)</p>	<p>Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs (ACTDIP038)</p> <p>Plan and manage projects using an iterative and collaborative approach, identifying risks and considering safety and sustainability (ACTDIP044)</p>
<p>SCIENCE</p>	<p>EARTH AND SPACE SCIENCE- YEAR 7 Some of Earth’s resources are renewable, including water that cycles through the environment, but others are non-renewable (ACSSU116)</p> <p>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)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR 7-8 Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations (ACSHE120), (ACSHE135)</p> <p>People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity (ACSHE121), (ACSHE136)</p> <p>SCIENCE INQUIRY SKILLS 7-8 Measure and control variables, select equipment appropriate to the task and collect data with accuracy (AC SIS126), (AC SIS141)</p> <p>Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS133), (AC SIS148)</p>	<p>PHYSICAL SCIENCE- YEAR 9 Energy transfer through different mediums can be explained using wave and particle models (ACSSU182)</p> <p>PHYSICAL SCIENCE- YEAR 10 Energy conservation in a system can be explained by describing energy transfers and transformations (ACSSU190)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR 9-10 Values and needs of contemporary society can influence the focus of scientific research (ACSHE228), (ACSHE230)</p> <p>SCIENCE INQUIRY SKILLS 9-10 Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS165), (AC SIS199)</p> <p>Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS166), (AC SIS200)</p>
<p>CRITICAL AND CREATIVE THINKING</p> <p>Analysing, synthesising and evaluating reasoning and procedures</p>	<p>Apply logic and reasoning identify gaps in reasoning and missing elements in information</p> <p>Draw conclusions and design a course of action differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions</p> <p>Evaluate procedures and outcomes explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified</p>	<p>Evaluate procedures and outcomes evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified</p> <p>Draw conclusions and design a course of action use logical and abstract thinking to analyse and synthesise complex information to inform a course of action</p> <p>Apply logic and reasoning analyse reasoning used in finding and applying solutions, and in choice of resources</p>

CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DIGITAL TECHNOLOGIES	<p>Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001)</p> <p>Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems (ACTDIP004)</p>	<p>Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data (ACTDIK007)</p> <p>Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)</p> <p>Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input (ACTDIP011)</p>	<p>Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)</p> <p>Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)</p> <p>Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)</p>
DESIGN TECHNOLOGIES (ENGINEERING)	<p>Explore how technologies use forces to create movement in products (ACTDEK002)</p> <p>Sequence steps for making designed solutions and working collaboratively (ACTDEP009)</p>	<p>Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)</p> <p>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)</p>	<p>Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020)</p> <p>Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)</p>
MATHEMATICS	<p>FOUNDATION Describe position and movement (ACMMG010)</p> <p>YEAR 1 Give and follow directions to familiar locations (ACMMG023)</p> <p>YEAR 2 Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)</p>	<p>YEAR 3 Create and interpret simple grid maps to show position and pathways (ACMMG065)</p> <p>Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)</p> <p>YEAR 4 Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)</p>	<p>YEAR 5 Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)</p> <p>YEAR 6 Investigate, with and without digital technologies, angles on a straight line, angles at a point and vertically opposite angles. Use results to find unknown angles (ACMMG141)</p>
SCIENCE	<p>PHYSICAL SCIENCE- FOUNDATION The way objects move depends on a variety of factors, including their size and shape (ACSSU005)</p> <p>CHEMICAL SCIENCE- YEAR 2 Different materials can be combined for a particular purpose (ACSSU031)</p>	<p>CHEMICAL SCIENCE- YEAR 4 Natural and processed materials have a range of physical properties that can influence their use (ACSSU074)</p> <p>PHYSICAL SCIENCE- YEAR 4 Forces can be exerted by one object on another through direct contact or from a distance (ACSSU076)</p>	<p>PHYSICAL SCIENCE YEAR 6 Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097)</p>

CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
SCIENCE	<p>SCIENCE AS A HUMAN ENDEAVOUR F-2</p> <p>Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)</p>	<p>SCIENCE AS A HUMAN ENDEAVOUR 3-4</p> <p>Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)</p>	<p>SCIENCE AS A HUMAN ENDEAVOUR 5-6</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)</p>
	<p>SCIENCE INQUIRY SKILLS F- 2</p> <p>Engage in discussions about observations and represent ideas (AC SIS233), (AC SIS213), (AC SIS041)</p> <p>Participate in guided investigations to explore and answer questions (AC SIS011), (AC SIS025), (AC SIS038)</p>	<p>SCIENCE INQUIRY SKILLS 3-4</p> <p>With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (AC SIS053), (AC SIS064)</p> <p>Compare results with predictions, suggesting possible reasons for findings (AC SIS215), (AC SIS216)</p>	<p>SCIENCE INQUIRY SKILLS 5-6</p> <p>Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS086), (AC SIS103)</p> <p>Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (AC SIS087), (AC SIS104)</p> <p>Reflect on and suggest improvements to scientific investigations (AC SIS091), (AC SIS108)</p>
<p>CRITICAL AND CREATIVE THINKING</p> <p>ANALYSING, SYNTHESISING AND EVALUATING REASONING AND PROCEDURES</p>	<p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION</p> <p>identify alternative courses of action or possible conclusions when presented with new information</p> <p>EVALUATE PROCEDURES AND OUTCOMES</p> <p>evaluate whether they have accomplished what they set out to achieve</p> <p>APPLY LOGIC AND REASONING</p> <p>identify reasoning used in choices or actions in specific situations</p>	<p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION</p> <p>draw on prior knowledge and use evidence when choosing a course of action or drawing a conclusion</p> <p>EVALUATE PROCEDURES AND OUTCOMES</p> <p>explain and justify ideas and outcomes</p> <p>APPLY LOGIC AND REASONING</p> <p>identify and apply appropriate reasoning and thinking strategies for particular outcomes</p>	<p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION</p> <p>scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action</p> <p>APPLY LOGIC AND REASONING</p> <p>assess whether there is adequate reasoning and evidence to justify a claim, conclusion or outcome</p> <p>EVALUATE PROCEDURES AND OUTCOMES</p> <p>evaluate the effectiveness of ideas, products, performances, methods and courses of action against given criteria</p>

CURRICULUM AREA	YEAR 7 & 8	YEARS 9 & 10
DIGITAL TECHNOLOGIES	<p>Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)</p> <p>Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment (ACTDEK034)</p> <p>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)</p>	<p>Investigate and make judgments on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions (ACTDEK043)</p> <p>Investigate and make judgments, within a range of technologies specialisations, on how technologies can be combined to create designed solutions (ACTDEK047)</p> <p>Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051)</p>
SCIENCE	<p>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)</p> <p>SCIENCE INQUIRY SKILLS 7-8</p> <p>Measure and control variables, select equipment appropriate to the task and collect data with accuracy (AC SIS126), (AC SIS141)</p> <p>Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS133), (AC SIS148)</p>	<p>PHYSICAL SCIENCE- YEAR 9 Energy transfer through different mediums can be explained using wave and particle models (ACSSU182)</p> <p>PHYSICAL SCIENCE- YEAR 10 Energy conservation in a system can be explained by describing energy transfers and transformations (ACSSU190)</p> <p>SCIENCE INQUIRY SKILLS 9-10</p> <p>Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS165), (AC SIS199)</p> <p>Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS166), (AC SIS200)</p>
CRITICAL AND CREATIVE THINKING ANALYSING, SYNTHESISING AND EVALUATING REASONING AND PROCEDURES	<p>APPLY LOGIC AND REASONING identify gaps in reasoning and missing elements in information</p> <p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions</p> <p>EVALUATE PROCEDURES AND OUTCOMES explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified</p>	<p>EVALUATE PROCEDURES AND OUTCOMES evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified</p> <p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION use logical and abstract thinking to analyse and synthesise complex information to inform a course of action</p> <p>APPLY LOGIC AND REASONING analyse reasoning used in finding and applying solutions, and in choice of resources</p>



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CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DESIGN TECHNOLOGIES (ENGINEERING)	<p>Identify how people design and produce familiar products, services and environments and consider sustainability to meet personal and local community needs (ACTDEK001)</p> <p>Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)</p>	<p>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)</p> <p>Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)</p> <p>Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)</p>	<p>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)</p> <p>Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020)</p> <p>Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)</p>
SCIENCE	<p>BIOLOGICAL SCIENCE- FOUNDATION Living things have basic needs, including food and water (ACSSU002)</p> <p>CHEMICAL SCIENCE- YEAR 2 Different materials can be combined for a particular purpose (ACSSU031)</p>	<p>BIOLOGICAL SCIENCE- YEAR 3 Living things can be grouped on the basis of observable features and can be distinguished from non-living things (ACSSU044)</p> <p>BIOLOGICAL SCIENCE- YEAR 4 Living things depend on each other and the environment to survive (ACSSU073)</p> <p>CHEMICAL SCIENCE- YEAR 4 Natural and processed materials have a range of physical properties that can influence their use (ACSSU074) Chemical Science- Year 5</p>	<p>SOLIDS, LIQUIDS AND GASES HAVE different observable properties and behave in different ways (ACSSU077)</p> <p>PHYSICAL SCIENCE- YEAR 6 Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097)</p> <p>BIOLOGICAL SCIENCE- YEAR 6 The growth and survival of living things are affected by physical conditions of their environment (ACSSU094)</p>
	<p>SCIENCE AS A HUMAN ENDEAVOUR F-2 Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)</p>	<p>SCIENCE AS A HUMAN ENDEAVOUR 3-4 Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)</p>	<p>SCIENCE AS A HUMAN ENDEAVOUR 5-6 Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE081, ACSHE098)</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)</p>
CRITICAL AND CREATIVE THINKING ANALYSING, SYNTHESISING AND EVALUATING REASONING AND PROCEDURES	<p>SCIENCE INQUIRY SKILLS F- 2 Engage in discussions about observations and represent ideas (AC SIS233), (AC SIS213), (AC SIS041)</p> <p>Participate in guided investigations to explore and answer questions (AC SIS011), (AC SIS025), (AC SIS038)</p>	<p>SCIENCE INQUIRY SKILLS 3-4 With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (AC SIS053), (AC SIS064)</p> <p>Compare results with predictions, suggesting possible reasons for findings (AC SIS215), (AC SIS216)</p>	<p>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 (AC SIS086), (AC SIS103)</p> <p>Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (AC SIS087), (AC SIS104)</p> <p>Reflect on and suggest improvements to scientific investigations (AC SIS091), (AC SIS108)</p>



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CURRICULUM AREA	YEAR 7 & 8	YEARS 9 & 10
DESIGN TECHNOLOGIES (ENGINEERING)	<p>Investigate the ways in which products, services and environments evolve locally, regionally and globally and how competing factors including social, ethical and sustainability considerations are prioritised in the development of technologies and designed solutions for preferred futures (ACTDEK029)</p>	<p>Critically analyse factors, including social, ethical and sustainability considerations, that impact on designed solutions for global preferred futures and the complex design and production processes involved (ACTDEK040)</p> <p>Explain how products, services and environments evolve with consideration of preferred futures and the impact of emerging technologies on design decisions (ACTDEK041)</p> <p>Investigate and make judgments on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions (ACTDEK043)</p>
SCIENCE	<p>BIOLOGICAL SCIENCE- YEAR 7 Classification helps organise the diverse group of organisms (ACSSU111)</p> <p>EARTH AND SPACE SCIENCE- YEAR 7 Some of Earth's resources are renewable, including water that cycles through the environment, but others are non-renewable (ACSSU116)</p> <p>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)</p> <p>CHEMICAL SCIENCE- YEAR 8 Chemical change involves substances reacting to form new substances (ACSSU225)</p>	<p>BIOLOGICAL SCIENCE- YEAR 9 Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems (ACSSU176)</p> <p>PHYSICAL SCIENCE- YEAR 9 Energy transfer through different mediums can be explained using wave and particle models (ACSSU182)</p> <p>CHEMICAL SCIENCE- YEAR 10 Different types of chemical reactions are used to produce a range of products and can occur at different rates (ACSSU187)</p> <p>PHYSICAL SCIENCE- YEAR 10 Energy conservation in a system can be explained by describing energy transfers and transformations (ACSSU190)</p>
	<p>SCIENCE INQUIRY SKILLS 7-8</p> <p>Measure and control variables, select equipment appropriate to the task and collect data with accuracy (AC SIS126), (AC SIS141)</p> <p>Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS133), (AC SIS148)</p>	<p>SCIENCE INQUIRY SKILLS 9-10</p> <p>Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS165), (AC SIS199)</p> <p>Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS166), (AC SIS200)</p>
CRITICAL AND CREATIVE THINKING ANALYSING, SYNTHESISING AND EVALUATING REASONING AND PROCEDURES	<p>APPLY LOGIC AND REASONING identify gaps in reasoning and missing elements in information</p> <p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions</p> <p>EVALUATE PROCEDURES AND OUTCOMES explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified</p>	<p>EVALUATE PROCEDURES AND OUTCOMES evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified</p> <p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION use logical and abstract thinking to analyse and synthesise complex information to inform a course of action</p> <p>APPLY LOGIC AND REASONING analyse reasoning used in finding and applying solutions, and in choice of resources</p>



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CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DESIGN TECHNOLOGIES (ENGINEERING)	<p>Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)</p> <p>Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)</p>	<p>Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)</p> <p>Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)</p>	<p>Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020)</p> <p>Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions (ACTDEP026)</p>
SCIENCE	<p>PHYSICAL SCIENCE- YEAR 1 Light and sound are produced by a range of sources and can be sensed (ACSSU020)</p>	<p>CHEMICAL SCIENCE- YEAR 4 Natural and processed materials have a range of physical properties that can influence their use (ACSSU074)</p>	<p>PHYSICAL SCIENCE YEAR 6 Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources (ACSSU097)</p>
	<p>SCIENCE AS A HUMAN ENDEAVOUR F-2 Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)</p>	<p>SCIENCE AS A HUMAN ENDEAVOUR 3-4 Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)</p>	<p>SCIENCE AS A HUMAN ENDEAVOUR 5-6 Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)</p>
	<p>SCIENCE INQUIRY SKILLS F- 2 Engage in discussions about observations and represent ideas (ACSIS233), (ACSIS213), (ACSIS041)</p> <p>Participate in guided investigations to explore and answer questions (ACSIS011), (ACSIS025), (ACSIS038)</p>	<p>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)</p> <p>Compare results with predictions, suggesting possible reasons for findings (ACSIS215), (ACSIS216)</p>	<p>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)</p> <p>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)</p> <p>Reflect on and suggest improvements to scientific investigations (ACSIS091), (ACSIS108)</p>
CRITICAL AND CREATIVE THINKING ANALYSING, SYNTHESISING AND EVALUATING REASONING AND PROCEDURES	<p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION identify alternative courses of action or possible conclusions when presented with new information</p> <p>EVALUATE PROCEDURES AND OUTCOMES evaluate whether they have accomplished what they set out to achieve</p> <p>APPLY LOGIC AND REASONING identify reasoning used in choices or actions in specific situations</p>	<p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION draw on prior knowledge and use evidence when choosing a course of action or drawing a conclusion</p> <p>EVALUATE PROCEDURES AND OUTCOMES explain and justify ideas and outcomes</p> <p>APPLY LOGIC AND REASONING identify and apply appropriate reasoning and thinking strategies for particular outcomes</p>	<p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action</p> <p>APPLY LOGIC AND REASONING assess whether there is adequate reasoning and evidence to justify a claim, conclusion or outcome</p> <p>EVALUATE PROCEDURES AND OUTCOMES evaluate the effectiveness of ideas, products, performances, methods and courses of action against given criteria</p>



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CURRICULUM AREA	YEAR 7 & 8	YEARS 9 & 10
DESIGN TECHNOLOGIES (ENGINEERING)	<p>Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment (ACTDEK034)</p> <p>Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)</p> <p>Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions (ACTDEP037)</p>	<p>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)</p>
SCIENCE	<p>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)</p>	<p>PHYSICAL SCIENCE- YEAR 9 Energy transfer through different mediums can be explained using wave and particle models(ACSSU182)</p>
	<p>SCIENCE INQUIRY SKILLS 7-8 Measure and control variables, select equipment appropriate to the task and collect data with accuracy (AC SIS126), (AC SIS141)</p> <p>Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS133), (AC SIS148)</p>	<p>SCIENCE INQUIRY SKILLS 9-10 Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS165), (AC SIS199)</p> <p>Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS166), (AC SIS200)</p>
CRITICAL AND CREATIVE THINKING ANALYSING, SYNTHESISING AND EVALUATING REASONING AND PROCEDURES	<p>APPLY LOGIC AND REASONING identify gaps in reasoning and missing elements in information</p> <p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions</p> <p>EVALUATE PROCEDURES AND OUTCOMES explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified</p>	<p>EVALUATE PROCEDURES AND OUTCOMES evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified</p> <p>DRAW CONCLUSIONS AND DESIGN A COURSE OF ACTION use logical and abstract thinking to analyse and synthesise complex information to inform a course of action</p> <p>APPLY LOGIC AND REASONING analyse reasoning used in finding and applying solutions, and in choice of resources</p>



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CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
DESIGN TECHNOLOGIES	<p>Explore how technologies use forces to create movement in products (ACTDEK002)</p> <p>Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)</p> <p>Explore needs or opportunities for designing, and the technologies needed to realise designed solutions (ACTDEP005)</p> <p>Generate, develop and record design ideas through describing, drawing and modelling (ACTDEP006)</p> <p>Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)</p>	<p>Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)</p> <p>Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)</p> <p>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)</p> <p>Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment (ACTDEP017)</p>	<p>Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)</p> <p>Investigate how electrical energy can control movement, sound or light in a designed product or system (ACTDEK020) (When combined with LittleBits)</p> <p>Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)</p> <p>Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)</p> <p>Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)</p>
MATHEMATICS	<p>FOUNDATION Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment (ACMMG009)</p> <p>Describe position and movement (ACMMG010)</p> <p>YEAR 1 Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022)</p> <p>YEAR 2 Describe the features of three-dimensional objects (ACMMG043)</p>	<p>YEAR 3 Make models of three-dimensional objects and describe key features (ACMMG063)</p> <p>YEAR 4 Compare the areas of regular and irregular shapes by informal means (ACMMG087)</p> <p>Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)</p>	<p>YEAR 5 Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111)</p> <p>Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)</p> <p>YEAR 6 Construct simple prisms and pyramids (ACMMG140)</p> <p>Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)</p>



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CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
<p>SCIENCE</p>	<p>PHYSICAL SCIENCE- FOUNDATION The way objects move depends on a variety of factors, including their size and shape (ACSSU005)</p> <p>CHEMICAL SCIENCE- YEAR 1 Everyday materials can be physically changed in a variety of ways (ACSSU018)</p> <p>CHEMICAL SCIENCE- YEAR 2 Different materials can be combined for a particular purpose (ACSSU031) (Just add cardboard)</p> <p>PHYSICAL SCIENCE- YEAR 2 A push or a pull affects how an object moves or changes shape (ACSSU033)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR F-2 Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013), (ACSHE021), (ACSHE034)</p> <p>SCIENCE INQUIRY SKILLS F- 2 Pose and respond to questions, and make predictions about familiar objects and events (ACSI014, ACSI024, ACSI037)</p> <p>Engage in discussions about observations and represent ideas (ACSI233), (ACSI213), (ACSI041)</p> <p>Participate in guided investigations to explore and answer questions (ACSI011), (ACSI025), (ACSI038)</p> <p>Compare observations with those of others (ACSI213, ACSI041)</p>	<p>PHYSICAL SCIENCE- YEAR 4 Forces can be exerted by one object on another through direct contact or from a distance (ACSSU076)</p> <p>CHEMICAL SCIENCE- YEAR 4 Natural and processed materials have a range of physical properties that can influence their use (ACSSU074)</p> <p>SCIENCE AS A HUMAN ENDEAVOUR 3-4 Science involves making predictions and describing patterns and relationships (ACSHE050), (ACSHE061)</p> <p>SCIENCE INQUIRY SKILLS 3-4 With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSI053), (ACSI064)</p> <p>Compare results with predictions, suggesting possible reasons for findings (ACSI215), (ACSI216)</p> <p>Reflect on investigations, including whether a test was fair or not (ACSI058, ACSI069)</p> <p>Represent and communicate observations, ideas and findings using formal and informal representations (ACSI060, ACSI071)</p>	<p>SCIENCE AS A HUMAN ENDEAVOUR 5-6</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083), (ACSHE100)</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083, ACSHE100)</p> <p>SCIENCE INQUIRY SKILLS 5-6</p> <p>With guidance, pose clarifying questions and make predictions about scientific investigations (ACSI231, ACSI232)</p> <p>Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSI086), (ACSI103)</p> <p>Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (ACSI087), (ACSI104)</p> <p>Reflect on and suggest improvements to scientific investigations (ACSI091), (ACSI108)</p>
<p>CRITICAL AND CREATIVE THINKING</p> <p>Analysing, synthesising and evaluating reasoning and procedures</p>	<p>Draw conclusions and design a course of action identify alternative courses of action or possible conclusions when presented with new information</p> <p>Evaluate procedures and outcomes evaluate whether they have accomplished what they set out to achieve</p> <p>Apply logic and reasoning identify reasoning used in choices or actions in specific situations</p>	<p>Draw conclusions and design a course of action draw on prior knowledge and use evidence when choosing a course of action or drawing a conclusion</p> <p>Evaluate procedures and outcomes explain and justify ideas and outcomes</p> <p>Apply logic and reasoning identify and apply appropriate reasoning and thinking strategies for particular outcomes</p>	<p>Draw conclusions and design a course of action scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action</p> <p>Apply logic and reasoning assess whether there is adequate reasoning and evidence to justify a claim, conclusion or outcome</p> <p>Evaluate procedures and outcomes evaluate the effectiveness of ideas, products, performances, methods and courses of action against given criteria</p>



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CURRICULUM AREA	YEAR 7& 8	YEARS 9 & 10
<p>DESIGN TECHNOLOGIES</p>	<p>Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions (ACTDEK031)</p> <p>Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment (ACTDEK034)</p> <p>Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)</p> <p>Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability (ACTDEP038)</p>	<p>Investigate and make judgments on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions (ACTDEK043)</p>
<p>MATHEMATICS</p>	<p>YEAR 7 Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)</p> <p>YEAR 8 Define congruence of plane shapes using transformations (ACMMG200)</p> <p>Develop the conditions for congruence of triangles (ACMMG201)</p>	<p>YEAR 9 Use the enlargement transformation to explain similarity and develop the conditions for triangles to be similar (ACMMG220)</p> <p>Solve problems using ratio and scale factors in similar figures (ACMMG221)</p> <p>YEAR 10 Apply logical reasoning, including the use of congruence and similarity, to proofs and numerical exercises involving plane shapes (ACMMG244)</p>
<p>SCIENCE</p>	<p>PHYSICAL SCIENCE- YEAR 7 Change to an object's motion is caused by unbalanced forces, including Earth's gravitational attraction, acting on the object (ACSSU117)</p> <p>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)</p> <p>SCIENCE INQUIRY SKILLS 7-8 Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (AC SIS124, AC SIS139)</p> <p>Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (AC SIS125, AC SIS140)</p> <p>Measure and control variables, select equipment appropriate to the task and collect data with accuracy (AC SIS126), (AC SIS141)</p>	<p>PHYSICAL SCIENCE- YEAR 10 Energy conservation in a system can be explained by describing energy transfers and transformations (ACSSU190)</p> <p>SCIENCE INQUIRY SKILLS 9-10 Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS165), (AC SIS199)</p>
<p>CRITICAL AND CREATIVE THINKING</p> <p>Analysing, synthesising and evaluating reasoning and procedures</p>	<p>Apply logic and reasoning identify gaps in reasoning and missing elements in information</p> <p>Draw conclusions and design a course of action differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions</p> <p>Evaluate procedures and outcomes explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified</p>	<p>Evaluate procedures and outcomes evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified</p> <p>Draw conclusions and design a course of action use logical and abstract thinking to analyse and synthesise complex information to inform a course of action</p> <p>Apply logic and reasoning analyse reasoning used in finding and applying solutions, and in choice of resources</p>



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CURRICULUM AREA	FOUNDATION - YEAR 2	YEAR 3 & 4	YEAR 5 & 6
MATHEMATICS	<p>FOUNDATION Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment (ACMMG009)</p> <p>Describe position and movement (ACMMG010)</p> <p>YEAR 1 Investigate and describe number patterns formed by skip-counting and patterns with objects (ACMNA018)</p> <p>Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022)</p> <p>YEAR 2 Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)</p> <p>Describe the features of three-dimensional objects (ACMMG043)</p>	<p>YEAR 3 Make models of three-dimensional objects and describe key features (ACMMG063)</p> <p>Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)</p> <p>Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)</p> <p>YEAR 4 Compare the areas of regular and irregular shapes by informal means (ACMMG087)</p> <p>Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)</p> <p>Compare objects using familiar metric units of area and volume (ACMMG290)</p>	<p>YEAR 5 Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111)</p> <p>Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)</p> <p>Calculate perimeter and area of rectangles using familiar metric units (ACMMG109)</p> <p>YEAR 6 Connect volume and capacity and their units of measurement (ACMMG138)</p> <p>Construct simple prisms and pyramids (ACMMG140)</p> <p>Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)</p>
DESIGN TECHNOLOGIES [ENGINEERING]	<p>Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)</p> <p>Explore needs or opportunities for designing, and the technologies needed to realise designed solutions (ACTDEP005)</p> <p>Generate, develop and record design ideas through describing, drawing and modelling (ACTDEP006)</p> <p>Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)</p>	<p>Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (ACTDEK013)</p> <p>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)</p> <p>Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment (ACTDEP017)</p>	<p>Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)</p> <p>Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)</p> <p>Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)</p> <p>Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)</p>
SCIENCE	<p>SCIENCE INQUIRY SKILLS F- 2 Pose and respond to questions, and make predictions about familiar objects and events (ACSI014, ACSI024, ACSI037)</p> <p>Engage in discussions about observations and represent ideas (ACSI233), (ACSI213), (ACSI041)</p> <p>Participate in guided investigations to explore and answer questions (ACSI011), (ACSI025), (ACSI038)</p> <p>Compare observations with those of others (ACSI213, ACSI041)</p>	<p>SCIENCE INQUIRY SKILLS 3-4 With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (ACSI053), (ACSI064)</p> <p>Compare results with predictions, suggesting possible reasons for findings (ACSI215), (ACSI216)</p> <p>Reflect on investigations, including whether a test was fair or not (ACSI058, ACSI069)</p> <p>Represent and communicate observations, ideas and findings using formal and informal representations (ACSI060, ACSI071)</p>	<p>SCIENCE INQUIRY SKILLS 5-6 With guidance, pose clarifying questions and make predictions about scientific investigations (ACSI231, ACSI232)</p> <p>Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSI086), (ACSI103)</p> <p>Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (ACSI087), (ACSI104)</p> <p>Reflect on and suggest improvements to scientific investigations (ACSI091), (ACSI108)</p>

CURRICULUM AREA	YEAR 7 & 8	YEARS 9 & 10
DESIGN TECHNOLOGIES [ENGINEERING]	<p>Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment (ACTDEK034)</p> <p>Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)</p> <p>Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability (ACTDEP038)</p>	<p>Investigate and make judgments on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions (ACTDEK043)</p>
MATHEMATICS	<p>YEAR 7 Establish the formulas for areas of rectangles, triangles and parallelograms, and use these in problem-solving (ACMMG159)</p> <p>Calculate volumes of rectangular prisms (ACMMG160)</p> <p>Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)</p> <p>Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165)</p> <p>Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163)</p> <p>YEAR 8 Define congruence of plane shapes using transformations (ACMMG200)</p> <p>Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)</p> <p>Develop formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198)</p> <p>Develop the conditions for congruence of triangles (ACMMG201)</p>	<p>YEAR 9 Use the enlargement transformation to explain similarity and develop the conditions for triangles to be similar (ACMMG220)</p> <p>Solve problems using ratio and scale factors in similar figures (ACMMG221)</p> <p>YEAR 10 Solve problems involving surface area and volume for a range of prisms, cylinders and composite solids (ACMMG242)</p> <p>Apply logical reasoning, including the use of congruence and similarity, to proofs and numerical exercises involving plane shapes (ACMMG244)</p>

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SCIENCE	<p>CHEMICAL SCIENCE - YEAR 8 Differences between elements, compounds and mixtures can be described at a particle level (ACSSU152)</p> <p>SCIENCE INQUIRY SKILLS 7-8</p> <p>Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (AC SIS124, AC SIS139)</p>	
CRITICAL AND CREATIVE THINKING	<p>Apply logic and reasoning identify gaps in reasoning and missing elements in information</p> <p>Draw conclusions and design a course of action differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions</p> <p>Evaluate procedures and outcomes explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified</p>	<p>Evaluate procedures and outcomes evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified</p> <p>Draw conclusions and design a course of action use logical and abstract thinking to analyse and synthesise complex information to inform a course of action</p> <p>Apply logic and reasoning analyse reasoning used in finding and applying solutions, and in choice of resources</p>
Analysing, synthesising and evaluating reasoning and procedures		

