

CURRICULUM AREA	FOUNDATION – YEAR 2	YEAR 3 & 4	YEAR 5 & 6
<p>DESIGN TECHNOLOGIES [ENGINEERING]</p>	<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>
<p>SCIENCE</p>	<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>
<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>

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 informatio</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>