



	AUTUMN	SPRING	SUMMER
Approach	English Martyrs' approach to Design and Technology is a process where ideas are generated, externalised, communicated and evaluated by action. This process in DT equips our pupils with the skills to become creative and reflective individuals, who can be resilient problem solvers. We apply the following six principles in each project: who the user is, what the purpose of the products are, that it functions effectively, the product must be innovative, pupils can make their own design decisions and that their product is authentic. We also ensure that each DT project includes <i>investigative and evaluative activities</i> (IEAs), <i>focused tasks</i> (FTs) and a design, make and evaluate element (DMEA).		
EARLY YEARS	Structures, Mechanisms and Textiles Children in EYFS are offered a range of opportunities to develop a range of skills in many strands of DT throughout engagement across all seven areas of learning. These align with guidance from 'Development Matters' (2023) and the Statutory Framework for the Early Years Foundation Stage (2023). The examples below are not exhaustive.		
	Mechanisms Make a moving Easter egg card (and other cards) – hinge and lever mechanism Exploring different fastenings – (eg. nuts and bolts) Communicating correct technical vocabulary for different mechanisms and forces (eg. wheel, force, pull, push, up, down, wedge, slope, lever, axle)	Structures Constructing dens Using Lego and Mobilo to construct Providing a range of non-fiction books related to machines, vehicles, etc Graphical instructions for building block structures to support graphical communication	Textiles Sock puppets – (link with Literacy text – Bringing the Rain to Kapiti Plain) Weaving, lacing boards, sticking and cutting Exploring and understanding that there is different media that can be combined to create new effects
	Cooking and Nutrition Cooking and nutrition is covered throughout the year by linking with our half term topics. Weekly provision is planned to give children the opportunity to explore cooking and nutrition through teaching of the EYFS curriculum. For example in Reception children prepare and assemble fruit kebabs, in EYFS children learn about where food comes from and undertake exploration of food linking to celebrations and festivals, EYFS children explore measuring (standardised and non-standardised) and through imaginary play EYFS children might explore food for a party or dinner.		
	Textiles	Mechanisms	Cooking and Nutrition
Problem	How can we create a puppet linked to a character from a story we are reading?	How can we create a moving story book to entertain our class?	How can we prepare and assemble a healthy summer salad/s for a picnic using produce from our garden and/or purchased from the shop?

	<p>Link: Literacy – Traditional Tales and other stories (Beegu, Lost and Found and Yeti and the Bird), Art – observational drawings, colour, pattern, texture, shape and experimenting with control marks, Science – use of everyday materials</p> <p>Key knowledge: templates and joining techniques (gluing, stapling, sewing)</p>	<p>Link: Literacy – traditional tales - using correct technical vocabulary, Religion – families and celebrations, Maths – position, direction, and movement, using standard and non-standard measures,</p> <p>Key knowledge: sliders and levers</p> <p>*using Kapow</p>	<p>Link: Science – seasonal changes (summer) and plants, Computing – using technology to research, Maths – measuring and counting, Literacy – Jack and the Beanstalk, and The Mango Tree</p> <p>Skills and knowledge: preparing fruit and vegetables, use the basic principles of a healthy and varied diet to prepare dishes, understand where food comes from. Other skills – peeling, cutting, slicing, grating, squeezing, and mixing</p>
YEAR 2	Structures	Mechanisms	Cooking and Nutrition
Problem	How can we create a freestanding swing structure using different materials?	How can we create a Fairground Wheel?	How can we prepare a healthy fruit smoothie?
	<p>Link: Reading – toys and games (non-fiction), Science – use of everyday materials, History – toys, Art – quick drawings, Maths – shapes, measuring</p> <p>Key knowledge: freestanding structures, 2-D shape to 3-D shape</p>	<p>Link: Science - forces</p> <p>Key knowledge: wheels and axles</p> <p>*using Kapow</p>	<p>Link: PSHE & PE – healthy eating, lifestyle, diet.</p> <p>Skills and knowledge: preparing fruit and vegetables, use the basic principles of a healthy and varied diet to prepare dishes, understand where food comes from. Other skills – cutting (bridge and claw technique), peeling, blending</p>
YEAR 3	Cooking and Nutrition	Textiles	Structures
Problem	How can we design, make and evaluate a healthy bread-based product with a filling for lunch, such as a wrap, a sandwich or roll?	How can we create a cushion for a pilgrimage?	How can we create a box to raise and collect money for charity?
	Link: PSHE & PE – healthy eating, lifestyle, diet.	<p>Link: Religion – Jubilee Year</p> <p>*using Kapow</p>	<p>Link: Maths – 2-D and 3-D shapes, nets, measuring, Computing – designing and creating content</p> <p>Key knowledge: shell structure</p>
YEAR 4	Mechanisms (Levers and linkages)	Mechanical Systems (Pneumatics)	Cooking and Nutrition
Problem	How can we design, make and evaluate a greetings card with moving parts for family or friends?	How can we design, make and evaluate a moving ‘creature in a box’ toy for small children?	How can we design, make and evaluate a healthy yeast-based snack for parents and children for a school event?

	<p>Link: RE – Christmas - Mathematics – use the vocabulary of position, direction and movement. Use a ruler to measure to the nearest cm, half cm or mm. Spoken language – ask relevant questions to extend knowledge and understanding. Build their technical vocabulary. Art and design – use colour, pattern, line, shape</p> <p>Key skills: problem-solving, teamwork, negotiation, consumer awareness, organisation, motivation, persuasion, leadership, perseverance.</p>	<p>Link: Science – identify and compare the suitability of a variety of everyday materials for particular uses. Spoken language – ask relevant questions to extend knowledge and understanding. Mathematics – measure, compare, add and subtract: lengths, volume and capacity. Art and design – use and develop drawing techniques. Use colour, pattern, line, shape.</p> <p>Key skills: problem-solving, teamwork, negotiation, consumer awareness, organisation, motivation, persuasion, leadership, perseverance, other – specify</p>	<p>Link: PSHE & PE – healthy eating, lifestyle, diet.</p> <p>Skills and knowledge: understand and apply the principles of a healthy and varied diet, prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques, understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed, safety and hygiene. Other skills – combining/mixing, rolling, frying, coating/dipping</p>
YEAR 5	Cooking & Nutrition	Structures	Mechanical Systems
Problem	How can we prepare a healthy and nutritious soup?	How can we design and build a bird feeder or bird house using recycled materials?	How can we create and build an orrery to illustrate the orbit of the planets of the sun?
	<p>Link: PE & PSHE - healthy eating, diet and exercise - Geography - seasonal food, imports, local customs and produce.</p>	<p>Link: Science – Living Things and their habitats – RE – Stewardship – Geography – Sustainability, data collection</p>	<p>Link: Science - Earth & Space - History - Ancient Greek Philosophers and thinkers - Art & Design - mixed media - Maths - 2D and 3D shapes</p>
YEAR 6	Textiles	Cooking and Nutrition	Electrical Systems
Problem	How can we create a collective banner for our class?	How can we prepare and cook a healthy, balanced meal?	How can we create an electronic moneybox?
	<p>Link: Art – Textiles – RE – Solidarity, Class Saint – PSHE – Friendship and Community.</p> <p>Key knowledge: combining different fabric shapes, computer aided design</p>	<p>Link: PSHE & PE – healthy eating, lifestyle, diet.</p> <p>Skills and knowledge: understand and apply the principles of a healthy and varied diet, prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques, understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed, food safety and hygiene. Other skills – cutting, baking</p>	<p>Link: PSHE – Lifesavers and financial education, Maths – money, Science – electricity (circuits, switches, conductors and insulators), Maths – measuring using standard units, Computing – use technology for research purposes</p> <p>How to Make Electric Saving Money Box (youtube.com)</p> <p>Key knowledge: more complex switches and circuits (including programming, monitoring and control)</p>