



Holy Family Catholic Primary School

Design and Technology Termly End Points

Design Technology



Intent

I will be creative and imaginative to design and make products that solve real and relevant problems.

Intent: Design Technology is an integral part of a children's right to a broad and balanced curriculum. Design Technology should build on children's prior learning and provide opportunities to be creative through curricular and cross-curricular topics. Children should develop a creative mind-set, become innovative designers and have the opportunity to critically evaluate their own work so they can develop their resilience, confidence and critical thinking skills through working independently and collaboratively with others. The problem solving and critical thinking skills acquired through Design Technology can be used across the whole school curriculum and be taken into life outside the classroom.

Year	Unit 1	Unit 2	Unit 3
EYFS	<u>Structures: Boats (Autumn 2)</u> To understand what waterproof means and to test whether materials are waterproof. To test and make predictions for which materials float or sink. To compare the uses of boats. To investigate how the shape and structure of boats affects the way they move. To design a boat. To create a boat based upon their own design.	<u>Structures: Junk modelling (Spring 1)</u> To explore and investigate the tools and materials in the junk modelling area. To investigate cutting different materials. To learn how to plan and select the correct resources needed to make a model. To verbally plan and create a junk model. To share a finished model and talk about the processes in its creation. To explore different ways to temporarily join materials together.	<u>Textiles: Bookmarks (Summer 1)</u> To develop threading and weaving skills. To practise and apply weaving skills to a specific material e.g. paper. To practise and apply threading skills with specific materials e.g. hessian and wool. To use threading or sewing to design a product (bookmark). To create a textiles product (bookmark) following their own design. To reflect with children on how they have achieved their aims.
1	<u>Textiles: Simple Stitches (Autumn 2)</u> To explore how fabrics are made and used. To thread a needle and make stitches. To sketch a design for a piece of bunting. To stitch a design for a piece of celebratory bunting. To finish a design of stitches and evaluate. Get started	<u>Mechanisms: Wheels and axles (Spring 2)</u> To develop cutting skills by shaping wheels. To refine cutting skills by shaping round wheels. To evaluate by comparing and discussing different wheel designs. To create a design by drawing plans for a pull-along toy.	<u>Structures: Stable structures (Summer 2)</u> To explore stability by balancing. To explore wide or narrow bases by building towers. To test a structure's stability with weight added in different places. To design a stable structure that meets the needs of a user.

		To apply finishing techniques by decorating a pull-along toy.	To use a variety of cutting and joining techniques to make a stable product.
2	<u>Structures: Baby Bear's chair (Autumn 2)</u> To evaluate existing structures. To explore how shape affects the strength of a tower. To explore how thickness affects the strength of materials. To make a strong and stable chair for a user. To evaluate and improve a structure.	<u>Mechanisms: Levers (Spring 2)</u> To describe how seesaws are a simple lever. To build and test a simple lever. To describe scissors as a mechanism with two levers. To make mechanisms with two levers. To design levers for everyday use.	<u>Cooking and nutrition: Balanced diet (Summer 2)</u> To recognise foods and their food groups. To identify the balance of food groups in a meal. To identify an appropriate piece of equipment to prepare a given food. To select balanced combinations of ingredients. To design based on criteria. To evaluate a dish based on design criteria.
3	<u>Cooking and nutrition: Eating seasonally (Autumn 2)</u> To explain why food comes from different places around the world. To explain the benefits of seasonal foods. To develop cutting and peeling skills. To evaluate seasonal ingredients. To design a mock-up using criteria. To evaluate a dish.	<u>Textiles: Egyptian collars (Spring 2)</u> To learn how to sew cross-stitch and appliqué. To develop and use a template. To assemble fabric parts into a fabric product. To decorate fabric using appliqué and cross-stitch.	<u>Structures: Product packaging (Summer 2)</u> To evaluate how 3D shapes are used in product packaging. To design nets for 3D product packaging. To review and improve net designs for packaging. To make 3D structures to package a healthy snack. To use a design brief to finalise and evaluate packaging.
4	<u>Cooking and nutrition: Adapting a recipe (Autumn 2)</u> To analyse existing biscuits for taste, texture and target audience. To follow a recipe to prepare and cook biscuits. To design a biscuit for a target audience. To prepare and cook an adapted biscuit recipe. To evaluate the final biscuit product.	<u>Mechanical systems: Mechanical cars (Spring 2)</u> To build a simple prototype car chassis. To build a prototype of a sustainable slingshot car chassis. To build a prototype of a durable slingshot car chassis. To design a mechanised toy car. To make a mechanical toy car from a kit.	<u>Electrical systems: Exploring electrical products (Summer 2)</u> To investigate the function of electrical products. To build an electrical circuit with a bulb and toggle switch. To build an electrical circuit with a push switch. To research a design problem by surveying a target audience. To communicate a design idea using a cross-sectional diagram.
5	<u>Electrical systems: Wobble bots (Autumn 1)</u> To investigate motors by creating circuits. To make a motorised product and test its function.	<u>Mechanical systems: Gears and pulleys (Autumn 2)</u> To create a working gear system and explain its function.	<u>Structures: Bridges (Summer 2)</u> To explore how bridges can solve real-world problems. To explore how shapes can be used to strengthen a structure.

	To apply knowledge of circuits to experiment with product design. To design a motorised product for a specific purpose. To make and evaluate the effectiveness of a motorised product.	To improve a working gear system and suggest some applications. To create a working pulley system and explain its function. To conduct market research to discover useful tasks an eco-gadget bike could perform. To design and evaluate an eco-gadget bike using design criteria.	To identify different ways to reinforce a bridge structure. To accurately make and assemble trusses for a bridge from a chosen design. To suggest improvements to the structure, strength and appearance of a bridge.
6	<u>Cooking and nutrition: Come dine with me (Autumn 2)</u> To explain the use of complementary flavours. To research and design a three-course meal. To explain recipe choices. To apply culinary skills and knowledge. To apply culinary skills and knowledge. To apply culinary skills and knowledge.	<u>Digital world: Navigating the world (Spring 2)</u> To investigate how existing products for the outdoor adventure market meet user needs. To communicate and refine design ideas clearly using CAD software. To develop a functional feature of a product by programming a digital pedometer. To program a product to respond to directional sensors and function as a compass. To evaluate a product to identify its pros and cons.	<u>Textiles: Bags (Summer 2)</u> To explore how pattern pieces are used to design and make fabric items. To use pattern piece templates to shape, cut and stitch fabric. To design a bag and create the prototype pattern pieces. To create a prototype bag from a design sketch. To add features to a bag.