



DT scheme of work (from Sep 2022) -

Christian values underpinning learning: Together we love and respect. We are creative, we are determined, we are confident, we are kind.

Intent

The National Curriculum (2014) forms the basis for all subject teaching ensuring continuity and progression in an age related curriculum. In addition, teachers make sure the content is relevant and stimulating by delivering through themes and topics.

Our DT curriculum has been developed because we believe that:

- DT is an inspiring, rigorous and practical subject, which provides children with a real life context for learning.
- Through DT children are able to create a range of structures, mechanisms, textiles, electrical systems and food products with a real life purpose.
- DT encourages children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.
- DT encourages children to become independent problem solvers, thinkers and risk takers, as individuals and part of a team.
- Combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industry.
- DT allows children to reflect on and evaluate past and present technology, its uses and its effectiveness.

Implementation

All teaching of DT should follow the design, make and evaluate cycle. Products should be designed and made for a purpose. During the making stage, children should be practising techniques and refining their design as they go, teaching should highlight the importance of making on-going changes and improvements at this stage. Children should evaluate their own products against a design criteria. It is important that each stage of the process is valued, not just the end product. Teaching should develop technical knowledge and vocabulary. Progression of skills and technical knowledge should be evident as each year group builds on previous learning. We aim, wherever possible, to link DT learning to other subjects such as maths, science, computing and art.



DT Opportunities						
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts, such as the home and school, gardens and playgrounds, the local community, industry and the wider environment.						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design						
*Think about and discuss what they want to make. *Discuss problems and how they might be solved as they arise.	* design purposeful, functional, appealing products for themselves and other users based on design criteria. *I can use my own ideas to make something *I can explain to someone else how I want to make my product *I can choose appropriate resources and tools *I can make a simple plan before making	*I can think of an idea and plan what to do next *I can choose tools and materials and explain why I have chosen them	* design purposeful, functional, appealing products for themselves and other users based on design criteria. * generate develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. *I can design a project and make sure that it looks attractive	*I can use ideas from other people when I am designing *I can produce a plan and explain it *I can evaluate and suggest improvements for my designs *I can evaluate products for both their purpose and appearance	* use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. * generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. *I can come up with a range of ideas after collecting information from different sources *I can produced a detailed step by step plan	*I can use market research to inform my plans and ideas *I can justify my plans in a convincing way *I can show that I consider culture and society in my plans and designs *I can explain how products should be stored and give reasons *I can work within a budget



					<p>*I can suggest alternative plans; outlining the positive features and draw backs</p> <p>*I can explain how a product will appeal to a specific audience</p>	
Make						
<p>*Return to and build on their previous learning, refining ideas and developing their ability to represent them.</p> <p>*Create collaboratively sharing ideas, resources and skills.</p> <p>*Construct with a range of materials.</p> <p>ELG - Creating with Materials:</p> <p>- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;</p> <p>- Share their creations, explaining the process they have used;</p>	<p>* select from and use a range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing.</p> <p>* select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>*I can make a product that moves</p>	<p>*I can join materials and components in different ways</p>	<p>* select from and use a range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing.</p> <p>* select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>*I can follow a step-by-step plan choosing the right equipment and materials</p> <p>*I can select the most appropriate tool and technique for a given task</p> <p>*I can work accurately to measure, make cuts and holes</p>	<p>*I can measure accurately</p>	<p>* select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately.</p> <p>* select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p>	<p>*I can follow and refine my plans</p>
Evaluate						



<p>*Reflect together on how they have achieved their aims.</p>	<p>*explore and evaluate a range of existing products. *I can make my model stronger</p>	<p>*I can explain what went well with my work</p>	<p>* explore and evaluate a range of existing products. * evaluate their ideas and products against design criteria. I can prove that my design meets some set criteria</p>	<p>*I can explain how I improved my original design *I can present my product in an interesting way *I can persevere and adapt my work when my original ideas do not work</p>	<p>* investigate and analyse a range of existing products. * evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. * understand how key events and individuals in design and technology have helped shape the world *I can evaluate appearance and function against original criteria *I can make a prototype before I make a final version</p>	<p>*I show that I can test and evaluate my products *I can evaluate my product against clear criteria</p>
<p>Technical knowledge</p>						
	<p>*build structures, exploring how they can be made stronger, stiffer and more stable. *explore and use mechanisms, such as levers, sliders, wheels and axles, in their products. *I can describe how something works</p>				<p>* apply their understanding of how to strengthen, stiffen and reinforce more complex structures. * understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages. * understand and use electrical systems in their products, such as</p>	



					series circuits incorporating switches, bulbs, buzzers and motors. * apply their understanding of computing to programme, monitor and control their products.	
Cooking and nutrition						
	* use the basic principles of a healthy and varied diet to prepare dishes. * understand where food comes from		* use the basic principles of a healthy and varied diet to prepare dishes. * prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.		* 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.	

Master practical skills: Food						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
*Use tools safely and hygienically (e.g. knives, grater, scissors).	*Cut ingredients safely and hygienically. * Measure or weigh using measuring cups or electronic scales.	*I can describe the ingredients I am using	* Cut, peel or grate ingredients safely and hygienically.	* I know how to be both hygienic and safe when using food	* Understand the importance of correct storage and handling of ingredients	



<ul style="list-style-type: none"> * Measure or weigh using measuring spoons and cups. * Assemble ingredients, following a recipe. 	<ul style="list-style-type: none"> * Assemble or cook ingredients, follow a recipe. *I can cut food safety 		<ul style="list-style-type: none"> * Measure or weigh using measuring cups or electronic scales. * Follow a recipe *I can describe how food ingredients come together 		<ul style="list-style-type: none"> (using knowledge of micro-organisms). * Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. * Demonstrate a range of baking and cooking techniques. * Create and refine recipes, including ingredients, methods, cooking times and temperatures. I show that I can be both hygienic and safe in the kitchen 	
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Master practical skills: Materials						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> * Construct with a range of materials. * Practise different techniques for joining materials, such as adhesive tape and different sorts of glue. * Use a range of tools with care and precision. (e.g. scissors, knives, saws, needles). 	<ul style="list-style-type: none"> * Cut materials safely using tools provided * Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). 		<ul style="list-style-type: none"> * Cut materials safely using tools provided. * Measure and mark out to the nearest centimetre. * Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). * Select appropriate joining techniques. 		<ul style="list-style-type: none"> * Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). * Measure and mark out to the nearest millimetre. 	



					<p>* Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).</p> <p>I can use a range of tools and equipment competently</p>	
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Master practical skills: Textiles						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>*Use needles carefully to make simple stitches.</p> <p>* Use stitches to join pieces of felt.</p> <p>*Use stitches and other features to add decoration to materials.</p> <p>*Sew pieces with a purpose in mind (e.g. masks, decorations).</p>	<p>* Join textiles using running stitch.</p> <p>* Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).</p>	<p>*I can explain why I have chosen specific textiles</p>	<p>* Shape textiles using templates.</p> <p>* Join textiles using running stitch.</p> <p>* Join textiles with appropriate stitching.</p> <p>* Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).</p> <p>*I can choose a textile for both its suitability and its appearance</p>		<p>* Understand the need for a seam allowance.</p> <p>* Create objects (such as a cushion) that employ a seam allowance.</p> <p>* Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration).</p> <p>* Use the qualities of materials to create suitable visual and tactile effects in the decoration of</p>	



					textiles (such as a soft decoration for comfort on a cushion).	
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Master practical skills: Electricals & electronics						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	* Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).		* Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage). * Create series and parallel circuits * I can make a product which uses both electrical and mechanical components		* Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).	

Master practical skills: Computing						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	* Model designs using software. * Control and monitor models using software designed for this purpose.		* Model designs using software. * Control and monitor models using software designed for this purpose.		* Model designs using software. * Control and monitor models using software designed for this purpose * Write code to control and monitor models or products.	



Master practical skills: Construction						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> *Use a variety of materials to construct with a purpose in mind (e.g. junk, wood) *Use tools safely and accurately to shape materials. *Join materials using glue and tape. 	<ul style="list-style-type: none"> *Use materials to gluing and nailing materials to make and strengthen products. 		<ul style="list-style-type: none"> * Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products. * Choose suitable techniques to construct products or to repair items. * Strengthen materials using suitable techniques. 		<ul style="list-style-type: none"> *Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding). * Choose suitable techniques to construct products or to repair items. * Strengthen materials using suitable techniques 	

Master practical skills: Mechanics						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> *Explore toys with gears, levers and pulleys. 	<ul style="list-style-type: none"> * Use construction kits that include gears, levers and wheels 		<ul style="list-style-type: none"> * Use construction kits that include gears, levers and wheels * Create products using levers, wheels and winding mechanisms. 		<ul style="list-style-type: none"> * Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). * Convert rotary motion to linear using cams. 	



					* Use innovative combinations of electronics (or computing) and mechanics in product designs.	
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To design, make and improve						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>*Design products that have a clear purpose and an intended user.</p> <p>* Talk about ways in which a product can be improved.</p>	<p>*Design products that have a clear purpose and an intended user.</p> <p>* Make products through stages of mock ups, making continual refinements.</p>		<p>* Design with purpose by identifying opportunities to design.* Make products, refining the design as work progresses, evaluate work.</p> <p>* Use software to design.</p> <p>* Make products through stages of prototypes, making continual refinements.</p>		<p>* Make products by working efficiently (such as by carefully selecting materials).</p> <p>* Design with the user in mind, motivated by the service a product will offer (rather than simply for profit).</p> <p>* Ensure products have a high quality finish, using art skills where appropriate.</p> <p>* Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.</p> <p>* Use software to design and represent product designs.</p>	



To take inspiration from design throughout history						
EYFS	KS1		KS2			
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>*Use photos and artefacts to explore how products have changed through history.</p> <p>*Explore different inventions and consider what life would be like without them (e.g. computer, telephone, TV, camera, car).</p>	<p>* Explore objects and designs to identify likes and dislikes of the designs.</p> <p>* Suggest improvements to existing designs.</p>		<p>* Explore objects and designs to identify likes and dislikes of the designs.</p> <p>* Suggest improvements to existing designs.</p> <p>* Disassemble products to understand how they work.</p>		<p>* Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.</p> <p>* Create innovative designs that improve upon existing products.</p> <p>* Evaluate the design of products so as to suggest improvements to the user experience.</p>	



Year A (2021 – 2022)

Class	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Oak (EAD)	Drawing Collage Painting Clay Keith Haring Giuseppi Arcimbaldo	Sewing - joining Nature Art Clay modelling Stick modelling Printing Weaving Andy Goldsworthy James Brunt	Printing Collage Junk modelling Painting Colouring with pens Van Gogh Mondrian	Painting – colour mixing Junk modelling Fruit printing Printing Sewing – decoration Eric Carle Jackson Pollock	Drawing Seed collages Clay fairy doors Collage Printing Transient natural art Weaving Matisse Andy Warhol	Collage Junk modelling Loose parts pictures Drawing Finger printing Yvonne Coomber Georgia O’Keefe
Poplar	Cooking Junk modelling – drawing (plan)	sewing Junk modelling /sculpting /building/gears & pulleys - drawing (plan) Shadow puppets Lanterns - science	Pastels – background Collage Cooking	Watercolours Cooking	Cooking Painting & drawing	Farm Diorama – junk modelling Collage - animals
Beech	Making roundhouses from natural materials.	Push and pull cars Creating igloos out of different materials.	Make shadow puppets and record a show.	Moving chariots Making Greek Flatbread	Design a new plant/ flower and explain where it would be found.	Design a costume for the event. Design and make their own t-shirt.
Willow		Design and Technology: Junk modelling.	Egyptian art/ DT- Making the following: cartouche (hieroglyphics), repeated pattern designs, scarab beetles using clay. Home learning to support	Cooking- to link cross- curricular to Science (human and animals/ healthy eating).	DT- Making a Railway landscape.	Painting with magnets/ marble painting. Monsters- DT- designing, creating and evaluating using junk modelling materials.
Maple	ART/DT Creating God’s Eyes and understanding the significance of these	Art – Using pastels and chalks to create art which represents black holes,	Art – Using pastels and chalks to create art which represents black holes,	Gaudi Claywork	Graffiti Art – Banksy..etc	ART – computer art – propaganda posters



	<p>Looking at Mayan masks and artwork focused around totem poles and creating individual images for a class pole Mayan Masks – create using overlaid cardboard – building up layers for effect and texture – thinking about area which should be overlaid Quetzal Birds – These are prominent within the myths shared – create sculpture of these – plan and design deciding upon materials to create these and then paint, collage to give effect of the bird – evaluation throughout and upon completion</p>	<p>milky way and the enormity of space. Explore the work of other artist who draw images of space – Peter Thorne. DT – design and create own textile piece in the style of Karen Rose</p>	<p>milky way and the enormity of space. Explore the work of other artist who draw images of space – Peter Thorne DT – design their own Mars Rover to build</p>		<p>Grayson Perry – Collage/Montage</p>	<p>Textiles – Rag rugs and Make do and Mend DT - Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose – Build Anderson Shelters and Gas Masks</p>
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Year B (2022 – 2023)

Class	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Oak (EAD)	Drawing Collage Painting Clay Keith Haring Giuseppe Arcimbaldo	Sewing - joining Nature Art Clay modelling Stick modelling Printing Weaving Andy Goldsworthy James Brunt	Printing Collage Junk modelling Painting Colouring with pens Van Gogh Mondrian	Painting – colour mixing Junk modelling Fruit printing Printing Sewing – decoration Eric Carle Jackson Pollock	Drawing Seed collages Clay fairy doors Collage Printing Transient natural art Weaving Matisse Andy Warhol	Collage Junk modelling Loose parts pictures Drawing Finger printing Yvonne Coomber Georgia O’Keefe
Poplar	Creating our own toys – drawing & sketching Junk modelling	Firework art and printing – Jackson Pollock Sewing – Christmas	paper weaving based on Kente Patterns – printing cooking	Edward TingaTinga – Tinga Tinga Art – paint/ watercolours, prints	Painting – maps Drawing - symbols Digital media – link to graphics unit in 123ICT	Drawing & sketching Collage Pastels



		Collage – natural materials (science/autumn)	Pastels	Sculpting our own animals – cardboard & clay	Cooking	
Beech	Cave painting inspired by Cave Baby. Making roundhouses from natural materials.		Make shadow puppets			
Willow	Katy and the Starry Night artwork.	Design and Technology: Junk modelling.		Egyptian art/ DT.		
Maple	Art/DT – Roman Mosaics – Design and create own mosaic Illuminated Lettering Photography – objects to represent letters to give words	Art/DT – Oil Pastels – Artists Turner and Martin Collage - textures and layers	DT/Art – Creating Hack silver jewellery, Viking food Art appreciation – Edvard Munch	DT/Art – Creating Hack silver jewellery, Viking food Art appreciation – Edvard Munch	Art/DT – Water colours and detailed observational sketching. James Brunt – Natural Artist Making own boats which float	Art/DT – Water colours and detailed observational sketching. James Brunt – Natural Artist Making own boats which float



Impact

Long term:

- That children will be able create structures, mechanisms, textiles, electrical systems and food products with a real life purpose.
- That children will use their creativity and imagination, to design and make products that solve real and relevant problems.
- That children will become independent problem solvers, thinkers and risk takers, as individuals and part of a team.
- That children will be able to combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industry.
- DT allows children to reflect on and evaluate their designs.

Assessment in DT:

- Pupil voice – to check understanding, understanding of key techniques, progression, confidence in discussing their designs and techniques
- Display and books – opportunity to practise skills, varied and engaging curriculum, showcased final pieces, clear progression in skills
- Feedback from parents and guests who attend show case events

Role of the co-ordinator:

- Highlight / Celebrate successes
- Collate appropriate evidence over time – this should show that pupils' skills and understanding develop over time
- Monitor the standards in the subject to ensure that outcomes are at expected levels

Provide ongoing support to colleagues