



All Saints' Catholic Primary School

**Design & Technology**

**Curriculum Progression**

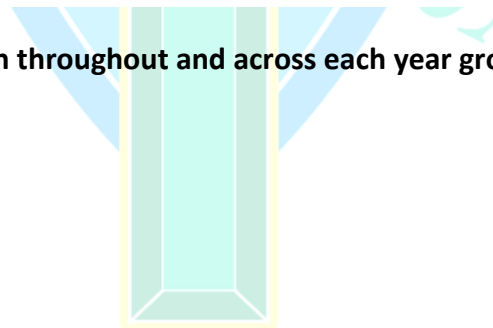
## OUR CURRICULUM INTENT

- ❖ We have designed an ambitious curriculum for all pupils that develops their knowledge, creativity, curiosity and skills-base. Utilising our location within North-West Durham, we deliver a curriculum that draws upon our rich history, cultural heritage and local resources.
- ❖ Our school life holds Gospel Values at its centre – this is evident within our curriculum delivery; we prioritise themes of fairness, integrity, compassion and responsibility and have high standards of all pupils in all subjects.
- ❖ Our curriculum is taught sequentially and systematically across each year group and assessments are used to inform current knowledge and future planning. Depending upon the individual needs of different cohorts or groups of pupils, the curriculum is adapted to ensure all children can access it and progress within it. Regardless of year group or subject, individual learning as well as collaborative learning is supported as part of a positive, hard working ethos.
- ❖ Prior learning is built upon with links made between old and new concepts. Meaningful learning is embedded throughout educational visits and creative activity and opportunity.
- ❖ When the children leave our school, we expect them to be confident learners who have a sound understanding of their place within our local community, our wider location and our global family. As a school, we are proud that our curriculum follows national policy but is also flexible and responsive to current issues.
- ❖ Our intention is for our pupils to be inspired to pursue knowledge and celebrate diversity in all areas.

## DESIGN & TECHNOLOGY RATIONALE

- ❖ We have designed an ambitious design and technology curriculum. We believe it is an inspiring, rigorous and practical subject that encourages children to learn, to think and intervene creatively to solve problems, both as individuals and as members of a team.
- ❖ Our school life holds Gospel Values at its centre – this is evident in D&T where we take pride in the individual ideas and designs of each pupil, encouraging students to support one another and celebrate diversity and creative thinking.
- ❖ Our design and technology curriculum is taught sequentially and systematically across each year group and assessments are used to inform current knowledge and future planning. Depending upon the individual needs of different cohorts or groups of pupils, the curriculum is adapted to ensure all children can access it and progress within it. Regardless of year group, individual learning as well as collaborative learning is supported as part of a positive, hard-working ethos.
- ❖ At All Saints', we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts. We also aim to make links to designs and designers throughout history, providing opportunities for children to critically reflect upon and evaluate their designs. Where possible, we utilise our unique local area and rich cultural heritage to widen our curiosity and develop our designs. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. This gives the learning purpose and relevance to the children.
- ❖ Children are taught to use disciplinary literacy in design and technology, understanding that presenting information in a variety of ways is appropriate to this subject.

For each individual subject document which shows progression throughout and across each year group, please access the One Drive or see each subject coordinator.





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**Intent**

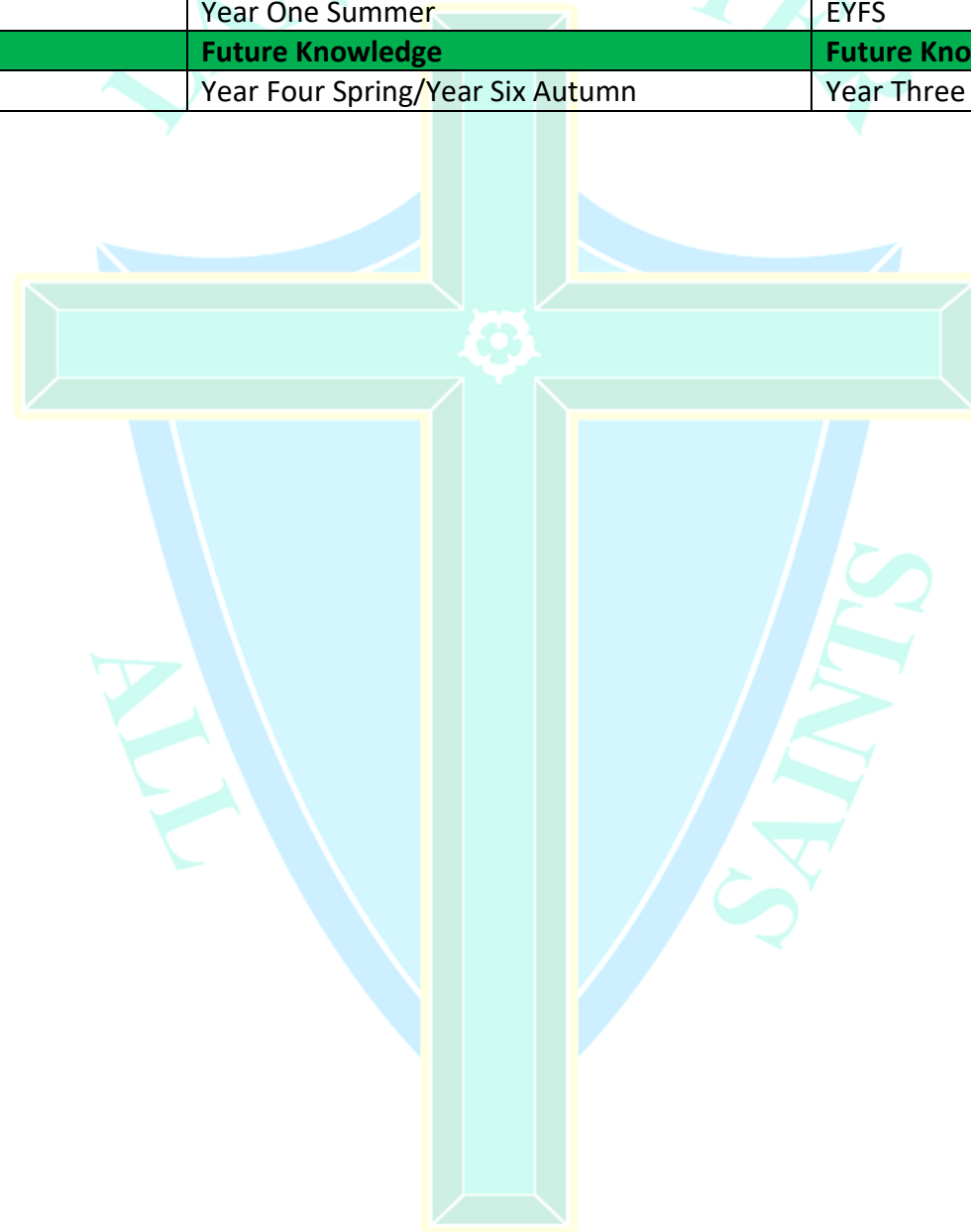
Year One Design Technology		
Autumn Term	Spring Term	Summer Term
How can objects move?	What do you know about fruit?	How can you make a strong, stable structure?
<p><b>Make, Technical Knowledge &amp; Evaluate</b></p> <ul style="list-style-type: none"> <li>To explore and use a range of existing products with mechanisms.</li> <li>To select and use tools (scissors) to cut and shape.</li> <li>To make a mechanism that moves using a lever in a moving picture.</li> <li>To make a mechanism using sliders in a moving picture.</li> <li>To evaluate their ideas and products against design criteria.</li> </ul>	<p><b>Cooking and Nutrition</b></p> <ul style="list-style-type: none"> <li>To design a fruit salad as a purposeful, functional, appealing product for themselves and others.</li> <li>To select from a range of tools to cut the fruit salad.</li> <li>To select and use a wide range of ingredients to make a fruit salad.</li> <li>To evaluate their ideas and products against design criteria.</li> </ul>	<p><b>Design, make, evaluate and technical knowledge</b></p> <ul style="list-style-type: none"> <li>To generate, develop, model and communicate their ideas for a structure through talking and drawing.</li> <li>To select from and use a wide range of materials and components, including construction materials according to their characteristics.</li> <li>To build structures, exploring how they can be made stronger, stiffer and more stable. To evaluate their ideas and structures against design criteria.</li> </ul>
<b>Vocabulary</b>	<b>Vocabulary</b>	<b>Vocabulary</b>
Mechanism, tools, scissors, cut, shape, lever, moving, slider	Design, make, fruit salad, ingredients, recipe, tools, knife, fork, spoon, cutlery, hygiene	Castle, stable, stronger, stiffer, materials, structure
<b>Prior Knowledge</b>	<b>Prior Knowledge</b>	<b>Prior Knowledge</b>
EYFS	EYFS	EYFS
<b>Future Knowledge</b>	<b>Future Knowledge</b>	<b>Future Knowledge</b>
Year Two autumn	Year Three spring	Year Two spring



# Year Two Design Technology

Autumn Term	Spring Term	Summer Term
How can I something with wheels move?	How can I make a strong free-standing structure?	How can I make a fabric hand puppet?
<p><b>Investigative and Evaluative Activities (IEAs)</b></p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of wheeled products such as toys and everyday objects.</li> <li>Draw an example of a wheeled product, stating the user and purpose, and labelling the main parts e.g. body, chassis, wheels, axles and axle holders.</li> <li>Read a story or non-fiction book that includes a wheeled product. Use this to introduce relevant vocabulary and to emphasise user and purpose.</li> </ul> <p><b>Focused Tasks (FTs)</b></p> <ul style="list-style-type: none"> <li>Using construction kits with wheels and axles, ask children to make a product that moves.</li> <li>Demonstrate to children how wheels and axles may be assembled as either fixed axles or free axles.</li> <li>Show different ways of making axle holders and stress the importance of making sure the axles run freely within the holders.</li> <li>Explore how to mark out, hold, cut and join materials and components correctly.</li> </ul> <p><b>Design, Make and Evaluate Assignment (DMEA)</b></p> <ul style="list-style-type: none"> <li>Make their wheel and axle product using their design ideas and criteria as an ongoing guide.</li> <li>Discuss how the children might add finishing techniques to their product with reference to their design ideas and criteria.</li> <li>Ask children to evaluate their finished product, communicating how it works and how it matches their design criteria, including any changes they made.</li> </ul>	<p><b>Design, make, evaluate and use technical knowledge.</b></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Design purposeful, functional, appealing products for others based on design criteria</li> <li>To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>Select from and use a range of tools and equipment to perform practical tasks [cutting, shaping, joining and finishing]</li> <li>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> </ul> <p><b>Evaluate:</b></p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products</li> <li>Evaluate their ideas and products against design criteria</li> </ul>	<p><b>Textiles</b></p> <ul style="list-style-type: none"> <li>To explore and evaluate a range of existing products.</li> <li>To design purposeful, functional, appealing products for themselves and other users based on design criteria.</li> <li>To select from a wide range of textiles according to their characteristics.</li> <li>To sew using joins and a good finish for their product.</li> <li>To evaluate their ideas and product against design criteria.</li> </ul>
<b>Vocabulary</b>	<b>Vocabulary</b>	<b>Vocabulary</b>
vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment	Strength, stiffness/rigidity, stability, rolling, mass/weight, fastening/joining, triangular, crossbar	Puppet, textiles, joins, purpose, evaluate

and materials used design, make, evaluate, purpose, user, criteria, functional		
<b>Prior Knowledge</b>	<b>Prior Knowledge</b>	<b>Prior Knowledge</b>
Year One Autumn	Year One Summer	EYFS
<b>Future Knowledge</b>	<b>Future Knowledge</b>	<b>Future Knowledge</b>
Year Three Autumn	Year Four Spring/Year Six Autumn	Year Three Summer



# Year Three Design Technology

Autumn Term	Spring Term	Summer Term
How could I design a Christmas card using mechanical components?	Can I make a sandwich from ingredients that I have grown?	How can I join two pieces of fabric?
<p><b>Design, make, evaluate and use technical knowledge.</b></p> <p><b>Produce:</b></p> <ul style="list-style-type: none"> <li>To research and design a functional product</li> <li>To generate and develop the design idea through discussion and annotated sketches</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>Demonstrate a range of lever and linkage mechanisms to the children using prepared teaching aids.</li> <li>Use questions to develop children's understanding e.g. Which card strip is the lever? Which card strip is acting as the linkage? Which part of the system is the input and which part the output? What does the type of movement remind you of? Which are the fixed pivots and which are the loose pivots?</li> <li>Demonstrate the correct and accurate use of measuring, marking out, cutting, joining and finishing skills and techniques.</li> <li>Children should develop their knowledge and skills by replicating one or more of the teaching aids.</li> </ul> <p><b>Evaluate:</b></p> <ul style="list-style-type: none"> <li>To evaluate the product</li> <li>To consider the views of others to improve their work</li> </ul>	<p><b>Cooking &amp; Nutrition</b></p> <p><b>Produce:</b></p> <ul style="list-style-type: none"> <li>To set out to grow plants such as cress or herbs with the intention of using them in their food product</li> <li>To research and develop design criteria of a sandwich aimed at a particular group of individuals</li> <li>To generate, develop and communicate their ideas through discussion and exploded diagrams</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>To select from a wide range of tools for cutting, grating, shaping and joining their product</li> </ul> <p><b>Evaluate:</b></p> <ul style="list-style-type: none"> <li>To evaluate their ideas and products against design criteria and consider the views of others to improve their work</li> </ul>	<p><b>Investigative and Evaluative Activities (IEAs)</b></p> <ul style="list-style-type: none"> <li>Children investigate a range of textile products that have a selection of stitches, joins, fabrics, finishing techniques, fastenings and purposes, linked to the product they will design, make and evaluate.</li> <li>Give children the opportunity to disassemble appropriate textiles products to gain an understanding of 3-D shape, patterns and seam allowances.</li> <li>Use questioning to develop understanding</li> </ul> <p><b>Focused Tasks (FTs)</b></p> <ul style="list-style-type: none"> <li>Demonstrate a range of stitching techniques demonstrating the use of, and need for, seam allowances.</li> <li>Allow children to use a textile product they have taken apart to create a paper pattern using 2-D shapes.</li> <li>Provide a range of fabrics – children to consider whether fabrics are suitable for the chosen purpose and user.</li> </ul> <p><b>Design, Make and Evaluate Assignment (DMEA)</b></p> <ul style="list-style-type: none"> <li>Plan the main stages of making e.g. using a flowchart or storyboard.</li> <li>Children to assemble their product using their existing knowledge, skills and understanding from IEAs and FTs.</li> <li>Evaluate as the process is undertaken and the final product in relation to the design brief and criteria. The product should be tested by the intended user and for its purpose and others' views sought to help with identifying possible improvements.</li> </ul>



<b>Vocabulary</b>	<b>Vocabulary</b>	<b>Vocabulary</b>
mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, user, purpose, function prototype, design criteria, innovative, appealing, design brief	Plant, grow, harvest, cut, slice, design, make, evaluate	fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, aesthetics, function, pattern pieces
<b>Prior Knowledge</b>	<b>Prior Knowledge</b>	<b>Prior Knowledge</b>
Year One autumn/Year Two autumn	Year One spring	Year Two summer
<b>Future Knowledge</b>	<b>Future Knowledge</b>	<b>Future Knowledge</b>
Year Five spring	Year Five summer	Year Five autumn

# Year Four Design Technology

Autumn Term	Spring Term	Summer Term
How can clay be moulded?	How does a box stay together?	How do you make a simple circuit?
<p><b>Control and Design - Mouldable Materials Design:</b></p> <ul style="list-style-type: none"> <li>To use research and develop design criteria to inform the design of an innovative, functional and appealing product that is fit for purpose and aimed at individuals or groups</li> <li>To generate, develop and model pattern pieces and prototype</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>To use a range of advanced techniques to shape and mould</li> <li>To use finishing techniques, showing an awareness of audience</li> </ul> <p><b>Evaluate:</b></p> <ul style="list-style-type: none"> <li>To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul>	<p><b>Investigative and Evaluative Activities (IEAs)</b></p> <ul style="list-style-type: none"> <li>Children investigate a collection of different shell structures including packaging. Use questions to develop children’s understanding</li> <li>Children take a small package apart identifying and discussing parts of a net including the tabs.</li> <li>Evaluate existing products to determine which designs children think are the most effective.</li> <li>Provide opportunities for the children to judge the suitability of the shell structures for their intended users and purposes.</li> <li>Discuss graphics including colours/impact of style/logo/size of font</li> </ul> <p><b>Focused Tasks (FTs)</b></p> <ul style="list-style-type: none"> <li>Children use kit parts with flat faces to construct nets. Practise making nets out of card, joining flat faces with masking tape to create 3-D shapes. Experiment with assembling in nets in numerous ways.</li> <li>Demonstrate skills and techniques of scoring, cutting out and assembling using pre-drawn nets. Then allow children to practise by constructing a simple box. Show how a window could be cut out and acetate sheet added.</li> <li>Demonstrate how to use different ways of stiffening and strengthening their shell structures</li> <li>Children discuss and explore the graphics techniques and media that could be used to achieve the desired appearance of their products.</li> </ul>	<p><b>Investigative and Evaluative Activities (IEAs)</b></p> <ul style="list-style-type: none"> <li>Discuss, investigate and, where practical, disassemble different examples of relevant battery-powered products, including those which are commercially available</li> <li>Ask children to investigate examples of switches, including those which are commercially available, which work in different ways</li> <li>Remind children about the dangers of mains electricity.</li> </ul> <p><b>Focused Tasks (FTs)</b></p> <ul style="list-style-type: none"> <li>Recap with the children how to make manually controlled, simple series circuits with batteries and different types of switches, bulbs and buzzers.</li> <li>Discuss which of the components in the circuit are input devices and which are output devices</li> <li>Demonstrate how to find a fault in a simple circuit and correct it, giving pupils opportunities to practise.</li> <li>Ask the children to make a variety of switches by using simple classroom materials</li> <li>Teach children how to avoid making short circuits.</li> </ul> <p><b>Design, Make and Evaluate Assignment (DMEA)</b> Develop a design brief with the children within a context which is authentic and meaningful.</p> <ul style="list-style-type: none"> <li>Discuss with children the purpose of the battery-powered products that they will be designing and making and who they will be for.</li> <li>Using annotated sketches, cross-sectional and exploded diagrams, as appropriate, ask the</li> </ul>

	<ul style="list-style-type: none"> <li>Practise using computer-aided design (CAD) software to design the net, text and graphics for their products according to purposes.</li> </ul> <p><b>Design, Make and Evaluate Assignment (DMEA)</b></p> <ul style="list-style-type: none"> <li>Develop a design brief with the children within a context which is authentic and meaningful.</li> <li>Discuss with the children the uses and purposes of their shell structures</li> <li>Agree on design criteria that can be used to guide the development and evaluation of children's products</li> <li>Ask the children to use annotated sketches and prototypes to develop, model and communicate their ideas for the product</li> <li>Ask children to identify the main stages of making and the appropriate tools and skills they learnt through focused tasks. Encourage the children to work with accuracy, using computer-aided design (CAD) where appropriate.</li> <li>Evaluate throughout and the final products against the intended purpose and with the intended user, drawing on the design criteria previously agreed.</li> </ul>	<p>children to develop, model and communicate their ideas.</p> <ul style="list-style-type: none"> <li>Ask the children to consider the main stages in making and testing before assembling high quality products, drawing on the knowledge, understanding and skills learnt through IEAs and FTs.</li> <li>Evaluate throughout and the final products against the intended purpose and with the intended user, drawing on the design criteria previously agreed.</li> </ul>
<b>Vocabulary</b>	<b>Vocabulary</b>	<b>Vocabulary</b>
Research, develop, design, evaluate, coil method, slip, glaze, patterns, tools, delicate	shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating font, lettering, text, graphics, decision, evaluating, design brief design criteria, innovative, prototype	series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip control, program, system, input device, output device user, purpose, function, prototype, design criteria, innovative, appealing, design brief
<b>Prior Knowledge</b>	<b>Prior Knowledge</b>	<b>Prior Knowledge</b>
EYFS	Year One summer	Year Four Science
<b>Future Knowledge</b>	<b>Future Knowledge</b>	<b>Future Knowledge</b>
Year Six summer	Year Six autumn	Year Five spring

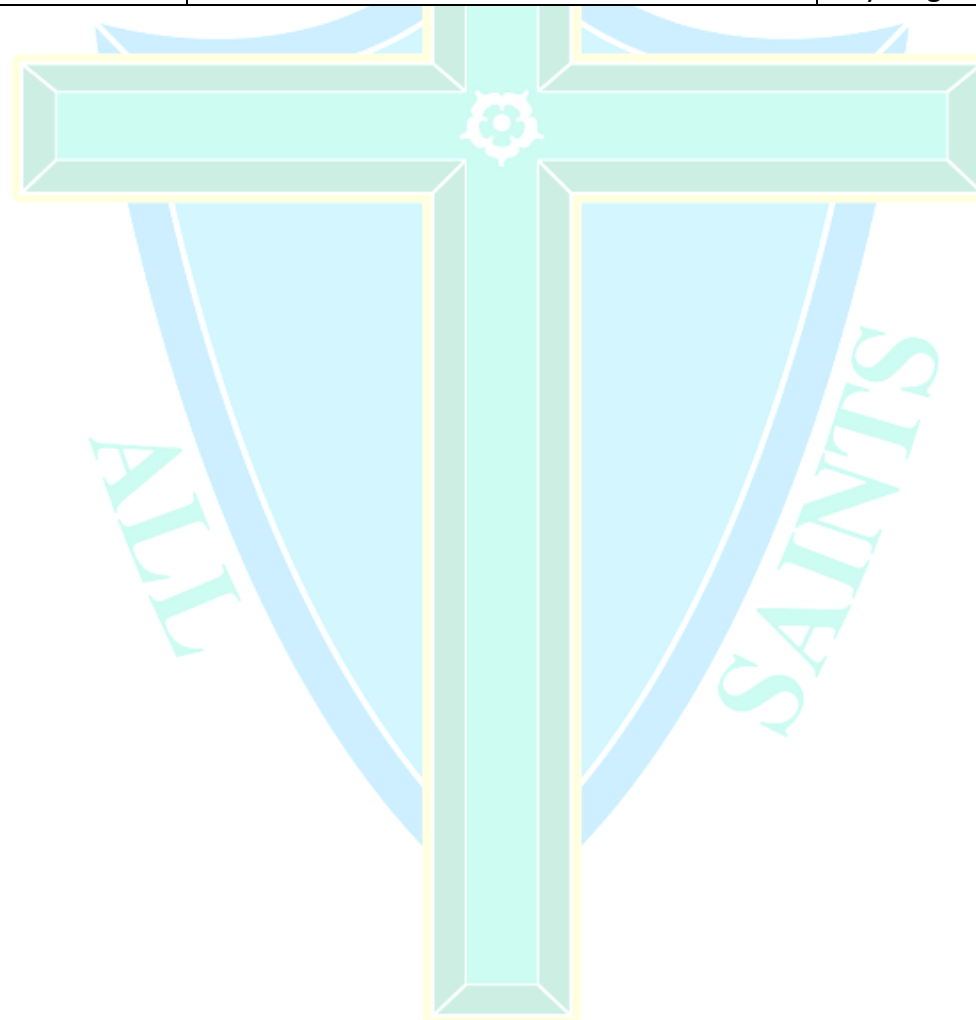
# Year Five Design Technology

Autumn Term	Spring Term	Summer Term
What is a loom?	How can we make something move?	What Mexican food makes a healthy plate?
<p><b>Textiles</b></p> <p><b>Design:</b></p> <ul style="list-style-type: none"> <li>To research and develop design criteria to inform the design of an innovative, functional and appealing product that is fit for purpose, aimed at particular individuals or groups.</li> <li>To generate and develop the product through discussion and annotated sketches</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>To make their product by selecting from a wide range of materials according to their functional and aesthetic qualities</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul>	<p><b>Investigative and Evaluative Activities (IEAs)</b></p> <ul style="list-style-type: none"> <li>Discuss with the children different types of movement: rotary, oscillating and reciprocating. Make simple models of different types of cams or have toys in which the cam mechanisms can be seen.</li> <li>Use videos, photographs and computer animations of products that cannot be explored through first-hand experience.</li> <li>Use observational drawings and questions to develop understanding of the products in the handling collection and those that children have researched</li> </ul> <p><b>Focused Tasks (FTs)</b></p> <ul style="list-style-type: none"> <li>Give children pre-cut cams made from MDF or wooden wheels to mount on a piece of board and observe their movement with a follower.</li> <li>Demonstrate how to use a hand drill safely to make an off-centre cam and position it accurately in a housing.</li> <li>Ensure children secure the wheel with a G-clamp and use a piece of scrap wood under the wheel to avoid drilling through the bench hook or table.</li> <li>Develop measuring, marking, cutting, shaping and joining skills using junior hacksaws, G-clamps, bench hooks, square section wood, card triangles and hand drills to make cam mechanisms and</li> </ul>	<p><b>Mexican Food</b></p> <p><b>Design:</b></p> <ul style="list-style-type: none"> <li>To research and develop design criteria to inform the design of an innovative, functional and appealing product that is fit for purpose, aimed at individuals of groups</li> </ul> <p><b>Technical Knowledge:</b></p> <ul style="list-style-type: none"> <li>To explain what they do to be both hygienic and safe when making their product</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>To produce a detailed step by step plan incorporating annotated sketches</li> <li>To select from a wider range of tools and equipment to perform practical tasks</li> </ul> <p><b>Evaluate:</b></p> <ul style="list-style-type: none"> <li>To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul>



	<p>construct wooden frames or card housings, as appropriate.</p> <ul style="list-style-type: none"> <li>• Demonstrate the accurate and safe use of tools and equipment.</li> </ul> <p><b>Design, Make and Evaluate Assignment (DMEA)</b></p> <ul style="list-style-type: none"> <li>• Develop an authentic and meaningful design brief with the children.</li> <li>• Children generate innovative ideas by carrying out research including surveys, interviews and questionnaires and develop a design specification for their product, carefully considering the purpose and intended user for their product.</li> <li>• Communicate ideas through detailed, annotated sketches from different views and/or exploded diagrams.</li> <li>• Produce detailed step-by-step plans and lists of tools, equipment and materials needed. If appropriate, allocate tasks within a team.</li> <li>• Make high quality products, applying knowledge, understanding and skills from IEAs and FTs.</li> <li>• Evaluate throughout and the final product in use, comparing it to the original design specification. Critically evaluate the quality of the design, the manufacture, functionality, innovation shown and fitness for the intended user and purpose.</li> </ul>	
<b>Vocabulary</b>	<b>Vocabulary</b>	<b>Vocabulary</b>
Loom, materials, tension, weave, fibre, jewellery, Viking, bracelet, design, evaluate	cam, snail cam, off-centre cam, peg cam, pear shaped cam follower, axle, shaft, crank, handle, housing, framework rotation, rotary motion, oscillating motion, reciprocating motion	Mexico, food groups, healthy plate, ingredients, storage, recipe, cooking, salsa, guacamole, quesadillas

	annotated sketches, exploded diagrams mechanical system, input movement, process, output movement design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief	
<b>Prior Knowledge</b>	<b>Prior Knowledge</b>	<b>Prior Knowledge</b>
Year Three summer	Year Four summer	Year Three spring
<b>Future Knowledge</b>	<b>Future Knowledge</b>	<b>Future Knowledge</b>
Key Stage 3	Year Six Summer	Key Stage 3



# Year Six Design Technology

Autumn Term	Summer Term
How can we change 2-d shapes into 3-d structures?	How can we design and create a helpful, functioning robot?
<p><b>Investigative and Evaluative Activities (IEAs)</b></p> <ul style="list-style-type: none"> <li>Children investigate and make annotated drawings of a range of portable and permanent frame structures, e.g. tents, bus shelters, umbrellas. Use photographs and web-based research to extend the range.</li> <li>Children research key events and individuals related to their study of frame structures e.g. Stephen Sauvestre – a designer of the Eiffel Tower; Thomas Farnolls Pritchard – designer of the Iron Bridge. They could also learn about locally important design and technology activity related to their project- Thomas Armstrong.</li> </ul> <p><b>Focused Tasks (FTs)</b></p> <ul style="list-style-type: none"> <li>Use a construction kit consisting of plastic strips and paper fasteners to build 2-D frameworks. Compare the strength of square frameworks with triangular frameworks. Ask the children to reinforce square frameworks using diagonals to help develop an understanding of using triangulation to add strength to a structure.</li> <li>Demonstrate how paper tubes can be made from rolling sheets of newspaper diagonally around pieces of e.g. dowel.</li> <li>Children to use these tubes and masking tape or paper straws with pipe cleaners to build 3-D frameworks such as cubes, cuboids and pyramids.</li> <li>Develop skills and techniques using junior hacksaws, G-clamps, bench hooks, square section wood, card triangles and hand drills to construct wooden frames, as appropriate.</li> <li>Demonstrate skills and techniques for accurately joining framework materials together.</li> </ul> <p><b>Design, Make and Evaluate Assignment (DMEA)</b></p> <ul style="list-style-type: none"> <li>Discuss the brief of designing and making a small-scale frame structure</li> </ul>	<p><b>Design, make, evaluate and use technical knowledge</b></p> <p><b>Design:</b></p> <ul style="list-style-type: none"> <li>To research and develop design criteria to inform the design of an innovative, functional and appealing product that is fit for purpose, aimed at particular individuals or groups.</li> <li>To generate, develop, model and communicate their design through discussion, exploded diagrams and prototypes.</li> </ul> <p><b>Technical Knowledge:</b></p> <ul style="list-style-type: none"> <li>To understand and use electrical systems in their products (e.g. series circuits, incorporating switches, bulbs, buzzers and motors).</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>To select from a wide range of materials and components according to their functional qualities.</li> </ul> <p><b>Evaluate:</b></p> <ul style="list-style-type: none"> <li>To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li> <li>To understand how key events and individuals in design and technology have helped shape the world.</li> <li>Apply their understanding to how to strengthen, stiffen and reinforce more complex structures.</li> <li>Understand and use electrical systems in their products.</li> </ul>

<ul style="list-style-type: none"> <li>• Children should be encouraged to generate innovative ideas, drawing on their research. Ask children to develop a simple design specification to guide their thinking.</li> <li>• Children should produce a detailed, step-by-step plan, listing tools and materials.</li> <li>• Children’s sketches should be annotated with notes to help develop and communicate their ideas.</li> <li>• Children to model their ideas first using materials such as paper, card and paper straws.</li> <li>• Encourage children to make their products with accuracy. They should regularly evaluate their work and their completed product, drawing on their design specification, and thinking about the intended purpose and user.</li> </ul>	
<b>Vocabulary</b>	<b>Vocabulary</b>
frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional	Prototype, 3D printer, Computer Aided Design, evaluate, research, annotate Plastic/polymer (PLA), improve, circuits, bulb/buzzer/wire/battery/cell/motor
<b>Prior Knowledge</b>	<b>Prior Knowledge</b>
Year Two Spring/ Year Four spring	Year Four Summer/ Year Five spring
<b>Future Knowledge</b>	<b>Future Knowledge</b>
Key Stage Three Curriculum	Key Stage Three Curriculum

