ALL SAINTS CE JUNIOR ACADEMY
LONG TERM SUBJECT OVERVIEW
DESIGN & TECHNOLOGY 2025-27

National Curriculum	Strand	Term 1			
		Year 3	Year 4	Year 5	Year 6
		Pop-up Books DT	Art - Mixed Media Land & City Scapes	Art - Making Monotypes	Art - Japanese art
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	**Design**	Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas.			
select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately ·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	**Make**	Order the main stages of making. • Select from and use appropriate tools with some accuracy to cut, shape and join paper and card. • Select from and use finishing techniques suitable for the product they are creating.			

Evaluate · 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	**Evaluate**	• Investigate and analyse books and, where available, other products with lever and linkage mechanisms. • Evaluate their own products and ideas against criteria and user needs, as they design and make			
Technical knowledge · apply their understanding of how to strengthen, stiffen and reinforce more complex structures · understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] · understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] · apply their understanding of computing to program, monitor and control their products	**Technical Knowledge** • Materials/structures • Mechanisms • Textiles • Food and nutrition • Electrical systems • Computer controlled monitoring	• Understand and use lever and linkage mechanisms. • Distinguish between fixed and loose pivots. • Know and use technical vocabulary relevant to the project.			
Exceeding the National Curriculum	Vocabulary	mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating			

		user, purpose, function prototype, design criteria, innovative, appealing, design brief			
	Texts	Wheels on the Bus- Picture book for examples.			
	Enhancements and enrichment				

National Curriculum	Strand	Term 2			
		Year 3	Year 4	Year 5	Year 6
		Art -Gestural Drawing with Charcoal	Art -Clay Saxon Heads	DT- Making Biscuits	Watercolour
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	**Design**			Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. • Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. • Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.	
select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately ·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	**Make**			• Write a step-by-step recipe, including a list of ingredients, equipment and utensils • Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. • Make, decorate and	

				present the food product appropriately for the intended user and purpose.	
Evaluate · 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	**Evaluate**			• Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. • Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. • Understand how key chefs have influenced eating habits to promote varied and healthy diets.	
Technical knowledge · apply their understanding of how to strengthen, stiffen and reinforce more complex structures · understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] · understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs,	**Technical Knowledge** • Materials/structures • Mechanisms • Textiles • Food and nutrition • Electrical systems • Computer controlled monitoring			• Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products. • Know and use relevant technical and sensory vocabulary.	

buzzers and motors] · apply their understanding of computing to program, monitor and control their products					
Exceeding the National Curriculum	Vocabulary			ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble design specification, innovative, research, evaluate, design brief	
	Texts				
	Enhancements and enrichment				

National Curriculum	Strand	Term 3			
		Year 3	Year 4	Year 5	Year 6
		Art -Cloth, Thread, Paint	Art - Landscapes	Art - Set Design	Art -Use Natural Materials to make images
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	**Design**				
select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately · 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	**Make**				
Evaluate · 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	**Evaluate**				

their work · understand how key events and individuals in design and technology have helped shape the world					
Technical knowledge · apply their understanding of how to strengthen, stiffen and reinforce more complex structures · understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] · understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] · apply their understanding of computing to program, monitor and control their products	**Technical Knowledge** • Materials/structures • Mechanisms • Textiles • Food and nutrition • Electrical systems • Computer controlled monitoring				
Exceeding the National Curriculum	Vocabulary				
	Texts				
	Enhancements and enrichment				

National Curriculum	Strand	Term 4			
		Year 3	Year 4	Year 5	Year 6
		Art - Telling Stories Through Making	Puppets-DT	DT - Bird Houses	DT- Micro Bits sensors (monitoring and control)
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	**Design**		Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. • Produce annotated sketches, prototypes, final product sketches and pattern pieces.	Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. • Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. • Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches.	Develop a design specification for a functional product that responds automatically to changes in the environment. • Generate, develop and communicate ideas through discussion, annotated sketches and pictorial representations of electrical circuits or circuit diagrams.
select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately ·select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and	**Make**		Plan the main stages of making. • Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. • Select fabrics and fastenings according to their Functional	Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. • Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction	Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. • Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable,

aesthetic qualities			characteristics e.g. strength, and aesthetic qualities e.g. pattern	materials to make frameworks. • Use finishing and decorative techniques suitable for the product they are designing and making.	functional product. • Create and modify a computer control program to enable their electrical product to respond to changes in the environment.
Evaluate · 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	**Evaluate**		Investigate a range of 3-D textile products relevant to the project. • Test their product against the original design criteria and with the intended user. • Take into account others' views. • Understand how a key event/individual has influenced the development of the chosen product and/or fabric.	Investigate and evaluate a range of existing frame structures. •Critically e valuate their products against their design specification, intended user and purpose , identifying strengths and areas for development, and carrying out appropriate tests. •Research key events and individuals relevant to frame structures.	• Continually evaluate and modify the working features of the product to match the initial design specification. • Test the system to demonstrate its effectiveness for the intended user and purpose.
Technical knowledge · apply their understanding of how to strengthen, stiffen and reinforce more complex structures · understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] · understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs,	• Materials/structures • Mechanisms • Textiles • Food and nutrition • Electrical systems • Computer controlled monitoring		Know how to strengthen, stiffen and reinforce existing fabrics. • Understand how to securely join two pieces of fabric together. • Understand the need for patterns and seam allowances. • Know and use technical vocabulary	Understand how to strengthen, stiffen and reinforce 3 D frameworks. •Know and use technical vocabulary relevant to the project.	• Understand and use electrical systems in their products. • Understand the use of computer control systems in products. • Apply their understanding of computing to program, monitor and control their products. • Know and use technical vocabulary

buzzers and motors] · apply their understanding of computing to program, monitor and control their products			relevant to the project.		relevant to the project.
Exceeding the National Curriculum	Vocabulary		fabric, names of fabrics, fastening, compartment, 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	Modelling – the process of making a 3-D representation of a structure or product. • Compression – the application of pressure to squeeze an object. • Strut – a part of a structure under compression. • Tension – a force pulling on a material or structure. • Tie – a part of a structure under tension. • Diagonal – a straight line that goes from one corner to another inside a shape. • Horizontal – a line that is parallel to the ground. • Vertical – a line that is at right angles to the ground. • Triangulation – the use of triangular shapes to strengthen a structure. • Frame structure – a structure made from thin components e.g. tent frame	Program, Microcontroller, Light emitting diode (LED), System, Output devices, Input devices, Process.
	Texts				

	Enhancements and enrichment		Anansi Stories. African Tales		

National Curriculum	Strand	Term 5			
		Year 3	Year 4	Year 5	Year 6
		Pizza Making	Art - Exploring Pattern	Greek Pots	Art -Exploring Identity
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	**Design**	Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. • Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.		Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. • Produce annotated sketches, prototypes, final product sketches and pattern pieces.	
select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately · 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	**Make**	Plan the main stages of a recipe, listing ingredients, utensils and equipment. • Select and use appropriate utensils and equipment to prepare and combine ingredients. • Select from a range of ingredients to make appropriate food products, thinking about sensory		Plan the main stages of making. • Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and glazing • understand the purpose of 'slip' to successfully join separate pieces of clay. • Consider choice of pattern to place on	

		characteristics.		pot and levels of complexity.	
Evaluate · 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	**Evaluate**	• Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. • Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.		• Evaluate the strength of the pots structure. • Evaluate the design of their pot e.g. shape •Consider how able they were to create their pattern using their selection of tools.	
Technical knowledge · apply their understanding of how to strengthen, stiffen and reinforce more complex structures · understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] · understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] · apply their understanding of computing to program, monitor and control their products	**Technical Knowledge** • Materials/structures • Mechanisms • Textiles • Food and nutrition • Electrical systems • Computer controlled monitoring	• Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.		• Know how to use appropriate equipment and utensils • Know how to join two pieces of clay using slip. •Know how to make their own slip. • Know and use relevant technical and sensory vocabulary appropriately.	
Exceeding the National Curriculum	Vocabulary	name of products, names of equipment, utensils, techniques and ingredients		Slip, coil, rolling pin, thick thin, sturdy, handle, push, pull, roll, cut, trace, carve,	

		texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet planning, design criteria, purpose, user, annotated sketch, sensory evaluations		brush, thumb, imprint,	
	Texts				
	Enhancements and enrichment				

National Curriculum	Strand	Term 6			
		Year 3	Year 4	Year 5	Year 6
		Art - Using Natural Materials to Make Images	Electrical Systems – simple programing and control.	Art - Making Birds	Textiles Combining Different Fabric shapes.
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	**Design**		Gather information about users' needs and wants and develop design criteria to inform the design of products that are fit for purpose. • Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams.		Generate innovative ideas by carrying out research including surveys, interviews and questionnaires. • Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design. • Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification.
select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately ·select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and	**Make**		Order the main stages of making. • Select from and use tools and equipment to cut, shape, join and finish with some accuracy. • Program a standalone control box, microcontroller or interface box to		• Produce detailed lists of equipment and fabrics relevant to their tasks. • Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment to make

aesthetic qualities			enhance the way the product works.		products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.
Evaluate · 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	**Evaluate**		Investigate and analyse a range of existing battery-powered products, including pre-programmed and programmable products. • Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.		• Investigate and analyse textile products linked to their final product. • Compare the final product to the original design specification. • Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • Consider the views of others to improve their work.
Technical knowledge · apply their understanding of how to strengthen, stiffen and reinforce more complex structures · understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] · understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] · apply their understanding of computing to program,	**Technical Knowledge** • Materials/structures • Mechanisms • Textiles • Food and nutrition • Electrical systems • Computer controlled monitoring		Understand and use computing to program and control products containing electrical systems, such as series circuits incorporating switches, bulbs and buzzers. • Know and use technical vocabulary relevant to the project.		• A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Fabrics can be strengthened, stiffened and reinforced where appropriate.

monitor and control their products					
Exceeding the National Curriculum	Vocabulary		Program, Microcontroller, Light emitting diode (LED), System, Output devices, Input devices, Process.		seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, iron transfer paper design criteria, annotate, design decisions, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype
	Texts				
	Enhancements and enrichment				