St Giles C. E Primary School – 2 Year Curriculum Map DT

Long term plan showing coverage of National Curriculum objectives (two-year curriculum cycle due to mixed age classes)

Year A	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Class 1	Cooking and Nutrition	Art focus Christmas crafts	Book marks Textiles	Junk Modelling	Revisit skills	Structures Boats
Class 2	Cooking & Nutrition **Smoothies** (Y1)	Textiles puppets (Y1)	Mechanisms Moving Story book (Y1)	Mechanisms Wheels and Axis (Y1)	Structures Making a windmill (Y1)	Revisit skills
Class 3	Cooking & Nutrition Eating seasonally (Y3)	Textiles Cushions (Y3)	Revisit skills	Mechanical systems: Making a slingshot car (Y4)	Revisit skills	Electrical systems Electric Poster (Y3)
Class 4	Structures Bridges (Y5)	Textiles Stuffed Toys (Y5)	Mechanisms Pop-up Books (Y5)	Electrical systems Doodlers (Y5)	Cooking & Nutrition Developing a recipe (Y5)	Revisit skills

Year B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Class 1	Cooking and Nutrition	Art focus Christmas crafts	Book marks Textiles	Junk Modelling	Revisit skills	Structures Boats
Class 2	Mechanisms Making a moving Monster (Y2)	Textiles Pouches (Y2)	Mechanisms Fairground wheel (Y2)	Structures Making baby bear's chair (Y2)	Cooking & Nutrition A balanced diet (Y2)	Cooking & Nutrition A balanced diet (Y2)
Class 3	Cooking & Nutrition Adapting a recipe (Y4)	Textiles Fastenings (Y4)	Mechanisms Pneumatic toys (Y3)	Structures Pavilions (Y4)	Electrical systems Torches (Y4)	Revisit skills
Class 4	Cooking & Nutrition Come dine with me? (Y6)	Textiles Waistcoats (Y6)	Mechanisms Automata Toys (Y6)	Structures Playgrounds (Y6)	Electrical systems Steady Hand Games (Y6)	Revisit skills

Progression map showing key skills to be taught over the curriculum cycle

Area of learning	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cooking							
Design	Designing packaging	Chopping fruit and vegetables safely to make a smoothie Identifying if a food is a fruit or a vegetable		Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination	Follow and adapting a recipe	Cutting and preparing vegetables safely Using equipment safely, including knives, hot pans and hobs Knowing how to avoid cross contamination	Following a recipe, including using the correct quantities of each ingredient Adapting a recipe based on research
Make	Safely use a knife to chop		Slicing food safely using the bridge or claw grip	Following the instructions within a recipe	Cooking safely, following basic hygiene rules	Following a step by step method carefully to make a recipe	Working safely and hygienically with independence
Evaluate		Tasting and evaluating different food combinations. Suggesting information to be included on packaging	Taste testing food combinations and final products. Describing the information that should be included on a label.	Establishing and using design criteria to help test and review dishes. Describing the benefits of seasonal fruits and vegetables and the impact on the environment. Suggesting points for improvement when making a seasonal tart	Evaluating a recipe, considering: taste, smell, texture and appearance. Describing the impact of the budget on the selection of ingredients. Evaluating and comparing a range of food products. Suggesting modifications to a recipe (e.g. This biscuit has too many raisins, and it is falling apart, so next time I will use less raisins.).	Identifying the nutritional differences between different products and recipes. Identifying and describing healthy benefits of food groups.	Evaluating a recipe, considering: taste, smell, texture and origin of the food group. Taste testing and scoring final products. Suggesting and writing up points of improvements when scoring others' dishes, and when evaluating their own throughout the planning, preparation and cooking process. Evaluating health and safety in

							production to minimise cross contamination.
	Textiles						
Design		Use a template	Design and use a template	Designing and making a template	Writing design criteria for a product, articulating decisions made. Designing a personalised item	Design considering main component shapes and create a template	Design a product to specifics specifications Annotate design, explaining decisions.
Make	Cut different materials using scissors safely Weave materials	Cutting fabric neatly with scissors Using joining methods to decorate a puppet	Selecting and cutting fabrics for sewing. Threading a needle Sewing a running stitch Pinning and cutting fabric	Following design criteria Selecting and cutting fabrics with ease using fabric scissors Threading needles Tying knots Sewing cross stitch to join fabric Decorating fabric	Measuring, marking and cutting fabric using a paper template Working neatly by sewing small, straight stitches.	Measuring, marking and cutting fabric accurately and independently . Creating strong and secure blanket stitches when joining fabric Threading needles independently	Using a template when cutting fabric to ensure they achieve the correct shape. Using pins effectively to secure a template to fabric without creases or bulges. Marking and cutting fabric accurately, in accordance with their design. Sewing accurately with evenly spaced, neat stitches.
Evaluate	Reflecting on a finished product, explaining likes and dislikes.	Reflecting on a finished product, explaining likes and dislikes.	Evaluating the quality of the stitching on others' work. Discussing as a class the success of their stitching against the success criteria. Identifying aspects of their peers' work that they particularly like and explaining why.	Evaluating an end product and thinking of other ways in which to create similar items.	Testing and evaluating an end product against the original design criteria. Suggesting modifications for improvement.	Testing and evaluating an end product and giving point for further improvements	Reflectingontheir workcontinually throughoutthe design,makeand evaluate process.
	Structures						

Design	Use knowledge of materials (floating) to select appropriately	Learning the importance of a clear design criteria. Including individual preferences and requirements in a design.	Generating and communicating ideas using sketching and modelling. Learning about different types of structures, found in the natural world and in everyday objects.	Design with a specific person in mind Draw and label a 2d design and how this will become 3d	Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.	To understand what a frame structure is To know that a 'free-standing' structure is one which can stand on its own	Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs.
Make	Follow a design	Learning how to turn 2D nets into 3D structures. Making stable structures from card, tape and glue . Following instructions to cut and assemble the supporting structure	Making a structure according to design criteria. Building a strong and stiff structure by folding paper	Construct using 3d shapes Create structure for an individual	Use different 3d shapes to create a structure Select appropriate materials to build a strong structure Create a design following a plan	Making a range of different shaped beam bridges. Using **triangles** to create truss bridges that span a given distance and support a load. Independently measuring and marking wood accurately. Select and safely use appropriate materials and tools to complete a task	Building a range of play apparatus structures drawing upon new and prior knowledge of structures. Measuring, marking and cutting wood to create a range of structures. Using a range of materials to reinforce and add decoration to structures
Evaluate		Evaluating a structure according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't Suggest points for improvements.	Exploring the features of structures. Comparing the stability of different shapes. Testing the strength of own structures. Identifying the weakest part of a structure. Evaluating the strength, stiffness and stability of own structure.	Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison to the original design. Suggesting points for modification	Evaluating structures made by the class. Describing what characteristics of a design and construction made it the most effective.	Adapting and improving own structure by identifying points of weakness and reinforcing them as necessary Suggesting points for improvements for own bridges	Improving a design plan based on peer evaluation Testing and adapting a design to improve it as it is developed Identifying what makes a successful structure

						of the individual designs	Considering effective and ineffective designs.	and those designed by others	
Technical		Understand shapes affect strength		Understand the shape of a structure will affect its strength Materials can be manipulated to increase strength "stable" structures are fixed and firm "strong" structures do not break easily.		To understand that wide and flat based objects are more stable. To understand the importance of strength and stiffness in structures.	To understand what a frame structure is To know that a 'free-standing' structure is one which can stand on its own	To understand some different ways to reinforce structures To understand how triangles can be used to reinforce bridges To understand why material selection is important based on properties.	To know that structures can be strengthened by manipulating materials and shapes
Mechanism		Wheels and Axis	Making a moving book	Making a moving Monster	Fairground Wheel				
Design		Design for a given audience	Design a moving vehicle	Design a product (wheel)	Create and design a monster for a specific audience	Design and develop a design according to a design brief	Design to a specific criteria Draw a net to then create a 3d object	Design using a range of structures and mechanisms Name these accurately	Use various CAMs to create desired movement Understanding and drawing cross-sectional diagrams to show the inner-workings of my design
Make		Follow a specific design	Adapt a mechanism	Select material according to their characteristics	Experiment with links to ensure they are effective	Create a system to create desired motion Selecting materials due to their functional and aesthetic characteristics Manipulating materials to create different effects by cutting, creasing,	Measuring, marking, cutting and assembling with increasing accuracy. Making a model based on a chosen design.	Follow a design brief accurately	Measure, mark and check accuracy of mark and cut Understand accuracy of measure, mark and cut affect the final product.

						folding and weaving			
Evaluate		Test final products explaining how to could be improved	Test final products explaining how to could be improved	Evaluate designs Adapt and test design	Evaluate design against design success criteria Use peer feedback to modify final design	Use views of others to adapt and improve a design Test and modify a product and suggest improvement	Evaluate a products effectiveness based on accuracy of the final product	Evaluating the work of others and receiving feedback on own work. Suggesting points for improvement.	Evaluating the work of others and receiving feedback on own work. Describing changes they would make/do if they were to do the project again
Technical		To know that a mechanism is the parts of an object that move together. Know a sliding mechanism moves an object along a single plain	To know for a wheel to turn it must attached to an axle Know an axle moves with an axle holder	Know different materials have different properties	Know mechanisms are made of separate components to make one machine.	Understand how a pneumatic system works and how it can be part of a mechanism	Know all object have kinetic energy and that energy is movement energy Understand the shape of an object can affect its effectiveness	To know that mechanisms control movement To understand that mechanisms can be used to change one kind of motion into another. To understand how to use sliders, pivots and folds to create paper-based mechanisms	To understand that the mechanism in an automata uses a system of cams, axles and followers. To understand that different shaped cams produce different outputs.
Electrical System									
Design						Research a topic to develop ideas Consider "client" for final design	Design considering a target audience	Identify where an existing product could be modified and how this would change to form and function Design to a target audience	Draw design from different perspectives Modify ideas through use of prototypes
Make						Create final design Add strengthening features Measure, mark and cut material	Use appropriate equipment to cut materials Assemble product according to design	Constructing a product with consideration for the design criteria	Accurately cutting, folding and assembling a net. Making and testing a circuit.

						Breaking down the construction process into steps so that others can make the product.	
Evaluate				Give and accept criticism on a final product Test product suitability linked to a design	Testing and evaluating the success of a final product	Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses Analysing whether changes in configuration positively or negatively affect an existing product Peer evaluating a set of instructions to build a product	Testing own and others finished games, identifying what went well and making suggestions for improvement Analysing a selection of existing children's toys
Technical						To know when there is a break in a series circuit, all components turn off	To know that batteries contain acid, which can be dangerous if they leak
	Textiles						
Design	Explore, use and refine a variety of artistic effects to express their ideas and feelings.	Using a template to create a design	Using a template to create a design	Designing and making a template from an existing product	Writing design criteria for a product, articulating decisions made	Designing a product, considering the main component shapes required and creating an appropriate template Considering the proportions of individual components	Designing a product in accordance to a specification linked to set of design criteria Annotating designs, to explain their decisions

Make	Return to and build on their previous learning, refining ideas and developing their ability to represent them.	Cutting fabric neatly with scissors Using joining methods to decorate Sequencing the steps taken during construction	Selecting and cutting fabrics for sewing Decorating a product using fabric glue or running stitch Threading a needle Sewing running stitch, with evenly spaced, neat, even stitches to join fabric Neatly pinning and cutting fabric using a template	Following design criteria to create a product Selecting and cutting fabrics with ease using fabric scissors Threading needles with greater independence Tying knots with greater independence Sewing cross stitch to join fabric Decorating fabric using appliqué	Making and testing a paper template with accuracy and in keeping with the design criteria Measuring, marking and cutting fabric using a paper template Selecting a stitch style to join fabric Working neatly by sewing small, straight stitches	Creating a 3D stuffed toy from a 2D design Measuring, marking and cutting fabric accurately and independently Creating strong and secure blanket stitches when joining fabric. Threading needles independently. Using appliqué to attach pieces of fabric decoration. Sewing blanket stitch to join fabric. Applying blanket stitch so the spaces between the stitches are even and regular.	Using a template when cutting fabric to ensure they achieve the correct shape. Using pins effectively to secure a template to fabric without creases or bulges. Marking and cutting fabric accurately, in accordance with their design. Sewing a strong running stitch, making small, neat stitches and following the edge. Tying strong knots. Decorating a product, attaching features (such as appliqué) using thread. Finishing the product with a secure fastening (such as buttons). Learning different decorative stitches. Sewing accurately with evenly spaced, neat stitches.
Evaluate		Reflecting on a finished product, explaining likes and dislikes	Evaluating the quality of the stitching on others' work Discussing as a class the success of their stitching against the success criteria	Evaluating an end product and thinking of other ways in which to create similar items	Testing and evaluating an end product against the original design criteria Deciding how many of the criteria should be met for the	Testing and evaluating an end product and giving point for further improvements	Reflecting on their work continually throughout the design, make and evaluate process

					product to be considered successful		
Technical		To know that 'joining technique' means connecting two pieces of material together To know that there are various temporary methods of joining fabric by using staples. glue or pins To understand that a template (or fabric pattern) is used to cut out the same shape multiple times	To know that sewing is a method of joining fabric To know that different stitches can be used when sewing To understand the importance of tying a knot after sewing the final stitch	To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces To know that when two edges of fabric have been joined together it is called a seam To know that it is important to leave space on the fabric for the seam To understand that some products are turned inside out after sewing so the stitching is hidden	To know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and Velcro To know that different fastening types are useful for different purposes To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions	To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. To understand that it is easier to finish simpler designs to a high standard. To know that soft toys are often made by creating appendages separately and then attaching them to the main body. To know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely	To understand that it is important to design clothing with the client/ target customer in mind. To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric. To understand the importance of consistently sized stitches

Medium term plan showing objectives taught in each year group

Year A	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Class 1	Explore fruits and vegetables and their differences To explore a pumpkin and describe it using 5 senses Design a fruit and veg soup recipe Learn how to use a knife safely To safely use tools to prepare ingredients Design food packages	Explore the tools and materials in junk modelling Investigate gutting different materials Learn how to plan and select the correct resources needed to make a model Verbally plan and create a junk model Share model and talk about its creation Explore ways to temporarily join materials	Develop threading and weaving skills Apply weaving skills to specific material – paper Apply weaving skills to specific material – hessian Use threading and weaving skills to make a book mark Create a textile product following own design Reflect on how to achieve aims	Explore the tools and materials in junk modelling Investigate gutting different materials Learn how to plan and select the correct resources needed to make a model Verbally plan and create a junk model Share model and talk about its creation Explore ways to temporarily join materials	Understand what waterproof means and test Test and make predictions which materials might sink or float Compare used of boats Investigate how shape and structure of a boat affects the way they move To design a boat Create a boat based on their design	
Class 2	• To identify if a food is a fruit or a vegetable • To identify where plants grow and which parts we eat • To taste and compare fruit and vegetable • To make a fruit and vegetable smoothie	• To join fabrics together using different methods • To use a template to create my design • To join two fabrics together accurately • To embellish my design using joining methods	• To understand how wheels move • To identify what stops wheels from turning • To design a moving vehicle • To build a moving vehicle	To include individual preferences and requirements in my design. To make a stable structure. To assemble the components of my structure. To evaluate my project and adapt my design.	• To explore making mechanisms • To design a moving storybook. • To construct a moving picture. • To evaluate my finished product.	

Class 3	• To know that climate affects food growth • To understand the advantages of eating seasonal foods grown in the UK • To create a recipe that is healthy and nutritious using seasonal vegetables • To safely follow a recipe when cooking	• To learn how to sew cross-stitch and appliqué. • To design a product and its template. • To decorate fabric using appliqué and cross-stitch. • To assemble and complete a cushion. •	• To understand how pneumatic systems work • To design a toy that uses a pneumatic system • To create a pneumatic system • To test and finalise ideas against design criteria	• To recognise how multiple shapes (2D and 3D) are combined to form a strong and stable structure • To design a castle • To construct 3D nets • To construct and evaluate my final product		• To understand the purpose of information design. • To research a set topic to develop a range of initial ideas. • To develop an initial idea into a final design. • To assemble my final product and incorporate a simple circuit. •
Class 4	• To explore how to reinforce a beam (structure) to improve its strength • To build a spaghetti truss bridge • To build a wooden truss bridge • To complete, reinforce and	• To design a stuffed toy • To sew blanket stitch • To create and add decorations to fabric • To use a blanket stitch to assemble the components of a stuffed toy	• To design a pop-up book • To follow my design brief to make my pop up book • To use layers and spacers to cover the working of mechanisms • To create a high-quality product suitable for a target user	To understand how motors are used in electrical products. To investigate an existing product to determine the factors that affect the product's form and function. To put findings from research into practice to	• To understand where food comes from • To understand the term 'healthy' • To adapt a traditional recipe • To complete a food product	

	evaluate my truss bridge			develop an improved product. To develop a DIY kit for another individual to assemble their product.		

Year B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Class 2	• To know what makes a balanced diet • To taste test food combinations • To design a healthy wrap • To make a healthy wrap •	• To sew a running stitch • To sew a running stitch • To join fabrics using a running stitch • To decorate a pouch using fabric glue or stitching	• To look at objects and understand how they move • To look at objects and understand how they move • To explore different design options • To make a moving monster	• To explore the concept and features of structures and the stability of different shapes • To understand that the shape of the structure affects its strength • To make a structure according to design criteria • To produce a finished structure and evaluate its strength, stiffness and stability	• To explore wheel mechanisms and design a Ferris wheel • To select appropriate materials • To build and test a moving wheel. • To make and evaluate a structure with a rotating wheel. •	•
Class 3	• To follow a baking recipe • To make and test a prototype	• To identify and evaluate different types of fastenings	• To build a car chassis • To design a shape that	• To create a range of different shaped frame structures	• To learn about electrical items and	•

	• To design a biscuit to a given budget. • To make a biscuit that meets a given design brief.	• To design a product to meet design criteria • To make and test a paper template • To assemble a book jacket	reduces air resistance • To make a model based on a chosen design • To assemble and test my completed product	• To design a structure • To build a frame structure • To add cladding to a frame structure	how they work. • To analyse and evaluate electrical products. • To design a product to fit a set of specific user needs. • To make and evaluate a torch. •	
Class 4	• To research and design a three-course meal • To prepare a meal using a recipe; To understand where their food comes from; To write up a recipe • Starter, Main, desert	• To design a waistcoat • To mark and cut fabric according to a design • To assemble a waistcoat • To decorate your waistcoat	• To prepare wood for assembly by measuring, marking and cutting each piece • To assemble the automata frame components and supports with the help of an exploded-diagram • To explore the relationship between cam profiles and follower movement, to inform a design decision • To apply the housing and	• To design a playground with a variety of structures • To build a range of structures • To improve and add detail to structures • To create the surrounding landscape	• To research and analyse a range of children's toys • To design a steady hand game • To construct a stable base • To assemble electronics and complete an electronic game	•

			finishing touches to the automata frame			