



Darley Churchtown CofE Primary School – Curriculum for 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 2	Cooking & Nutrition Fruit and vegetables	Textiles Puppet	Mechanisms Wheels and Axis	Structures Making a windmill	Mechanisms Moving Story book	
Class 3	Cooking & Nutrition Eating seasonally	Textiles Cushions	Mechanisms Pneumatic Toys	Structures Castles	Electrical systems Electric Poster	
Class 4	Cooking & Nutrition What could be healthier?	Textiles Stuffed Toys	Mechanisms Pop-up Books	Structures Bridges	Electrical systems Doodlers	

Year B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Class 2	Cooking & Nutrition A balanced diet	Textiles Pouches	Mechanisms Making a moving Monster	Structures Making baby bear's chair	Mechanisms Fairground wheel	
Class 3	Cooking & Nutrition Adapting a recipe	Textiles Fastenings	Mechanisms Slingshot Cars	Structures Pavilions	Electrical systems Torches	
Class 4	Cooking & Nutrition Come dine with me?	Textiles Waistcoats	Mechanisms Automata Toys	Structures Playgrounds	Electrical systems Steady Hand Games	



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

Area of learning	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cooking						
Design	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		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.	Design considering main component shapes and create a template	Design a product to specifics specifications



				Designing a personalised item		Annotate design, explaining decisions.
Make	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.	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	Reflecting on their work continually throughout the design, make and evaluate process.
Structures						
Design	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	Learning how to turn 2D nets into 3D structures. Making stable structures from card, tape and glue .	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	Making a range of different shaped beam bridges. Using triangles to create truss bridges that span a given	Building a range of play apparatus structures drawing upon new and prior knowledge of structures.



	Following instructions to cut and assemble the supporting structure				Create a design following a plan	distance and support a load. Independently measuring and marking wood accurately. Select and safely use appropriate materials and tools to complete a task	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 of the individual designs	Evaluating structures made by the class. Describing what characteristics of a design and construction made it the most effective. Considering effective and ineffective designs.	Adapting and improving own structure by identifying points of weakness and reinforcing them as necessary Suggesting points for improvements for own bridges and those designed by others	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
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, folding andweaving	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.
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 Breaking down the construction process into steps so that others can make the product.	Accurately cutting, folding and assembling a net. Making and testing a circuit.
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	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	Cutting fabric neatly with scissors	Selecting and cutting fabrics for sewing	Following design criteria to create a product	Making and testing a paper template with accuracy and in	Creating a 3D stuffed toy from a 2D design	Using a template when cutting fabric to ensure



	Using joining methods to decorate Sequencing the steps taken during construction	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	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	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	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.	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 product to be considered successful	Testing and evaluating an end product and giving point for further improvements	Reflecting on their work continually throughout the design, make and evaluate process
Technical	To know that 'joining technique' means connecting two pieces of material together	To know that sewing is a method of joining fabric To know that different stitches can be used when sewing	To know that applique is a way of mending or decorating a textile by applying smaller	To know that a fastening is something which holds two pieces of material together for	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 important to design clothing with the client/ target customer in mind.



	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 understand the importance of tying a knot after sewing the final stitch	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	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 mockup (prototype) of their design is useful for checking ideas and proportions	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 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	• Fruit or vegetable • Where fruit and vegetables grow • Smoothie ingredients tasting • Making smoothies	• Joining fabrics • Designing a puppet • Making and joining a puppet • Decorating a puppet	• How wheels move • Fixing broken wheels • Designing a wheel • Wacky races	• Designing the structure • Assembling the structure • Assemble the windmill • Testing and evaluating	• Exploring sliders movement • Design • Construction • Testing and evaluation	
Class 2	• Where in the world? • British Seasonal foods • Rainbow foods • Making Tarts	• Cross-stitch and applique • Cushion design • Decorating my cushion • Assembling my cushion •	• Exploring pneumatics • Designing a pneumatic toy • Making pneumatic toy • Decorating and assembling a toy	• Features of a castle • Designing a castle • Nets and Structures • Building a castle	• Information design • Topic research • Design development • Electric poster assembly	
Class 3	• From farm to fork • What does a healthy meal look like? • Adapting and improving a recipe • Making a healthy Bolognese	• Designing a stuffed toy • Blanket stitch • Details and appendages • Stuffed toy assembly	• Pop up book page design • Making my pop up book • Using layers and spacers • Writing and illustrating	• Arch and beam bridges • Spaghetti truss bridges • Building bridges • Finalising bridges	• Electrical systems and motors • Meet the doodlers • Doodler design and construction • Doodler DIY kits	



Year B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Class 1	• Hidden sugars in drinks • Taste test combinations • Designing and making a wrap • Making and evaluating	• Running stitch • Using a template • Making a pouch • Decorating a pouch	• Pivots, leavers and linkages • Making linkages • Designing a Monster • Making a monster	• Exploring stability • Strengthening materials • Making baby bear's chair • Fixing and testing Baby Bear's chair	• Design a Ferris wheel • Planning the build • Building the frame and wheels • Adding pods and decoration	
Class 2	• Following a recipe • Testing ingredients • Final design and budget • Biscuit bake off	• Evaluating fastenings • Designing a book sleeve • Paper mock up and preparing fabric • Assembling a book sleeve	• Chassis and launch mechanism • Designing the car body • Making the car body • Assembly and testing	• Exploring frame structures • Designing a pavilion • Pavilion Frame • Pavilion cladding	• Electrical products • Evaluating torches • Torches design • Torch assembly	
Class 3	• Three ingredients three courses • To start... • Main course • Dessert •	• Waistcoat design • Preparing fabric • Assembling my waistcoat • Decorating my waistcoat	• Automatas • Frame assembly • Experimenting with cams • Finishing touches	• Design a new playground • Building structures • Perfecting structures • Playground landscapes	• Development through play • Game plan • Base building • Electronics and assembly	