



St Bartholomew's C of E Primary School Progression of Skills for Design Technology

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As the curriculum for Design Technology encompasses a range of disciplines, the skills progression for each is detailed separately below. The EYFS curriculum does not separate the discipline as exclusive teaching areas so the skills progression encompasses all the disciplines through the Early Learning Goals, the New EYFS Framework 2021 and DfE Guidance from the Development Matters 2021 Documents.

EYFS

Early Learning Goals: Creating with Materials Children at the expected level of development will: - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; - Share their creations, explaining the process they have used; - Make use of props and materials when role playing characters in narratives and stories.

Class Teachers Subject leaders will use the guidance from the Department for Education 's Development Matters Document 2021 to determine progression and children's corresponding attainment. (Pages 114 onwards)

St Bartholomew's C of E Primary School Progression of Skills – DT Cooking and Nutrition

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cooking and Nutrition	<ul style="list-style-type: none"> Chopping fruit and vegetables safely. Hygiene and safety awareness. Identifying if a food is a fruit or a vegetable. Learning where and how fruits and vegetables grow. 	<ul style="list-style-type: none"> Design a healthy snack thinking about the combination of ingredients. Slicing food safely using the bridge or claw grip. Constructing a wrap that 	<ul style="list-style-type: none"> Creating a healthy and nutritious recipe using seasonal ingredients, considering the taste, texture, smell and appearance of the dish. Knowing how to prepare themselves and 	<ul style="list-style-type: none"> Designing a product within a given budget, drawing upon previous taste testing. Following a baking recipe. Cooking safely, following basic hygiene rules. Adapting a recipe. 	<ul style="list-style-type: none"> Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients. 	<ul style="list-style-type: none"> Writing a recipe explaining the key steps, method and ingredients. Including facts and drawings from research undertaken. Following a recipe including using



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	<ul style="list-style-type: none"> Describing and grouping fruits by texture and taste. 	<p>meets a design brief.</p> <ul style="list-style-type: none"> Understanding what makes a balanced diet Knowing where to find the nutritional information on packaging. Knowing the five food groups. 	<p>a work space to cook safely in, learning the basic rules to avoid food contamination.</p> <ul style="list-style-type: none"> Following the instructions within a recipe. Working with cooking equipment safely and hygienically. Learning that vegetables and fruit grow in certain seasons. Learning that each fruit and vegetable gives us nutritional benefits. Learning to use, store and clean a knife safely. 	<ul style="list-style-type: none"> Understanding the impact of the cost and importance of budgeting while planning ingredients for a product. Understanding the environmental impact on future product and cost of production. 	<ul style="list-style-type: none"> Writing an amended method for a recipe to incorporate the relevant changes to ingredients. Designing appealing packaging to reflect a recipe. Cutting and preparing vegetables safely. Using equipment safely, including knives, hot pans and hobs. Knowing how to avoid cross contamination. Following a step by step method carefully to make a recipe. Understanding what constitutes a balanced diet, 	<p>the correct quantities of each ingredient.</p> <ul style="list-style-type: none"> Adapting a recipe based on research. Working to a given timescale. Working safely and hygienically with independence. Learning how to research a recipe by ingredient. Recording the relevant ingredients and equipment needed for a recipe. Understanding the combinations of food that will complement one another.
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					<ul style="list-style-type: none">• Learning to adapt a recipe to make it healthier.• Comparing two adapted recipes using a nutritional calculator and then identifying the healthier option.	
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St Bartholomew's CofE Primary School Progression of Skills – DT Electrical System

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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electrical Systems	N/A	N/A	<ul style="list-style-type: none"> Identify a design criteria and a target audience. Design a product using static electricity. Using a design criteria to create a product. Using a wider range of material safely and effectively. Using electrostatic energy to move objects in isolation as well as in part of a system. Understand what static electricity is and how it moves objects through attraction or repulsion. Generating static electricity independently. 	<ul style="list-style-type: none"> Using circuits for a design giving consideration to the target audience and creating both design and success criteria focusing on features of individual. Make a product with a working electrical switch. Using appropriate equipment to cut and attach materials. Assembling a product according to the design and success criteria. Identifying electrical products. Learning what electrical conductors and insulators are. 	<ul style="list-style-type: none"> Design and create with a simple electrical control circuit. Creating a labelled design showing positive and negative parts. Make a working circuit. Creating an electronics product, referring to a design criteria. Mapping out where different components of the circuit will go. Learning the key components used to create a functioning circuit. Learning that graphite is a conductor and can be used as part of a circuit 	<ul style="list-style-type: none"> Design a product and naming the components required. Drawing a design from three different perspectives. Generating ideas through sketching and discussion. Modelling ideas through prototypes. Making electromagnetic motors and tweaking the motor to improve its function. Accurately cutting, folding and assembling a net. Making and testing a circuit. Learning that batteries contain



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			<ul style="list-style-type: none">Using static electricity to make objects move in a desired way.	<ul style="list-style-type: none">Understanding that a battery contains stored electricity and can be used to power products.	<ul style="list-style-type: none">Learning the difference between series and parallel circuits.Understanding that breaks in a circuit will stop it from working.	<p>acid, which can be dangerous if they leak.</p> <ul style="list-style-type: none">Learning that when electricity enters a magnetic field it can make a motor.
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St Bartholomew's CofE Primary School Progression of Skills – DT Structures

St Bartholomew's CofE Primary School Progression of Skills – DT Structures						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Structures	<ul style="list-style-type: none"> • Own ideas in design. • Make stable structures from card, tape and glue. • Follow instructions to cut and assemble. • Turn 2D shapes into 3D nets. • Learning that the shape of materials can be changed to improve strength and stiffness. • Understand that cylinders are a strong structure. • Develop an awareness that different structures can be made for different purposes. 	<ul style="list-style-type: none"> • Generate and communicate ideas through sketching. • Learn different structures found in everyday objects. • Make a design according to a criteria. • Creating joints and structures from paper/card and tape. • Identify natural and man-made structures. • Compare structures as more or less stable than another. • Know that shapes and structures with wide, flat bases 	<ul style="list-style-type: none"> • Design a structure for a specific purpose. • Drawing and labelling a design using 2D shapes and 3D shapes with labels. • Construct a range geometric shapes using nets. • Create special features for individual designs. • Identifying suitable materials to be selected. • Extend the knowledge of wide and flat based objects are more stable 	<ul style="list-style-type: none"> • Design a structure for a particular purpose that is aesthetically pleasing. • Build frame structures to support weight. • Create a range of different shaped structures. • Make a variety of free-standing structures of different shapes and sizes. • Selecting appropriate materials to build a strong structure. • Reinforce corners to strengthen a structure. 	<ul style="list-style-type: none"> • Design a stable structure that can support weight. • Create a frame structure with a focus on triangulation. • Use triangles as a base for support. • Build wooden structures. • Independently measuring and marking wood accurately. • Selecting appropriate tools and equipment for particular tasks. • Use the correct techniques to saws safely. • Identify where a structure needs reinforcement 	<ul style="list-style-type: none"> • Design a product that includes a range of different structures. • Consider how the structures will be used. • Build a range of structures drawing upon new and prior knowledge of structures. • Measuring, marking and cutting wood to create a range of structures. • Use a range of materials to reinforce and add decoration to structures.



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		<p>or legs are the most stable.</p> <ul style="list-style-type: none"> • Understand the shape of a structure effects it's strength. • Use the vocabulary: strength, stiffness and stability • Know that materials can be manipulated to improve strength and stiffness • • Building a strong and stiff structure by folding paper. 	<ul style="list-style-type: none"> • Understanding the terminology of strut, tie, span, beam. • Understanding the difference between frame and shell structure. 	<ul style="list-style-type: none"> • Begin to create different textural effects with materials. • Build on prior knowledge of net structures and broadening knowledge of frame structure and implement this knowledge. • Consider effective and ineffective designs. 	<p>and using card corners for support.</p> <ul style="list-style-type: none"> • Explore how to create a strong beam. • Identifying arch and beam bridges and understanding the terms: compression and tension • Identify structures as weak or strong and explain why. • • Understanding how triangles can be used to reinforce bridge. 	<ul style="list-style-type: none"> • Know that structures can be strengthened by manipulating materials and shapes. • Identifying the shell structure in everyday life (cars, aeroplanes, tins, cans).
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St Bartholomew's CofE Primary School Progression of Skills – DT Textiles

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Textiles	<ul style="list-style-type: none"> • Using a template to create a design. • Cutting fabric neatly with scissors. • Using joining methods to decorate. • Sequencing steps for construction. • Learning different ways in which to join fabrics together: pinning, stapling, gluing. 	<ul style="list-style-type: none"> • Design a product for a purpose. • Selecting and cutting fabrics for sewing. • Decorating using fabric glue or running stitch. • Joining items using fabric glue or stitching. • Identifying benefits of these techniques. • Threading a needle • Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. • Neatly pinning and cutting 	<ul style="list-style-type: none"> • Designing and making a template from an existing product and applying individual design criteria. • Following a design criteria to create a product. • Selecting and cutting fabrics with ease using fabric scissors. • Sewing cross stitch to join fabric. • Decorating fabric using appliqué. • Completing design ideas with stuffing 	<ul style="list-style-type: none"> • Writing design criteria for a product, articulating decisions made. • 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 sewing small neat stitches. • Incorporating fastening to a design. 	<ul style="list-style-type: none"> • Designing a product considering the main component shapes required and creating an appropriate template. • Considering proportions of individual components. • Create a 3D product from a 2D design. • Measuring, marking and cutting fabric accurately and independently. • Creating strong and secure blanket stitches 	<ul style="list-style-type: none"> • Designing a product in accordance to specification linked to set of design criteria to fit a specific theme. • Annotating designs. • Use template pinning panels on to fabric. • Marking and cutting fabric accurately, in accordance with a design. • Sewing a strong running stitch, making small, neat stitches and following the edge.



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		<p>fabric using a template.</p>	<p>and sewing the edge.</p> <ul style="list-style-type: none"> • Threading needles with greater independence. • Tying knots with greater independence. • Sewing cross stitch and appliqué. • Understanding the need to count the thread on a piece of even weave fabric in each direction to create uniform size and appearance. • Understanding that fabrics can be layered for affect. 	<ul style="list-style-type: none"> • Understanding that there are different types of fastenings and what they are. • Articulating the benefits and disadvantages of different fastening types. 	<p>when joining fabric.</p> <ul style="list-style-type: none"> • Using applique to attach pieces of fabric decoration. • Learning to sew blanket stitch to join fabric. • Applying blanket stitch so the space between the stitches are even and regular. • Threading needles independently. 	<ul style="list-style-type: none"> • Tying strong knots. • Decorating a product - attaching objects using thread and adding a secure fastening. • Learning different decorative stitches. • Application and outcome of the individual technique. • Sewing accurately with even regularity of stiches.
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St Bartholomew's CofE Primary School Progression of Skills – DT Mechanisms

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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mechanisms	<ul style="list-style-type: none"> • Design a product using mechanisms for a given audience. • Create a clearly labelled drawings which illustrate movement. • Understand that wheels, axles and axle holders, which will allow the wheels to move. • Follow a design to create moving models that use levers and sliders. • Use the vocabulary: up, down, left, right, vertical and horizontal to 	<ul style="list-style-type: none"> • Work as a group creating a design for an object with moving parts. • Design for a specific audience in accordance with a design criteria. • Select a suitable linkage system to produce the desired motions. • Select appropriate materials based on their properties. • Make linkages using card levers and split pins for pivot. • Experiment with linkages 	<ul style="list-style-type: none"> • Develop a design criteria from a design brief. • Generate ideas using thumbnail sketches and exploded diagrams. • Learning that different types of drawings are used in design to explain ideas clearly • Creating a pneumatic system to create a desired motion. • Selecting materials due to their functional and aesthetic characteristics. 	<ul style="list-style-type: none"> • Design a shape that reduces air resistance. • Drawing a net to create a structure from. • Choosing shapes that increase or decrease speed as a result of air resistance. • Personalising a design. • Measuring, marking, cutting and assembling with increasing accuracy. • Making a model based on a chosen design. • Learning that all moving things have kinetic energy. 	<ul style="list-style-type: none"> • Design a product which uses a mixture of structures and mechanisms. • Naming each mechanism, input and output accurately. • Follow a design brief to make a product neatly and with focus on accuracy. • Making mechanisms and/ or structures using sliders, pivots and folds to produce movement. • Using layers and spacers to hide the workings of 	<ul style="list-style-type: none"> • Understanding how linkages change the direction of a force. • Making things move at the same time. • Measuring, marking and checking the accuracy of the jelutong and dowel pieces required. • Measuring, marking and cutting components accurately using a ruler and scissors. • Assembling components accurately to



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	<p>describe movement</p> <ul style="list-style-type: none"> • Learning that for a wheel to move it must be attached to an axle. • Identifying what mechanism makes a toy or vehicle roll forwards. 	<p>adjusting the widths, lengths and thicknesses of card used.</p> <ul style="list-style-type: none"> • Cutting and assembling components neatly. • Following a design brief. • Learn that mechanisms are a collection of moving parts that work together in a machine • Learn that there is an input and output in a mechanism. • Identify mechanisms in everyday objects • Learn that a lever is something that turns on a pivot • Learning that a linkage is a system of levers 	<ul style="list-style-type: none"> • Manipulating materials to create different effects by cutting, creasing, folding, weaving. • Understanding that pneumatic systems can be used as part of a mechanism • Learning that pneumatic systems force air over a distance to create movement. 	<ul style="list-style-type: none"> • Understanding that kinetic energy is the energy that something (object person) has by being in motion. 	<p>mechanical parts for an aesthetically pleasing result.</p> <ul style="list-style-type: none"> • Knowing that an input is the motion used to start a mechanism • Knowing that output is the motion that happens as a result of starting the input. • Knowing that mechanisms control movement. • Describing mechanisms that can be used to change one kind of motion into another. 	<p>make a stable frame.</p> <ul style="list-style-type: none"> • Understanding that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles. • Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set. • Exploring cams, learning that different shaped cams produce different follower movements • Exploring types of motions and
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St Bartholomew's CofE Primary School Progression of Skills – DT Evaluation

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluation	<ul style="list-style-type: none"> • Evaluate product by discussions. • Evaluate product by identifying strengths and weaknesses. • Start to suggest things that they might change. • Evaluate their product by asking questions about what they have made and how. • Begin to explain how to make structures stronger. 	<ul style="list-style-type: none"> • Evaluate against their design criteria. • Evaluate their products as they are developed. • Identify strengths and weaknesses. • Suggest possible changes. • Talk about their ideas saying what they like and dislike about them. • Explore and explain how to make structures stronger. • Explore existing and explain how things are made. 	<ul style="list-style-type: none"> • Evaluate their product during and at the end of the process. • Evaluate against design criteria. • Investigate similar products. • Draw and sketch products to help analyse. • Discuss how well the finished product meets the design criteria. • Investigate key events in DT. 	<ul style="list-style-type: none"> • Evaluate work both during and at the end. • Evaluate product by carrying out appropriate tests. • Research the needs of the user. • Identify strengths and weakness in relation to the user. • Make decisions about which design to develop. • Explain how a product can be improved. 	<ul style="list-style-type: none"> • Evaluate product against original design. • Research and evaluate existing products using books and the web. • Identify strengths and weaknesses of own design. • Discuss how well the finished product meets the design criteria of the user. • Evaluate the product personally and seek evaluation from others. 	<ul style="list-style-type: none"> • Evaluate their products identifying strengths, weaknesses and areas for developments. • Record evaluations using drawings with labels. • Evaluate against original criteria and suggest ways that their product can be improved. • Use technical vocabulary in evaluation. • Understand how key people have influenced design.