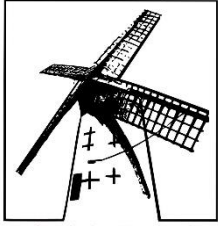


# Skills & Knowledge Progression: D&T

Year group	Cooking & Nutrition	Stable Structures	Textiles
Nursery (F1)	<ul style="list-style-type: none"> <li>Explore and taste a selection of foods from the UK and India.</li> <li>Make a sandwich, choosing the filling and developing spreading skills.</li> <li>Make Indian coconut sweets by combining and manipulating the ingredients.</li> </ul>	<ul style="list-style-type: none"> <li>Build increasingly complex and imaginative structures (linked to topics) using small world resources such as blocks and construction kits, and including outdoor large construction.</li> <li>Use picture books, photographs and toys to explore pirate ship designs.</li> <li>Manipulate different materials to make a simple pirate ship model using reclaimed materials of cardboard and plastic.</li> <li>Test the model pirate ships, comparing the models used.</li> </ul>	<ul style="list-style-type: none"> <li>Look at stick, glove and finger puppets.</li> <li>Make a glove or stick animal puppet, choosing from a range of materials.</li> <li>Explore different materials freely, to develop their ideas about how to use them and what to make.</li> <li>Join different materials and explore different textures.</li> </ul>
Reception (F2)	<ul style="list-style-type: none"> <li>Create a design for a gingerbread person.</li> <li>Follow a simple recipe and combine ingredients to make a gingerbread person.</li> <li>Decorate and evaluate biscuit produced against original design.</li> <li>Talk about the processes undertaken to make and decorate their biscuit.</li> </ul>	<ul style="list-style-type: none"> <li>Use photographs, non-fiction books and own observations to make a minibeast model using reclaimed materials.</li> <li>Safely use a variety of tools to join materials together.</li> <li>Use a variety of joining techniques to attach the model parts.</li> <li>Refine and develop ideas while building the minibeast model.</li> <li>Share and talk about the processes undertaken to build their minibeast model.</li> </ul>	<ul style="list-style-type: none"> <li>Explore different Autumn coloured manmade and natural materials.</li> <li>Join different materials together using weaving techniques in a simple frame.</li> <li>Share their creations, explaining the process they have used.</li> </ul>

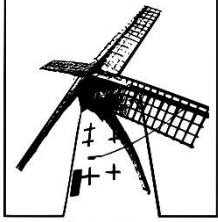


'Achieving Together'

# Skills & Knowledge Progression: D&T

Year group	Stable Structures	Cooking & Nutrition	Mechanical systems
Year 1	<ul style="list-style-type: none"> <li>• Identify the features of toy garages.</li> <li>• Know what the word 'stable' means.</li> <li>• Make changes to the design of a stable structure to make it fit for purpose.</li> <li>• Explore a range of materials and evaluate the usefulness of their properties for a particular project.</li> <li>• Explore how to make stable structures that hold a given object.</li> <li>• Follow a design to make a stable structure.</li> <li>• Know some ways to make a structure more stable.</li> <li>• Evaluate my finished structure against a set of given criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Name a variety of fruits and vegetables.</li> <li>• Describe the taste, smell and texture of a variety of fruits and vegetables.</li> <li>• Know that some fruits and vegetables need to be washed, cut, cored, peeled or grated before they can be eaten.</li> <li>• Understand basic food hygiene,</li> <li>• Use a knife to cut some fruits and vegetables in different ways.</li> <li>• I can grate and peel a variety of fruit and vegetables.</li> </ul>	<ul style="list-style-type: none"> <li>• Make a sliding mechanism out of card.</li> <li>• Know what a pivot and lever are.</li> <li>• Use a pivot and lever mechanism using card and a split pin.</li> <li>• Make a wheel mechanism using card and a split pin.</li> <li>• Match a mechanism to the type of movement they produce.</li> <li>• Design a moving minibeast picture to include a variety of moving mechanisms.</li> <li>• Follow a design to create a moving minibeast picture for a particular purpose.</li> <li>• Evaluate my finished moving minibeast picture by identifying things that worked well and things that could be improved.</li> </ul>

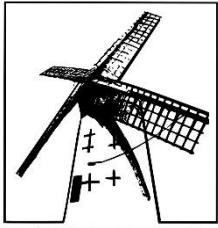
	Mechanical Systems	Cooking & Nutrition	Textiles
<b>Year 2</b>	<ul style="list-style-type: none"> <li>• Investigate a range of vehicles, identifying and labelling their features.</li> <li>• Know what an axle is.</li> <li>• Know what a chassis is.</li> <li>• Explore different ways of using axles, chassis and wheels to create a moving base.</li> <li>• Design a vehicle with wheels, axles and chassis, as well as a body.</li> <li>• Follow a design to make a moving vehicle.</li> <li>• Evaluate my finished moving vehicle.</li> </ul>	<ul style="list-style-type: none"> <li>• Name a variety of pizza toppings.</li> <li>• Use the model of the balanced plate to evaluate how healthy different pizzas are.</li> <li>• Explore different types of bread and evaluate which would work best for a pizza base.</li> <li>• Identify which food group a variety of pizza toppings belong to.</li> <li>• Sort pizza toppings into groups based on different criteria, e.g. animal vs plant products.</li> <li>• Explain why each of the food groups is important for a balanced diet.</li> <li>• Design and make a healthy pizza following given criteria.</li> <li>• Evaluate my finished pizza, saying what I think and feel about it</li> </ul>	<ul style="list-style-type: none"> <li>• Explore a variety of puppets, identifying and labelling their features.</li> <li>• Cut out felt using a simple template.</li> <li>• Stick pieces of felt together to make a finger puppet.</li> <li>• Add pieces of felt and other materials to a finger puppet to create features, such as eyes, hats and mouths.</li> <li>• Use running stitch to join two pieces of fabric together.</li> <li>• Use overstitch to join two pieces of fabric together.</li> <li>• Sew a button onto a piece of fabric.</li> <li>• Design a glove puppet for a particular purpose.</li> <li>• Follow a design to make a glove puppet by sewing two pieces of fabric together and adding decorations.</li> <li>• Evaluate my finished glove puppet by identifying what went well and what could be improved.</li> </ul>



'Achieving Together'

Year group	Cooking & Nutrition	Stable Structure and Inventions & Achievements	Stable Structures
Year 3	<ul style="list-style-type: none"> <li>• Explain what the term 'seasonal food' means.</li> <li>• Know that different parts of the world have different seasonal food.</li> <li>• Discuss the benefits and problems of unseasonal food being available in shops all year round.</li> <li>• Know that some foods, like wheat, are available all year round in the UK.</li> <li>• Practise cooking skills including slicing, dicing, beating, whisking, folding, sieving, rolling and grating.</li> <li>• Follow a recipe.</li> <li>• Describe the cycle of wheat production in the UK.</li> <li>• Distinguish between fruits that are grown in the UK and those that are grown abroad.</li> <li>• Know how food producers can speed up or slow down the ripening process to make fruits and vegetables available all year round.</li> <li>• Know some of the nutrients we get from fruits, vegetables, meat, fish and dairy products.</li> <li>• Know when certain meats are in season in the UK and which are available all year round.</li> <li>• Know some vegetarian options that provide the same nutrients as meat.</li> <li>• Explain how fish are caught or reared, processed and used in healthy meals.</li> <li>• Use what I have learnt about seasonal food to design healthy meals and menus</li> </ul>	<ul style="list-style-type: none"> <li>• Explain about the invention of the mackintosh.</li> <li>• Investigate ways of making fabric waterproof.</li> <li>• Explain about the invention of the world wide web.</li> <li>• Describe how the invention of the internet has changed the world.</li> <li>• Explain how concrete is used to make structures more stable.</li> <li>• Create a structure strong enough to hold a dictionary using just newspaper and tape.</li> </ul>	<ul style="list-style-type: none"> <li>• Know what a greenhouse is and how they work.</li> <li>• Explore a range of different greenhouses.</li> <li>• Know how greenhouses are used today.</li> <li>• Explain how the shape of a structure affects its stability.</li> <li>• Know that the weight of the structure needs to be evenly spread on the base to make it secure.</li> <li>• Know that the wider a structure's base is, the more stable it will be.</li> <li>• Use 3D nets to explore potential structures for a greenhouse, assessing their stability.</li> <li>• Investigate ways of making a structure more stable, e.g. by inserting dowelling or adding triangles at the joins.</li> <li>• Experiment with a range of materials to test which would be most appropriate for making the structure of a mini greenhouse.</li> <li>• Design a mini greenhouse using specific design criteria.</li> <li>• Select appropriate tools and materials to make a mini greenhouse.</li> <li>• Follow my design to make a mini greenhouse.</li> <li>• Evaluate my finished mini greenhouse for stability, effectiveness and visual appeal.</li> </ul>

Year group	Textiles	Mechanical Systems	Programming & Electrical Systems
Year 4	<ul style="list-style-type: none"> <li>• Explain the difference between the function and visual appeal of a product.</li> <li>• Evaluate the function and visual appeal of a variety of Christmas stockings.</li> <li>• Use pins to temporarily fasten two pieces of fabric together.</li> <li>• Use running stitch, back stitch, over stitch and zigzag stitch to join two pieces of fabric together.</li> <li>• Hide the finishing knot.</li> <li>• Identify a variety of decorative techniques that have been used to decorate Christmas stockings.</li> <li>• Sew a button, bead, sequin or pipe cleaner onto a piece of fabric.</li> <li>• Embroider shapes and patterns into a piece of fabric.</li> <li>• Use appliqué to add decoration to a piece of fabric.</li> <li>• I can design a Christmas stocking incorporating a range of decorative techniques.</li> <li>• Use a template to cut out front and back pattern pieces.</li> <li>• Follow a design to create a Christmas stocking.</li> <li>• Evaluate the function and visual appeal of my finished Christmas stocking.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore moving parts in storybooks, suggesting how they work and what purpose they serve.</li> <li>• Explain what the words 'linkage', 'pivot', 'rotate' and 'lever' mean.</li> <li>• Use a paper concertina to make an object pop out of a book.</li> <li>• Arrange and stick paper between pages to create a pop-out.</li> <li>• Use levers to create moving parts.</li> <li>• Create moving wheel mechanisms to create different effects.</li> <li>• Experiment with different fonts and graphic design features.</li> <li>• Design pages of a storybook to include moving mechanisms and appropriate graphic features.</li> <li>• Follow my designs to create a storybook with moving mechanisms.</li> <li>• Evaluate how well my moving mechanisms work.</li> <li>• Evaluate the overall effectiveness of my storybook.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore and analyse illuminated signs.</li> <li>• Create a simple circuit with incandescent bulbs and a switch.</li> <li>• Describe the difference between an LED and an incandescent light bulb.</li> <li>• Create a simple circuit with an LED bulb and a resistor.</li> <li>• Make a circuit with a string of LED lights.</li> <li>• Design an illuminated light box against a set of design criteria.</li> <li>• Select materials, tools and components to create a free-standing structure.</li> <li>• Make a stable, free-standing structure to house an electrical circuit.</li> <li>• Strip, twist and join wire to make permanent connections.</li> <li>• Insert an electrical circuit into a free-standing structure to create an illuminated light box.</li> <li>• Evaluate the effectiveness of my finished product against the design criteria.</li> </ul>



# Skills & Knowledge Progression: D&T

Year group	Cooking & Nutrition	Textiles	Programming & Electrical Systems and Inventions & Achievements
Year 5	<ul style="list-style-type: none"> <li>• Know that most foods we buy have nutrition labels to help us make informed choices about what we eat.</li> <li>• Know that calories come from fats, proteins and carbohydrates.</li> <li>• Evaluate how healthy a burger is based on its nutrition label.</li> <li>• Compare different burgers and assess which is healthiest.</li> <li>• Explain some of the different ways in which burger patties are cooked.</li> <li>• Follow a recipe to make a patty and a burger sauce.</li> <li>• Add ingredients to a basic burger patty to reflect global cuisine.</li> <li>• Design a burger menu to incorporate different patties, sides and sauces.</li> <li>• Explore, taste and assess different types of bread and their suitability for a burger bun.</li> <li>• Offer suggestions for some alternatives for bread.</li> <li>• Add mixtures of herbs and spices to a basic bread dough to make flavoured burger buns.</li> <li>• Design a burger for a particular purpose and for particular dietary requirements.</li> <li>• Make and evaluate a burger, following my recipe and design</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the process of turning raw cotton into cloth.</li> <li>• Know that products that are woven together are called textiles.</li> <li>• Know that different textiles have different properties, and can match these to their purpose.</li> <li>• Identify straight stitch, zigzag stitch, whip/blanket stitch, blind stitch, buttonhole stitch and overlock stitch on a variety of ready-made garments.</li> <li>• Describe what the job of a fashion designer entails.</li> <li>• Sew a basting stitch, back stitch and whip stitch.</li> <li>• Sew a hem.</li> <li>• Sew an appliqué decoration and use back stitch to embroider.</li> <li>• Know what a pattern piece is and why they are important when designing a garment.</li> <li>• Design a drawstring bag, including the necessary pattern pieces.</li> <li>• Use pattern pieces to measure, mark, cut and sew fabric.</li> <li>• Sew design elements according to design criteria.</li> <li>• Join two pieces of fabric by hand sewing, using an appropriate stitch. Evaluate my finished product against a set of design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how computers and computer programs are used in a variety of products.</li> <li>• Explain how modern memory chips work to store information.</li> <li>• Write an algorithm to suggest how various appliances might work.</li> <li>• Know what a computer engineer is and what they do.</li> <li>• Describe some examples of how computer hardware and software specialists work together to create new products.</li> <li>• Develop and build a prototype pedestrian crossing using computer programming.</li> <li>• Develop, model and communicate ideas for an embedded system which monitors and controls a door, room or both.</li> <li>• Describe the typical design process for computer-controlled electronic products.</li> <li>• Debug errors in an algorithm.</li> <li>• Suggest ways to change an algorithm to improve a system.</li> <li>• Select and use electronic components to construct a prototype of an embedded computer-controlled room system.</li> <li>• Evaluate my design for a computer-controlled system and consider the views of others to improve my work.</li> <li>• Know that Charles Babbage created the first mechanical computer.</li> <li>• Know that Ada Lovelace is referred to as the world's first computer programmer.</li> <li>• Know that Steve Jobs and Steve Wozniak co-founded Apple, Inc. to make the first Apple computers.</li> </ul>

Year group	Stable Structures	Mechanical Systems and Inventions & Achievements	Stable Structures
Year 6	<ul style="list-style-type: none"> <li>• Know what beams and pillars are and how they are used in bridge construction.</li> <li>• Predict which beams will be strongest from their cross-section.</li> <li>• Test the strength of different beam shapes using paper and card.</li> <li>• Explain what a truss is and how trusses make bridges stronger.</li> <li>• Identify the three types of trusses commonly used in bridge design.</li> <li>• Build a truss bridge spanning a width of 40cm using paper straws.</li> <li>• Use a fair test to evaluate the strength of my truss bridge.</li> <li>• Explain how arches work to make bridges stronger.</li> <li>• Test the arch heights to see which can bear the most load.</li> <li>• Make an arch frame.</li> <li>• Explain how suspension bridges use tension forces to work.</li> <li>• Design, make and evaluate a prototype suspension bridge using a scale of 1:100 according to specific design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore how different transmissions create different movements.</li> <li>• Use a crank to change the motion on a transmission from circular to linear motion.</li> <li>• Explain how the invention of paper helped shape the world.</li> <li>• Explain the traditional method for making paper.</li> <li>• Test a variety of types of paper for strength, absorbency, opacity, etc.</li> <li>• Make recycled paper.</li> <li>• Know how gunpowder was invented.</li> <li>• Explain how the invention of gunpowder helped shape the world.</li> <li>• Explain how the invention of the compass changed the world.</li> <li>• Make a hanging/floating compass.</li> <li>• Design and label my own compass.</li> <li>• Explain what water-powered machines are and how they helped change the world.</li> <li>• Explain why kites were first invented and how they were made.</li> <li>• Make a variety of kite prototypes and test their effectiveness.</li> <li>• Design, make and evaluate a kite according to specific design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Investigate the appearance and function of a variety of different bird houses.</li> <li>• Identify what materials have been used to construct a variety of bird houses and suggest how the parts have been joined together.</li> <li>• Know what a flat pack diagram is and can use it to identify each part of a structure.</li> <li>• Create a flat pack diagram of a constructed bird house.</li> <li>• Draw an exploded diagram.</li> <li>• Identify the tools associated with basic woodwork.</li> <li>• Measure, clamp, saw, sand and join wood.</li> <li>• Use a hand drill to drill a hole in a piece of wood.</li> <li>• Know the safety rules I need to follow when doing woodwork.</li> <li>• Design a bird house for a particular bird, considering the bird's needs.</li> <li>• Select appropriate tools and materials to use when making a bird house.</li> <li>• Create a sturdy bird house frame using wood.</li> <li>• Evaluate my finished bird house, considering the views of others to improve my work.</li> <li>• Use observation to evaluate the effectiveness of my bird house.</li> </ul>