Design Technology – Curriculum Progression

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design (including taking inspiration from other designers)	•Begin to explore different products and their intended users •Discuss similarities and differences of existing products •Express likes and dislikes for products •Talk about what they're planning to make •Draw pictures of intended products •Begin to explain their designs •Describe how products are	•Explore given objects and designs to identify likes and dislikes. •Suggest improvements to existing designs. •Explore how products have been created. •Design products that have a clear purpose and an intended user. •Use pictures and words to plan and begin to use models •Make products, refining the design as work progresses.	•Explore objects and designs to identify likes and dislikes. •Suggest more detailed improvements to existing designs. •Explore how products have been created using previous learning. •Design products that have a clear purpose and an intended user. *Describe design using pictures, words, models, diagrams and begin to use digital software •With increasing independence, make products, refining the design	•Begin to research the works of some of the great designers in the area of study to generate ideas for designs. •Use existing designs as inspiration, giving reasons for choices. •Design with purpose by identifying the user and purpose of their products, with support. •Create a plan which shows order, equipment and tools •Describe design using an accurately labelled sketch and words	•Look at the works of a range of the great designers in the area of study to generate ideas •Identify key areas to improve upon or use as inspiration for designs. •Improve upon existing designs, giving reasons for choices. •Design with purpose by identifying the user and purpose. •Produce a plan and explain it to others •Make and explain design decisions considering	•Combine elements of design from a range of inspirational designers giving reasons for choices. •Create increasingly innovative designs that improve upon existing products. •Begin to evaluate the design of existing products so as to suggest improvements to the user experience. •Design with the user in mind considering the	•Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. •Create innovative designs that improve upon existing products. •Evaluate the design of products so as to suggest improvements to the user experience. •Design with the user in mind, motivated by the service a product will offer. •Use prototypes, cross-sectional diagrams and

	made of many parts		as work progresses. •Use knowledge of existing products to produce ideas.	•Use apps to design and represent product designs •Make products by working increasingly efficiently (such as by carefully selecting materials). •Refine work and techniques as work progresses, continually evaluating the product design.	availability of resources •Include an annotated sketch •Use apps to design and represent increasingly detailed product designs •Make products by working efficiently (such as by carefully selecting materials). •Refine work and techniques as work progresses, continually evaluating the product design.	service the product will offer. •Use prototypes, cross-sectional diagrams and begin to use computer-aided designs to represent designs. •Make products through stages of prototypes, making refinements. •Ensure products have an increasingly high-quality finish, using art skills where, appropriate.	computer-aided designs to represent detailed designs. •Make products through stages of prototypes, making continual refinements. •Ensure products have a high-quality finish, using art skills where appropriate.
Technical Knowledge -Structures & Materials	•Explore and begin to understand various joining techniques, such as gluing, tape, sticking,	**Taught through Frame structures (Autumn) and Slider mechanisms (Spring)**	**Taught through Wheel & axle mechanisms (Autumn)** •Practise using various techniques (e.g. hot- gluing) materials to make	**Taught through Frame structures (Autumn)** •Begin to choose suitable techniques to construct products.	**Taught through Linked Levers (Spring)** •Independently choose suitable techniques to construct	**Taught through Electronic motors (Autumn) and Arch structures (Summer)** •Develop a range of practical skills	**Taught through Cams (Spring)** •Use a range of practical skills to create products (such as cutting, drilling and screwing, nailing,

	stapling, zips, knots and laces. •Develop fine and gross motor skills so that children can use a range of tools competently, such as cutting, threading, making models, pouring and stirring •Explore a range of tools such as scissors, knives, hammers etc •Begin to choose their own tools for a range of purposes •Use a range of materials such as felt, paper, card etc. •Begin to choose their own tools for a range of purposes •Begin to talk about the properties of a	•Practise using materials (e.g. glue and tape) to make and strengthen products. •Cut materials safely using tools provided. •Begin to measure lengths of materials •Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). •Demonstrate a range of joining techniques (such as gluing, or combining materials to strengthen).	and strengthen products. •Cut an increasing amount of materials safely using tools provided. •Measure and mark out to the nearest centimetre. •Demonstrate a range of cutting and shaping techniques depending on the material. •Demonstrate a range of joining techniques (such as gluing, using hinges or combining materials to strengthen).	•Begin to strengthen materials using suitable techniques. •Cut materials safely and with increasing accuracy by selecting appropriate tools. •Measure and mark out to the nearest millimetre. •Apply appropriate cutting and shaping techniques to a wider range of materials (such as fabric and wood) •Select appropriate joining techniques.	products or to repair items. •Strengthen materials using suitable techniques. •Cut materials accurately and safely by selecting appropriate tools. •Measure and mark out to the nearest millimetre with increased fluency. •Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). •Select appropriate joining techniques considering the effectiveness of them.	to create products (such as cutting, gluing, filing and sanding). •Cut materials with increasing precision and refine the finish with appropriate tools (such as sanding wood). •Begin to consider the qualities of materials in order to choose appropriate tools to cut and shape •Select appropriate joining techniques for a wider range of products.	gluing, filing and sanding). •Cut a variety of materials with precision and refine the finish with appropriate tools (such as sanding wood) •Show an understanding of the qualities of materials in order to choose appropriate tools to cut and shape. •Independently select appropriate joining techniques

	range of materials •Consider which materials are going to be most suitable for construction •Independently create structures for a range of purposes						
Technical knowledge – Mechanisms	•Begin to explore mechanisms e.g. slider mechanisms, through their story books •With support, begin to incorporate moving parts into models	**Slider mechanisms (Spring)** •understand how sliding mechanisms work •Create products using sliding mechanisms.	**Wheel & axle mechanisms (Autumn)** • understand how wheel and axle mechanisms work •Create products using wheels and winding mechanisms.		**Linked Levers (Spring)** • Understand a range of linked lever mechanisms • Choose appropriate mechanisms for a product (such as linked levers and sliders).	**Electronic motors (Autumn)** •Use combinations of electronics and mechanics in product designs.	**Cams (Spring)** •Convert rotary motion to linear using cams.
Technical knowledge – Textiles	•Independently thread a large needle		**Purses (Summer)** •Join materials using glue and/ or a stitch.	**Pencil cases (Summer)** •Shape and stitch materials. • Use basic cross			**Hanging Decorations (Autumn)** •Show precision in techniques.

	•Sew using simple running stitch •Explore a range of materials such as felt, fabric, card etc.		•Use a simple running stitch •Measure and mark out to the nearest centimetre. •Demonstrate a range of cutting and shaping techniques depending on the material. •Demonstrate a range of joining techniques (such as gluing, using hinges or combining materials to strengthen).	stitch and back stitch. • Quilt, pad and gather fabric. •Apply appropriate cutting and shaping techniques to a wider range of materials (such as fabric) •Select appropriate joining techniques for their products.			• Choose from a range of stitching techniques (cross stich, back stitch and overstitch) •Combine previously learned techniques to create pieces •Cut a variety of material with precision (such fabric and felt) and refine the finish with appropriate tools (such as a more precise cut when cutting fabric) •Show an understanding of the qualities of materials in order to choose appropriate tools to cut and shape (e.g. the nature of fabric may require sharper scissors than would be used to cut paper)

Technical knowledge – Electrical systems	•Be able to switch devices on and off. •Begin to understand how to instruct using Bee Bots	**Coding takes place within Computing lessons:** •Design and create a simple program	**Coding takes place within Computing lessons:** •Create a program that uses a timer command •Create a program that includes different objects •Understand and debug a simple program	**Coding takes place within Computing lessons:** • Create a program that includes repeat commands • Apply prior knowledge to code, test and debug their own program • Design and code an interactive scene	**App control (Summer) and within Science lessons** •Understand and use series and parallel circuits. •Control and monitor models using apps designed for this purpose. **Coding takes place within Computing lessons:** •Create a program that incorporates IF statements •Code a playable game	**Electronic motors (Autumn)** •Create products using electronics kits that employ a number of components (such as LEDs and resistors). **Coding takes place within Computing lessons:** •Simulate a physical system •Use functions when coding to increase efficiency •Set and change variable values appropriately	**Coding takes place within Computing lessons:** •Plan and code a program which includes a timer and a score •Debug based on errors that occur •Create a program that uses multiple functions •Design and code a text based adventure game
Technical knowledge – Food & Nutrition	•Understand different seasons and begin to explore the different things that	**Portable snacks (Summer)** •Cut, peel and grate ingredients safely and hygienically with support	**Couscous (Spring)** •Cut, peel and grate ingredients safely and hygienically with increasing confidence	**Dips (Autumn)** •Use a number of utensils (knives, peelers, graters, presses)	**Vegetable soup (Autumn)** •Use an increasing number (knives, peelers, graters, presses and blenders) of	**Bread (Spring)** •Choose appropriate utensils in order to prepare dishes and use	**Bolognese (Summer)** •Combine the use of a wide number of utensils in order to prepare dishes

	grow in these seasons •Explore how to keep ourselves safe and hygienic •Begin to wash materials and our hands •Explore a range of cooking utensils and experiment using these for different purposes •Begin to use wooden knives to cut ingredients with support •Explore a range of different foods and begin to sort them into food groups •With support, create food products to enjoy	•Begin to use bridge hold and fork secure to prepare ingredients, with support •Use vegetable holders and wooden knives for support, if needed. •Wash hands and clean surfaces before cooking •Measure or weigh using measuring cups or electronic scales. •Assemble given ingredients to prepare dishes which follow basic principles of a healthy and varied diet. • describe textures •Say where some foods come from, (i.e. plant or animal)	•Use bridge hold and fork secure to prepare ingredients, with minimal support. •Use vegetable holders and wooden knives for support, if needed •Wash hands and surfaces and understand why this is important •Measure or weigh using measuring cups with increasing accuracy •Assemble a wider variety of ingredients to prepare dishes which follow basic principles of a healthy and varied diet. •describe properties of ingredients and say where food comes from	confidently and safely •Use bridge hold and fork secure to prepare ingredients, with increasing independence •Independently use vegetable holders for support, if needed. •Prepare ingredients hygienically •Begin to understand food comes from UK and wider world •draw eat well plate; explain there are groups of food •Measure ingredients accurately to the nearest gram, with support. •Assemble a wider range of ingredients with children beginning	utensils confidently and safely •Independently use bridge hold and fork secure to prepare ingredients •Begin to use the claw grip safely to prepare ingredients. •Independently prepare ingredients hygienically •Begin to understand about food being grown, reared or caught in the UK or wider world •describe eat well plate and how a healthy diet=variety/ balance of food groups •Measure, with growing confidence, ingredients	these independently and in a safe manner •Independently use bridge hold, fork secure and claw grip to prepare ingredients. •Understand the importance of correct storage and handling of ingredients. •Measure accurately and begin to calculate ratios of ingredients to scale up or down •Combine previous skills to demonstrate a range of baking techniques. •Begin to create and refine recipes, including ingredients, methods, cooking times and temperatures ensuring these	independently and in a safe manner •Independently use and select the most appropriate knife holds whilst preparing foods. •Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). •Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. •Combine previous skills to demonstrate a range of cooking techniques. •Create and refine recipes, including ingredients, methods, cooking times and temperatures ensuring these

	•Use a knife and fork competently		(animal, underground etc.)	to choose ingredients based on the principles of a healthy and varied diet. •Begin to understand seasonality.	accurately to the nearest gram. •Follow and begin to adapt a recipe •Assemble a range of ingredients to create dishes that follow the principles of a healthy and varied diet. •Assemble and cook ingredients controlling the temperature of the hob, if cooking. •Understand seasonality and begin to use this to make choices over ingredients, with support.	temperatures ensuring that these follow the principles of a varied and healthy diet. •Understand that food is grown, reared or caught in the UK and the wider world. •Understand seasonality and make independent choices over ingredients based on this knowledge.	follow the principles of a healthy and varied diet. •Understand that food is grown, reared or caught in the UK and the wider world and begin to make conscious decisions about the sustainability of ingredient choices. •Understand seasonality and make independent choices over ingredients based on this knowledge.

Evaluate (takes place continuously throughout the design process)	•Describe how their products are made up of many parts •Begin to refine products as they progress •Talk about what they like about their products. •Begin to consider what would make their products even better	•Talk about the products produced; linking it to initial design criteria •Consider the use of materials, how it works, the user and where it could be used. •Talk about what is good and what isn't. •Consider what could make the product even better.	•Describe what went well, thinking about design criteria •Consider the use of materials, how it works, the user and where it could be used and express personal opinions on the product. •Consider what is good and what isn't. •Explain what improvements could be made.	•Look at design criteria while designing and making •Use design criteria to evaluate finished product •Consider how the product has been made, the materials used, whether the product works and whether it is fit for purpose. •Explain changes that could be made to make the product more successful.	•Refer to design criteria while designing and making •Use criteria to evaluate the product •Explain how the design could be improved •Consider how the product has been made, the materials used, whether the product works, whether it is fit for purpose and whether products can be recycled or reused. •Explain changes that could be made to make the product more successful and how/why this would improve it.	•Evaluate the quality of the design while designing and making •Evaluate ideas and finished product against specification, considering purpose and appearance. •Test and evaluate final product •Evaluate and discuss product considering: how well it's been made, the materials used, whether it works, how it's been made, whether it's fit for purpose •Begin to evaluate how much their products cost to make and how innovative they	•Evaluate the quality of design while designing and making; is it fit for purpose? •Keep checking that the design is the best it can be •Evaluate ideas and finished product against specification, stating if it's fit for purpose •Test and evaluate final product; explain what would improve it and the effect different resources may have had •Do thorough evaluations of their product considering: how well it's been made, the materials used, whether it works, how it's been made and whether it is fit for purpose •Evaluate how much

						are •Consider how sustainable the materials used are	products cost to make and how innovative they are •Consider and discuss how sustainable the materials used are •Consider the impact of products beyond their intended purpose