



Design & Technology Progression

Progression of Skills

	Structures		
	Design	Make	Evaluate
Year 1	<ul style="list-style-type: none"> Learning the importance of a clear design criteria Including individual preferences and requirements in a design 	<ul style="list-style-type: none"> Making stable structures from card, tape and glue Learning how to turn 2D nets into 3D structures Following instructions to cut and assemble the supporting structure Making functioning turbines and axles which are assembled into a main supporting structure 	<ul style="list-style-type: none"> 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
Year 2	<ul style="list-style-type: none"> Generating and communicating ideas using sketching and modelling 	<ul style="list-style-type: none"> Making a structure according to design criteria Creating joints and structures from paper/card and tape Building a strong and stiff structure by folding paper 	<ul style="list-style-type: none"> Testing the strength of own structures Identifying the weakest part of a structure Evaluating the strength, stiffness and stability of own structure
Year 3	<ul style="list-style-type: none"> Designing a structure with key features to appeal to a specific person/purpose Drawing and labelling a structure design using 2D shapes, labelling: - the 3D shapes that will create the features - materials needed and colours Designing and/or decorating a structure on CAD software 	<ul style="list-style-type: none"> Constructing a range of 3D geometric shapes using nets Creating special features for individual designs Making facades from a range of recycled materials 	<ul style="list-style-type: none"> 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
Year 4	<ul style="list-style-type: none"> Designing a stable structure that is aesthetically pleasing and selecting materials to create a desired effect Building frame structures designed to support weight 	<ul style="list-style-type: none"> Creating a range of different shaped frame structures Making a variety of free standing frame structures of different shapes and sizes Selecting appropriate materials to build a strong structure and for the cladding Reinforcing corners to strengthen a structure Creating a design in accordance with a plan Learning to create different textural effects with materials 	<ul style="list-style-type: none"> Evaluating structures made by the class Describing what characteristics of a design and construction made it the most effective Considering effective and ineffective designs
Year 5	<ul style="list-style-type: none"> Designing a stable structure that is able to support weight Creating frame structure with focus on triangulation 	<ul style="list-style-type: none"> Making a range of different shaped structures Using triangles to create truss structures that span a given distance and supports a load Building a wooden bridge structure Independently measuring and marking wood accurately Selecting appropriate tools and equipment for particular tasks Using the correct techniques to saw safely Identifying where a structure needs reinforcement and using card corners for support Explaining why selecting appropriating materials is an important part of the design process Understanding basic wood functional properties 	<ul style="list-style-type: none"> Adapting and improving own bridge by identifying points of weakness and reinforcing them as necessary Suggesting points for improvements for own bridges and those designed by others
Year 6	<ul style="list-style-type: none"> Designing a structure featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs 	<ul style="list-style-type: none"> Building a range of 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 	<ul style="list-style-type: none"> 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



Design & Technology Progression

Mechanisms / Mechanical systems			
	Design	Make	Evaluate
Year 1	<ul style="list-style-type: none"> Explaining how to adapt mechanisms, using bridges or guides to control the movement Designing a moving mechanism for a given audience Designing a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move Creating clearly labelled drawings which illustrate movement 	<ul style="list-style-type: none"> Following a design to create moving models that use levers and sliders Adapting mechanisms 	<ul style="list-style-type: none"> Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed Testing mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move
Year 2	<ul style="list-style-type: none"> Selecting a suitable linkage system to produce the desired motions Designing a wheel Selecting appropriate materials based on their properties Creating a class design criterion for a mechanical system Designing a mechanical system for a specific audience in accordance with a design criteria 	<ul style="list-style-type: none"> Selecting materials according to their characteristics Following a design brief Making linkages using card for levers and split pins for pivots Experimenting with linkages adjusting the widths, lengths and thicknesses of card used Cutting and assembling components neatly 	<ul style="list-style-type: none"> Evaluating different designs Testing and adapting a design Evaluating own designs against design criteria Using peer feedback to modify a final design
Year 3	<ul style="list-style-type: none"> Designing a toy which uses a pneumatic system Developing design criteria from a design brief Generating ideas using thumbnail sketches and exploded diagrams Learning that different types of drawings are used in design to explain ideas clearly 	<ul style="list-style-type: none"> Creating a pneumatic system to create a desired motion Building secure housing for a pneumatic system Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy Selecting materials due to their functional and aesthetic characteristics Manipulating materials to create different effects by cutting, creasing, folding, weaving 	<ul style="list-style-type: none"> Using the views of others to improve designs Testing and modifying the outcome, suggesting improvements Understanding the purpose of exploded-diagrams through the eyes of a designer and their client
Year 4	<ul style="list-style-type: none"> Designing 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 	<ul style="list-style-type: none"> Measuring, marking, cutting and assembling with increasing accuracy Making a model based on a chosen design 	<ul style="list-style-type: none"> Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance
Year 5	<ul style="list-style-type: none"> Designing a pop-up book which uses a mixture of structures and mechanisms Naming each mechanism, input and output accurately Storyboarding ideas for a book 	<ul style="list-style-type: none"> Following a design brief to make a pop up book, 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 mechanical parts for an aesthetically pleasing result 	<ul style="list-style-type: none">
Year 6	<ul style="list-style-type: none"> Experimenting with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement Understanding how linkages change the direction of a force Making things move at the same time Understanding and drawing cross-sectional diagrams to show the inner-working 	<ul style="list-style-type: none"> Measuring, marking and checking the accuracy of the straw and dowel pieces required Measuring, marking and cutting components accurately using a ruler and scissors Assembling components accurately to make a stable frame 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 	<ul style="list-style-type: none"> Evaluating the work of others and receiving feedback on own work Applying points of improvements Describing changes they would make/do if they were to do the project again



Design & Technology Progression

Electrical systems – KS2 only			
	Design	Make	Evaluate
Year 3	•	•	•
Year 4	<ul style="list-style-type: none"> Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas 	<ul style="list-style-type: none"> Making a torch with a working electrical circuit and switch Using appropriate equipment to cut and attach materials Assembling a torch according to the design and success criteria 	<ul style="list-style-type: none"> Testing and evaluating the success of a final product and taking inspiration from the w
Year 5	<ul style="list-style-type: none"> Designing an electronic greetings card with a copper track circuit and components Creating a labelled circuit diagram showing positive and negative parts in relation to the LED and the battery Writing design criteria for an electronic greeting card Compiling a moodboard relevant to my chosen theme, purpose and recipient 	<ul style="list-style-type: none"> Making a functional series circuit Creating an electronics greeting card, referring to a design criteria Mapping out where different components of the circuit will go 	<ul style="list-style-type: none"> Evaluating a peer's product against design criteria and suggesting modifications that could be made to improve the reliability or aesthetics of it or to incorporate another type of circuit component
Year 6	<ul style="list-style-type: none"> Designing a steady hand game - identifying and naming the components required Drawing a design from three different perspectives Generating ideas through sketching and discussion Modelling ideas through prototypes 	<ul style="list-style-type: none"> Constructing a stable base for a game Accurately cutting, folding and assembling a net Decorating the base of the game to a high quality finish Making and testing a circuit Incorporating a circuit into a base 	<ul style="list-style-type: none"> Testing own and others finished games, identifying what went well and making suggestions for improvement

Cooking and Nutrition			
	Design	Make	Evaluate
Year 1	<ul style="list-style-type: none"> Designing smoothie carton packaging by-hand or on ICT software 	<ul style="list-style-type: none"> Chopping fruit and vegetables safely to make a smoothie Identifying if a food is a fruit or a vegetable Learning where and how fruits and vegetables grow 	<ul style="list-style-type: none"> Tasting and evaluating different food combinations Describing appearance, smell and taste Suggesting information to be included on packaging
Year 2	<ul style="list-style-type: none"> Designing a healthy wrap based on a food combination which work well together 	<ul style="list-style-type: none"> Slicing food safely using the bridge or claw grip Constructing a wrap that meets a design brief 	<ul style="list-style-type: none"> Describing the taste, texture and smell of fruit and vegetables Taste testing food combinations and final products Describing the information that should be included on a label Evaluating which grip was most effective
Year 3	<ul style="list-style-type: none"> Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish 	<ul style="list-style-type: none"> Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination Following the instructions within a recipe 	<ul style="list-style-type: none"> 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
Year 4	<ul style="list-style-type: none"> Designing a biscuit within a given budget, drawing upon previous taste testing 	<ul style="list-style-type: none"> Following a baking recipe Cooking safely, following basic hygiene rules Adapting a recipe 	<ul style="list-style-type: none"> 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 products Suggesting modifications
Year 5	<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 Writing an amended method for a recipe to incorporate the relevant changes to ingredients Designing appealing packaging to reflect a recipe 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Identifying the nutritional differences between different products and recipes Identifying and describing healthy benefits of food groups
Year 6	<ul style="list-style-type: none"> Writing a recipe, explaining the key steps, method and ingredients Including facts and drawings from research undertaken 	<ul style="list-style-type: none"> Following a recipe, including using the correct quantities of each ingredient Adapting a recipe based on research Working to a given timescale Working safely and hygienically with independence 	<ul style="list-style-type: none"> 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 in productions Evaluating health and safety in production to minimise cross contamination



Design & Technology Progression

Textiles			
	Design	Make	Evaluate
Year 1	<ul style="list-style-type: none"> Using a template to create a design for a puppet 	<ul style="list-style-type: none"> Cutting fabric neatly with scissors Using joining methods to decorate a puppet Sequencing steps for construction 	<ul style="list-style-type: none"> Reflecting on a finished product, explaining likes and dislikes
Year 2	<ul style="list-style-type: none"> Designing a pouch 	<ul style="list-style-type: none"> Selecting and cutting fabrics for sewing Threading a needle Sewing running stitch, with evenly spaced, neat, even stitches to join fabric Neatly pinning and cutting fabric using a template 	<ul style="list-style-type: none"> Troubleshooting scenarios posed by teacher
Year 3	<ul style="list-style-type: none"> Designing and making a template from an existing cushion and applying individual design criteria 	<ul style="list-style-type: none"> Following design criteria to create a cushion 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 Completing design ideas with stuffing and sewing the edges 	<ul style="list-style-type: none"> Evaluating an end product and thinking of other ways in which to create similar items
Year 4	<ul style="list-style-type: none"> Writing design criteria for a product, articulating decisions made Designing a personalised book sleeve 	<ul style="list-style-type: none"> 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"> 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 Suggesting modifications for improvement Articulating the advantages and disadvantages of different fastening types
Year 5	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
Year 6	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">



Design & Technology Progression

Digital world– KS2 only			
	Design	Make	Evaluate
Year 3	<ul style="list-style-type: none"> • Problem solving by suggesting potential features on a Micro: bit and justifying my ideas • Developing design ideas for a technology pouch • Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge 	<ul style="list-style-type: none"> • Using a template when cutting and assembling the pouch • Following a list of design requirements • Selecting and using the appropriate tools and equipment for cutting, joining, shaping and decorating a foam pouch • Applying functional features such as using foam to create soft buttons 	<ul style="list-style-type: none"> • Analysing and evaluating an existing product • Identifying the key features of a pouch
Year 4	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
Year 5	<ul style="list-style-type: none"> • Researching (books, internet) for a particular (user's) animal's needs • Developing design criteria based on research • Generating multiple housing ideas using building bricks • Understanding what a virtual model is and the pros and cons of traditional and CAD modelling • Placing and manoeuvring 3D objects, using CAD • Changing the properties of, or combine one or more 3D objects, using CAD 	<ul style="list-style-type: none"> • Understanding the functional and aesthetic properties of plastics • Programming to monitor the ambient temperature and coding an (audible or visual) alert when the temperature rises above or falls below a specified range 	<ul style="list-style-type: none"> • Stating an event or fact from the last 100 years of plastic history • Explaining how plastic is affecting planet Earth and suggesting ways to make more sustainable choices • Explaining key functions in my program (audible alert, visuals) • Explaining how my product would be useful for an animal carer including programmed features
Year 6	<ul style="list-style-type: none"> • Writing a design brief from information submitted by a client • Developing design criteria to fulfil the client's request • Considering and suggesting additional functions for my navigation tool • Developing a product idea through annotated sketches • Placing and manoeuvring 3D objects, using CAD • Changing the properties of, or combine one or more 3D objects, using CAD 	<ul style="list-style-type: none"> • Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo) • Explaining material choices and why they were chosen as part of a product concept • Programming an N,E, S,W cardinal compass 	<ul style="list-style-type: none"> • Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool • Developing an awareness of sustainable design • Identifying key industries that utilise 3D CAD modelling and explain why • Describing how the product concept fits the client's request and how it will benefit the customers • Explaining the key functions in my program, including any additions • Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool • Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch • Demonstrating a functional program as part of a product concept



Design & Technology Progression

Design & Technology Progression of Knowledge

Structures		
	Technical	Additional
Year 1	<ul style="list-style-type: none"> To understand that the shape of materials can be changed to improve the strength and stiffness of structures To understand that certain shapes are a strong type of structure (e.g. the main shape used for windmills and lighthouses are cylinders) To understand that axles are used in structures and mechanisms to make parts turn in a circle To begin to understand that different structures are used for different purposes To know that a structure is something that has been made and put together 	<ul style="list-style-type: none"> To know that a client is the person I am designing for To know that design criteria is a list of points to ensure the product meets the client's needs and wants To know the purpose of my product e.g. that a windmill harnesses the power of wind for a purpose like grinding grain, pumping water or generating electricity To know how my product works e.g. that windmill turbines use wind to turn and make the machines inside work To know details about my product e.g. that a windmill is a structure with sails that are moved by the wind and that the three main parts of a windmill are the turbine, axle and structure
Year 2	<ul style="list-style-type: none"> To know that materials can be manipulated to improve strength and stiffness To know that a structure is something which has been formed or made from parts To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move To know that a 'strong' structure is one which does not break easily To know that a 'stiff' structure or material is one which does not bend easily 	<ul style="list-style-type: none">
Year 3	<ul style="list-style-type: none"> To understand that wide and flat based objects are more stable To understand the importance of strength and stiffness in structures 	<ul style="list-style-type: none"> To know the features of their structure e.g. for a castle: flags, towers, battlements, turrets, curtain walls, moat, drawbridge and gatehouse - and their purpose To know that a façade is the front of a structure To understand that products need certain qualities e.g. a castle needed to be strong and stable to withstand enemy attack To know that a paper net is a flat 2D shape that can become a 3D shape once assembled To know that a design specification is a list of success criteria for a product
Year 4	<ul style="list-style-type: none"> To understand what a frame structure is To know that a 'free-standing' structure is one which can stand on its own 	<ul style="list-style-type: none"> To know about my product in some detail e.g. that a pavilion is a decorative building or structure for leisure activities To know that cladding can be applied to structures for different effects. To know that aesthetics are how a product looks To know that a product's function means its purpose To understand that the target audience means the person or group of people a product is designed for To know that architects consider light, shadow and patterns when designing
Year 5	<ul style="list-style-type: none"> To understand some different ways to reinforce structures To understand how triangles can be used to reinforce structures such as bridges To know that properties are words that describe the form and function of materials To understand why material selection is important based on their properties To understand the material (functional and aesthetic) properties of wood 	<ul style="list-style-type: none"> To know that structures can be strengthened by manipulating materials and shapes
Year 6	<ul style="list-style-type: none"> To know that structures can be strengthened by manipulating materials and shapes 	<ul style="list-style-type: none"> To understand what a 'footprint plan' is To understand that in the real world, design , can impact users in positive and negative ways To know that a prototype is a cheap model to test a design idea



Design & Technology Progression

Mechanisms / Mechanical systems		
	Technical	Additional
Year 1	<ul style="list-style-type: none"> To know that a mechanism is the parts of an object that move together To know that a slider mechanism moves an object from side to side To know that a slider mechanism has a slider, slots, guides and an object To know that bridges and guides are bits of card that purposefully restrict the movement of the slider To know that wheels need to be round to rotate and move To understand that for a wheel to move it must be attached to a rotating axle To know that an axle moves within an axle holder which is fixed to the vehicle or toy To know that the frame of a vehicle (chassis) needs to be balanced 	<ul style="list-style-type: none"> To know that in Design and Technology we call a plan a 'design' To know some real-life items that use wheels such as wheelbarrows, hamster wheels and vehicles
Year 2	<ul style="list-style-type: none"> To know that different materials have different properties and are therefore suitable for different uses To know that mechanisms are a collection of moving parts that work together as a machine to produce movement To know that there is always an input and output in a mechanism To know that an input is the energy that is used to start something working To know that an output is the movement that happens as a result of the input To know that a lever is something that turns on a pivot To know that a linkage mechanism is made up of a series of levers 	<ul style="list-style-type: none"> To know the features of my product e.g. a ferris wheel include the wheel, frame, pods, a base an axle and an axle holder To know that it is important to test my design as I go along so that I can solve any problems that may occur To know some real-life objects that contain mechanisms
Year 3	<ul style="list-style-type: none"> To understand how pneumatic systems work To understand that pneumatic systems can be used as part of a mechanism To know that pneumatic systems operate by drawing in, releasing and compressing air 	<ul style="list-style-type: none"> To understand how sketches, drawings and diagrams can be used to communicate design ideas To know that exploded-diagrams are used to show how different parts of a product fit together To know that thumbnail sketches are small drawings to get ideas down on paper quickly
Year 4	<ul style="list-style-type: none"> To know that air resistance is the level of drag on an object as it is forced through the air To understand that the shape of a moving object will affect how it moves due to air resistance 	<ul style="list-style-type: none"> To know that aesthetics means how an object or product looks in design and technology To know that a template is a stencil you can use to help you draw the same shape accurately To know that a birds-eye view means a view from a high angle (as if a bird in flight) To know that graphics are images which are designed to explain or advertise something To know that it is important to assess and evaluate design ideas and models against a list of design criteria.
Year 5	<ul style="list-style-type: none"> To know that mechanisms control movement To understand that mechanisms that 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 	<ul style="list-style-type: none">
Year 6	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> To know that an automata is a hand powered mechanical toy To know that a cross-sectional diagram shows the inner workings of a product To understand how to use a bench hook and saw safely To know that a set square can be used to help mark 90° angles



Design & Technology Progression

Electrical systems – KS2 only		
	Technical	Additional
Year 3	•	•
Year 4	<ul style="list-style-type: none"> To know that an electrical circuit must be complete for electricity to flow To know that a switch can be used to complete and break an electrical circuit 	<ul style="list-style-type: none"> To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison
Year 5	<ul style="list-style-type: none"> To know the key components used to create a functioning circuit To know that copper is a conductor and can be used as part of a circuit To understand that breaks in a circuit will stop it from working To understand that a series circuit only has one path for the electrical current to flow from positive to negative To know that we use symbols to represent components in a circuit diagram To know the names of the components in a basic series circuit: crocodile wires, LED (light-emitting diode), battery holder, battery, cell 	<ul style="list-style-type: none"> To know that product analysis is critiquing the strengths and weaknesses of a product To know that a moodboard may include words, sketches, textures, colours, material samples etc. and can act as inspiration when designing
Year 6	<ul style="list-style-type: none"> To know that batteries contain acid, which can be dangerous if they leak To know the names of the components in a basic series circuit including a buzzer 	<ul style="list-style-type: none"> To understand the diagram perspectives 'top view', 'side view' and 'back'



Design & Technology Progression

Cooking and nutrition	
Cooking and nutrition	
Year 1	<ul style="list-style-type: none"> Understanding the difference between fruits and vegetables To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber) To know that a blender is a machine which mixes ingredients together into a smooth liquid To know that a fruit has seeds and a vegetable does not To know that fruits grow on trees or vines To know that vegetables can grow either above or below ground To know that vegetables can come from different parts of the plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber)
Year 2	<ul style="list-style-type: none"> To know that 'diet' means the food and drink that a person or animal usually eats To understand what makes a balanced diet To know where to find the nutritional information on packaging To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar To understand that I should eat a range of different foods from each food group, and roughly how much of each food group To know that nutrients are substances in food that all living things need to make energy, grow and develop To know that 'ingredients' means the items in a mixture or recipe To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'
Year 3	<ul style="list-style-type: none"> To know that not all fruits and vegetables can be grown in the UK To know that climate affects food growth To know that vegetables and fruit grow in certain seasons To know that cooking instructions are known as a 'recipe' To know that imported food is food which has been brought into the country To know that exported food is food which has been sent to another country. To understand that imported foods travel from far away and this can negatively impact the environment To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health To know safety rules for using, storing and cleaning a knife safely To know that similar coloured fruits and vegetables often have similar nutritional benefits
Year 4	<ul style="list-style-type: none"> To know that the amount of an ingredient in a recipe is known as the 'quantity' To know that it is important to use oven gloves when removing hot food from an oven To know the following cooking techniques: sieving, creaming, rubbing method, cooling To understand the importance of budgeting while planning ingredients for biscuits
Year 5	<ul style="list-style-type: none"> To understand where meat comes from - learning that beef is from cattle and how beef is reared and processed, including key welfare issues To know that I can adapt a recipe to make it healthier by substituting ingredients To know that I can use a nutritional calculator to see how healthy a food option is To understand that 'cross-contamination' means that bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects
Year 6	<ul style="list-style-type: none"> To know that 'flavour' is how a food or drink tastes To know that many countries have 'national dishes' which are recipes associated with that country To know that 'processed food' means food that has been put through multiple changes in a factory To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork)



Design & Technology Progression

Textiles	
Knowledge	
Year 1	<ul style="list-style-type: none"> 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 different techniques for joining materials can be used for different purposes To understand that a template (or fabric pattern) is used to cut out the same shape multiple times To know that drawing a design idea is useful to see how an idea will look
Year 2	<ul style="list-style-type: none"> 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 a thimble can be used to protect my fingers when sewing
Year 3	<ul style="list-style-type: none"> To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric 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
Year 4	<ul style="list-style-type: none"> To know that a fastening is something which holds two pieces of material together e.g. 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
Year 5	<ul style="list-style-type: none">
Year 6	<ul style="list-style-type: none">

Digital world - KS2 only		
	Technical	Additional
Year 3	<ul style="list-style-type: none"> To understand that in programming a 'loop' is code that repeats something again and again until stopped To know that a Micro:bit is a pocket-sized, codeable computer Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm 	<ul style="list-style-type: none"> To know what the 'Digital Revolution' is and features of some of the products that have evolved as a result To know that in Design and technology the term 'smart' means a programmed product To know the difference between analogue and digital technologies To understand what is meant by 'point of sale display' To know that CAD stands for Computer-aided design
Year 4	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
Year 5	<ul style="list-style-type: none"> To know that a 'device' means equipment created for a certain purpose or job and that monitoring devices observe and record To know that a sensor is a tool or device that is designed to monitor, detect and respond to changes for a purpose To understand that conditional statements (and, or, if booleans) in programming are a set of rules which are followed if certain conditions are met 	<ul style="list-style-type: none"> To understand key developments in thermometer history To know events or facts that took place over the last 100 years in the history of plastic, and how this is changing our outlook on the future To know the 6Rs of sustainability To understand what a virtual model is and the pros and cons of traditional vs CAD modelling
Year 6	<ul style="list-style-type: none"> To know that accelerometers can detect movement To understand that sensors can be useful in products as they mean the product can function without human input 	<ul style="list-style-type: none"> To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request To know that 'multifunctional' means an object or product has more than one function To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing