

	<div>Design and Technology</div> <div>National Curriculum expectations and progression of skills development</div>						
	EYFS	End of Y1	End of Y2	End of Y3	End of Y4	End of Y5	End of Y6
National Curriculum Expectations:	<ul style="list-style-type: none">They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.Children use what they have learnt about media and materials in original ways, thinking about uses and purposes.They represent their own ideas, thoughts and feelings through design and technology	Design <ul style="list-style-type: none">Design purposeful, functional, appealing products based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and ICT. Make <ul style="list-style-type: none">Select from and use a range of tools and equipment to perform practical tasks.Select from and use a wide range of materials and components, including construction materials, textiles, and ingredients. Evaluate <ul style="list-style-type: none">Explore and evaluate a range of existing products.Evaluate ideas / products against design criteria. Technical knowledge <ul style="list-style-type: none">Build structures, exploring how they can be made stronger, stiffer and more stable.Explore and use mechanisms in their products.Use the basic principles of a healthy and varied diet to prepare dishesUnderstand where food comes from.	Design <ul style="list-style-type: none">Use research and develop criteria to inform the design of innovative, functional, appealing products that are fit for purpose.Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Make <ul style="list-style-type: none">Select from and use a wider range of tools and equipment to perform practical tasks accurately.Select from and use a wider range of materials and components. Evaluate <ul style="list-style-type: none">Investigate and analyse a range of existing products.Evaluate ideas and products against own design criteria and consider the views of others.Understand how key events and individuals have helped shape the world. Technical knowledge <ul style="list-style-type: none">Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.Understand and use mechanical systems in their productsUnderstand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].Apply understanding of computing to program, monitor and control products.Understand and apply the principles of a healthy and varied diet.Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.				
	Design and develop	<ul style="list-style-type: none">Generate ideas from their own experienceTalk about their ideas and say what will be doneDescribe what they want to do using pictures and wordsMake lists of materials they will need	<ul style="list-style-type: none">Generate ideas, and plan what to do next, using their experience of materials and componentsUse their knowledge of some working characteristics of materials when designingUse wheels, slides and levers in plansUse plans to show how to put their ideas into practiceSay how the product will be useful to the userDraw pictures with labels, with some text	<ul style="list-style-type: none">Use others to help generate their ideasUse what they know about the properties of materialsPlan their work to include a range of joinsEnsure that plans are realistic and appropriate for the aimShow the order of working in plansUse models, pictures and words in designsMake increasing use of ICT to plan ideasRecognise that designs must meet a range of needsSay why something will be usefulApply what they know about mechanisms to create movement when planning and designingInvestigate a range of products to see how they work	<ul style="list-style-type: none">Collect and use information to generate ideasConsider the way the product will be usedUnderstand designs must meet a range of criteria and constraintsTake users' views into accountUnderstand how some properties can be used – e.g. waterproofThink ahead about the order of their workAdd electricity to create motion or make lightProduce step by step plansMake ongoing sketches and annotations	<ul style="list-style-type: none">Make more complex designs to include belts and pulleys, and a combination of other mechanismsPlan the order of work by thinking aheadUse sketches to show other ways of doing things – and then make choicesMeet an identified need – e.g. a meal for an older person – by selecting ingredients or materialsUse various sources of information and draw on them in design	<ul style="list-style-type: none">Keep cost constraints in mind when selecting materials in designUse their knowledge of –e.g.- science and art when designingBe aware of commercial aspects and incorporate these into their designsDesign including hydraulics and pneumatics when where appropriateDraw scaled diagrams with increasing use of ratio Calculate the amount of materials needed use this to estimate cost

Make		<ul style="list-style-type: none"> Know the features of some familiar products Join two materials together, often with glue Use scissors or a knife to cut, sometimes with help Make simple models, not necessarily with a purpose Use simple construction kits – e.g. Lego Know about basic hygiene and safety 	<ul style="list-style-type: none"> Begin to select tools for folding, joining, rolling Measure out and cut fabric Use a simple template for cutting out Practise skills before using them Use simple finishing techniques Select tools and techniques appropriate to the job Follow basic safety rules Understand and use the terms ingredient and component Use simple scales or balances Understand main rules of food hygiene 	<ul style="list-style-type: none"> Measure and cut out using centimetres and weigh in grams Choose tools and equipment which are appropriate for the job Prepare for work by assembling components together before joining Use scoring and folding for precision Make holes using a punch and drill Work out how to make models stronger Alter and adapt materials to make them stronger Combine a number of components together in different ways Make the finished product neat and tidy Begin to select their own ingredients when cooking or baking Make good presentation of food 	<ul style="list-style-type: none"> Increasingly model their ideas before making Measure accurately to centimetres and grams Combine materials for strength and to improve how the product looks Use permanent and temporary fastenings to join Join with a greater range of techniques – e.g. staples Strengthen joins and corners in a variety of ways Understand how wheels, axles, turning mechanisms, hinges and levers all work together 	<ul style="list-style-type: none"> Carry out tests to see if their design works Make improvements from design suggestions Work in a safe and hygienic way Measure and cut precisely to millimetres Make stable and strong joins to stand the test of time Use proportions when cooking, by doubling and halving recipes 	<ul style="list-style-type: none"> Measure and cut out in precise detail, and make sure that finished products are carefully finished Make separate elements of a model before combining into the finished article Understand how an article might be mass produced Produce a simple instruction manual or handbook for their product
Product and evaluation		<ul style="list-style-type: none"> Recognise the characteristics of familiar products Know how some moving objects work Use simple terms to talk about their own and others' work Identify materials and mechanisms in familiar products Know the benefits of fruit and vegetables 	<ul style="list-style-type: none"> Talk about how moving objects work Describe how a commercial product works Use like and dislike when evaluating or describing Explain why some products are useful Use digital photography to present design or finished work Recognise what they have done well and talk about what could be improved Seek out the views and judgements of others Predict how changes will improve the finished product 	<ul style="list-style-type: none"> Be clear about their ideas when asked Can alter and adapt original plans following discussion and evaluation Recognise what has gone well, but suggest further improvements for the finished article Suggest which elements they would do better in the future Identify where evaluation has led to improvements Understand safe food storage 	<ul style="list-style-type: none"> Talk about what they like and dislike, giving reasons Develop their designs through their own reflection and the evaluation of others Carry out tests before making improvements Evaluate food by taste, texture, flavour etc. 	<ul style="list-style-type: none"> Identify what is working well and what might be improved – and make choices from several alternatives Refine the quality of the finished product, including making annotations on the design Clarify ideas through drawing and modelling Increasingly use testing to improve models and finished products 	<ul style="list-style-type: none"> Research products using the internet Test and evaluate commercial products, understanding how this information supports their own designs Evaluate a range of different sources of information such as advertising and handbooks