DT Skills Progression KS2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3		Different flavoured chocolate and linking it to the Aztecs		Making Stone Age jewellery out of clay		Roman Chariot making
Year 4		Christmas stockings		Torches		Biscuits
Year 5		Moving Toy-cam toy		Bird feeders/snack boxes		Greek Masks
Year 6		British Food		Punch and Judy Puppets		

Design and Technology - Key Stage 2				
NC	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Design- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals/groups Design- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	I can look at design criteria while designing and making stone age jewellery out of clay. I can make design decisions. I can describe my design using an accurately labelled sketch and key words when designing my Roman Chariot and Mosaic. I can explain how my product will work. I can make a simple prototype to test my design idea.	I can use my research as design ideas for a Christmas Stocking. I can have at least one idea about how to create a product and suggest improvements for my Christmas Stocking design. I can make and explain design decisions for my torch design considering availability of resources. I can produce a plan, including an annotated sketch and explain it to others, saying how realistic my plan is and how my product will work. I can make a prototype of my product to test how realistic my design is (including using pattern pieces).	I can use the internet and questionnaires to research design ideas and use this research to inform my own design. I can create my own design criteria considering the end users' needs and wants. I can produce a logical and realistic plan for making a product and explain it to others. I can use cross-sectional diagrams and exploded diagrams to design my toy-cam toy and use this to clearly explain how parts of the product will work. I can model and refine design ideas by making prototypes and using pattern pieces.	I can research different products and identify features that will appeal to the intended user. I can explain why some products are more appealing than others. I can use this research to create my own design criteria my own puppet, ensuring that it appeals to the intended user. I can design a range of ideas that would appeal to my target market. I can come up with innovative designs for my puppet show. I can make design decisions for my puppet show and crumble, considering resources and cost. I can use computer aided designs to explain how my puppet show design will work and be fit for purpose. I can follow and refine a logical plan and independently model and where

				necessary adapt design ideas by making prototypes for my puppet show.
Make- select from and use a wider range of tools and equipment to perform practical tasks (e.g cutting, shaping, joining and finishing], accurately Make- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select suitable tools/equipment, explain choices; begin to use them accurately Select appropriate materials, fit for purpose. Work through plan in order Consider how good product will be Begin to measure, mark out, cut and shape materials/components with some accuracy Begin to assemble, join and combine materials and components with some accuracy Begin to apply a range of finishing techniques with some accuracy	Select suitable tools and equipment, explain choices in relation to required techniques and use accurately Select appropriate materials, fit for purpose; explain choices Work through plan in order. Realise if product is going to be good quality Measure, mark out, cut and shape materials/components with some accuracy Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques with some accuracy	Use selected tools/equipment with good level of precision Produce suitable lists of tools, equipment/materials needed Select appropriate materials, fit for purpose; explain choices, considering functionality Create and follow detailed step-by-step plan Explain how product will appeal to an audience Mainly accurately measure, mark out, cut and shape materials/components Mainly accurately assemble, join and combine materials/components Mainly accurately apply a range of finishing techniques Use techniques that involve a small number of steps Begin to be resourceful with practical problems	Use selected tools and equipment precisely Produce suitable lists of tools, equipment, materials needed, considering constraints Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics Create, follow, and adapt detailed step-by-step plans Explain how product will appeal to audience; make changes to improve quality Accurately measure, mark out, cut and shape materials/components Accurately assemble, join and combine materials/components Accurately apply a range of finishing techniques Use techniques that involve a number of steps Be resourceful with practical problems

Evaluate- investigate and analyse a range of existing products Evaluate- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Evaluate- understand how key events and individuals in design and technology have helped shape the world	Look at design criteria while designing and making Use design criteria to evaluate finished product Say what I would change to make design better Begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose Learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products	Refer to design criteria while designing and making Use criteria to evaluate product Begin to explain how I could improve original design Evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose Research whether products can be recycled or reused Know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products	Evaluate quality of design while designing and making Evaluate ideas and finished product against specification, considering purpose and appearance. Test and evaluate final product Evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose Begin to evaluate how much products cost to make and how innovative they are Research how sustainable materials are Talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products	Evaluate quality of design while designing and making; is it fit for purpose? Keep checking design is 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 existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose Evaluate how much products cost to make and how innovative they are Research and discuss how sustainable materials are Consider the impact of products beyond their intended purpose Discuss some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products

Technical knowledge- apply their understanding of how to strengthen, stiffen and reinforce more complex structures Technical knowledge- understand and use mechanical systems in their products (e.g gears, pulleys, cams, levers and linkages) Technical knowledge- understand and use electrical systems in their products (e.g series circuits incorporating switches, bulbs, buzzers and motors) Technical knowledge- apply their understanding of computing to program, monitor and control their products.	Use appropriate materials Work accurately to make cuts and holes Join materials Begin to make strong structures Select appropriate tools / techniques Alter product after checking, to make it better *begin to try new/different ideas Use simple lever and linkages to create movement Use simple circuit in product Learn about how to program a computer to control product.	Measure carefully to avoid mistakes Attempt to make product strong Continue working on product even if original didn't work Make a strong, stiff structure Select most appropriate tools / techniques *explain alterations to product after checking it *grow in confidence about trying new / different ideas. Use levers and linkages to create movement Use number of components in circuit Program a computer to control product	Select materials carefully, considering intended use of product and appearance Explain how product meets design criteria Measure accurately enough to ensure precision Ensure product is strong and fit for purpose Begin to reinforce and strengthen a 3D frame Refine product after testing Grow in confidence about trying new / different ideas Begin to use cams, pulleys or gears to create movement Incorporate switch into product Confidently use number of components in circuit Begin to be able to program a computer to monitor changes in environment and control product	Select materials carefully, considering intended use of the product, the aesthetics and functionality. Explain how product meets design criteria Reinforce and strengthen a 3D frame Refine product after testing, considering aesthetics, functionality and purpose Be confident to try new / different ideas Use cams, pulleys and gears to create movement Use different types of circuit in product Think of ways in which adding a circuit would improve product Program a computer to monitor changes in environment and control product

Cooking and Nutrition- understand and apply the principles of a healthy and varied diet Cooking and Nutrition- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Cooking and Nutrition- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	Carefully select ingredients Use equipment safely *make product look attractive Think about how to grow plants to use in cooking *begin to understand food comes from UK and wider world Describe how healthy diet= variety/balance of food/drinks Explain how food and drink are needed for active/healthy bodies Prepare and cook some dishes safely and hygienically Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking .	**E**xplain how to be safe/hygienic Think about presenting product in interesting/ attractive ways Understand ingredients can be fresh, pre-cooked or processed 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 and drinks Explain importance of food and drink for active, healthy bodies Prepare and cook some dishes safely and hygienically Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Explain how to be safe/hygienic Think about presenting product in interesting/ attractive ways Understand ingredients can be fresh, pre-cooked or processed 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 and drinks Explain importance of food and drink for active, healthy bodies Prepare and cook some dishes safely and hygienically Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Understand a recipe can be adapted by adding / substituting ingredients Explain seasonality of foods Learn about food processing methods Name some types of food that are grown, reared or caught in the UK or wider world Adapt recipes to change appearance, taste, texture or aroma. Describe some of the different substances in food and drink, and how they can affect health Prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.