The Greville Primary School –Progression Map

D.T.

National curriculum	Design	Make	Evaluate
Early Years	• work within a range of contexts - story based, home, school, playground • use existing examples to generate ideas • begin to talk about their designs • use language of designing and making (join, build, shape, longer, shorter, heavier etc.)	• construct with a purpose, using a variety of resources • use simple tools and techniques • build / construct with a wide range of objects • select tools & techniques to shape, assemble and join • replicate structures with materials / components	• adapt work if necessary • dismantle, examine, talk about existing objects/structures • consider and manage some risks • practise some appropriate safety measures independently • talk about how things work • look at similarities and differences between existing objects / materials / tools • show an interest in technological toys
Year 1	• use pictures and words to explain what they want to design and make • say whether it is for themselves or someone else and how it will work • use drawings to record ideas as they are developed • select materials from a limited range that will meet the design criteria • research similar existing products	• explain what I'm making and why • describe what I need to do next • select tools/equipment to cut, shape, join, finish and explain choices • measure, mark out, cut and shape, with support • choose suitable materials and explain choices • try to use finishing techniques to make product look good • work in a safe and hygienic manner	• talk about my work, linking it to what I was asked to do • talk about existing products considering: use, materials, how they work, audience, where they might be used • talk about existing products, and say what is and isn't good • talk about things that other people have made • begin to talk about what could make product better
Year 2	• have own ideas and plan what to do next • explain what I want to do and describe how I may do it • explain purpose of product, how it will work and how it will be suitable for the user • describe design using pictures, words, models, diagrams • design products for myself and others following design criteria • choose best tools and materials, and explain choices	• explain what I am making and why it fits the purpose • make suggestions as to what I need to do next. • join materials/components together in different ways • measure, mark out, cut and shape materials and components, with support. • describe which tools I'm using and why • choose suitable materials and explain choices depending on characteristics. • use finishing techniques to make product look good	• describe what went well, thinking about design criteria • talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion • evaluate how good existing products are • talk about what I would do differently if I were to do it again and why

	• use knowledge of existing products to produce ideas	• work safely and hygienically	
Year 3	• begin to research others' needs • show design meets a range of requirements • describe purpose of product • follow a given design criteria • have at least one idea about how to create product • create a plan which shows order, equipment and tools • describe design using an accurately labelled sketch and words • make design decisions • explain how product will work • make a prototype	• 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 a 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	• 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 • begin to understand by whom, when and where products were designed • learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products
Year 4	• use research for design ideas • show design meets a range of requirements and is fit for purpose • begin to create own design criteria • have at least one idea about how to create product and suggest improvements for design. • produce a plan and explain it to others • say how realistic the plan is. • include an annotated sketch • make and explain design decisions considering availability of resources • explain how product will work • make a prototype	• 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 a 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	• 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 • discuss by whom, when and where products were designed • research whether products can be recycled or reused • know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products
Year 5	• take a user's view into account when designing • begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose • create own design criteria • have a range of ideas • produce a logical, realistic plan and explain it to others.	• 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	• 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

	• use cross-sectional planning and annotated sketches • make design decisions considering time and resources. • clearly explain how parts of the product will work. • model and refine design ideas by making prototypes	• 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	• 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 groundbreaking product
Year 6	• draw on market research to inform design • use research of user's individual needs, wants, requirements for design • identify features of design that will appeal to the intended user • create own design criteria and specification • come up with innovative design ideas • follow and refine a logical plan. • use annotated sketches, cross-sectional planning and exploded diagrams • make design decisions, considering, resources and cost • clearly explain how parts of design will work, and how they are fit for purpose • independently model and refine design ideas by making prototypes	• 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 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

National curriculum	Technical Knowledge				Cooking and Nutrition
	Materials/ Structures	**Mechanisms**	**Textiles**	**Electrical Systems**	
Early Years	• Recognise that a range of technology is used in places such as homes and schools • Select and use technology for particular purposes				• Begin to understand some food preparation tools, techniques and processes • Practise stirring, mixing, pouring, blending • Discuss how to make an activity safe and hygienic • Discuss use of senses • Understand need for variety in food • Begin to understand that eating well contributes to good health
	• Begin to know about the simple working characteristics of materials and components	• Show an interest in toys with buttons and mechanisms • Begin to understand the movement of simple mechanisms such as levers, sliders and wheels	• Use vocabulary to describe elements of different textiles e.g. soft, smooth, rough, fluffy, thick, thin	• Show an interest in toys that work using electricity • Begin to understand that some toys or appliances need batteries to work	
Year 1	• begin to measure and join materials, with some support • describe differences in materials • suggest ways to make material/product stronger	• begin to use levers and sliders	• measure, cut and join textiles to make a product, with some support • choose suitable textiles		• describe textures • wash hands & clean surfaces • think of interesting ways to decorate food • say where some foods come from, (i.e. plant or animal) • describe differences between some food groups (i.e. sweet, vegetable etc.) • discuss how fruit and vegetables are healthy • cut, peel and grate safely, with support
Year 2	• measure materials • describe some different characteristics of materials • join materials in different ways • use joining, rolling or folding to make it stronger • use own ideas to try to make product stronger	• use levers or sliders • begin to understand how to use wheels and axles	• measure textiles • join textiles together to make a product, and explain how I did it • carefully cut textiles to produce accurate pieces • explain choices of textile • understand that a 3D textile structure can be		• explain hygiene and keep a hygienic kitchen • describe properties of ingredients and importance of varied diet • say where food comes from (animal, underground etc.) • describe how food is farmed, home-grown, caught • draw eat well plate; explain there are groups of food • describe “five a day”

			made from two identical fabric shapes		• cut, peel and grate with increasing confidence
Year 3	• 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	• join different textiles in different ways • choose textiles considering appearance and functionality • begin to understand that a simple fabric shape can be used to make a 3D textiles project		• 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, baking
Year 4	• 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	• think about user when choosing textiles • think about how to make product strong • begin to devise a template • explain how to join things in a different way • understand that a simple fabric shape can be used to make a 3D textiles project	• use circuits that includes a number of components • incorporate a switch into product	• 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
Year 5	• select materials carefully, considering intended use of product and appearance	• refine product after testing	• think about user and aesthetics when choosing textiles • use own template	•	• explain how to be safe / hygienic and follow own guidelines

	• 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	• grow in confidence about trying new / different ideas • begin to use cams, pulleys or gears to create movement	• think about how to make product strong and look better • think of a range of ways to join things • begin to understand that a single 3D textiles project can be made from a combination of fabric shapes.		• present product well - interesting, attractive, fit for purpose • begin to understand seasonality of foods • understand food can be grown, reared or caught in the UK and the wider world • describe how recipes can be adapted to change taste, appearance, texture, aroma • explain how there are different substances in food / drink needed for health • prepare and cook some dishes safely and hygienically including, where appropriate, use of heat source • use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
Year 6	• 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 • incorporate hydraulics and pneumatics • be confident to try new / different ideas • use cams, pulleys and gears to create movement	• think about user's wants/needs and aesthetics when choosing textiles • make product attractive and strong • make a prototype • use a range of joining techniques • think about how product might be sold • think carefully about what would improve product • understand that a single 3D textiles project can be made from a combination of fabric shapes.	• 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 or control a product	• 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 dishes safely and hygienically including, where appropriate, the use of heat source. • use a range of preparation and decoration techniques confidently