

St. Gerard's Catholic Primary & Nursery School
Design & Technology Progression Document 2022-2023

	Foundation	KS1		Lower KS2		UPPER KS2	
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
DFE Purpose Aims	<p>Purpose of study Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.</p> <p>Aims The national curriculum for design and technology aims to ensure that all pupils:</p> <ul style="list-style-type: none"> ▪ develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world ▪ build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users ▪ critique, evaluate and test their ideas and products and the work of others ▪ understand and apply the principles of nutrition and learn how to cook. 						
Attainment Targets	By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.						
Subject Content	<p>Key Stage 1: Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ▪ design purposeful, functional, appealing products for themselves and other users based on design criteria 						

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<ul style="list-style-type: none"> ▪ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> ▪ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] ▪ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> ▪ explore and evaluate a range of existing products ▪ evaluate their ideas and products against design criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> ▪ build structures, exploring how they can be made stronger, stiffer and more stable ▪ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. <p>Key stage 2</p> <p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ▪ use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups ▪ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> ▪ select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately ▪ 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 						

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	<p>Evaluate</p> <ul style="list-style-type: none"> ▪ investigate and analyse a range of existing products ▪ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work ▪ understand how key events and individuals in design and technology have helped shape the world <p>Technical knowledge</p> <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 products [for example, gears, pulleys, cams, levers and linkages] ▪ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▪ apply their understanding of computing to program, monitor and control their products <p>Cooking and nutrition</p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>Pupils should be taught to:</p> <p>Key stage 1</p> <ul style="list-style-type: none"> ▪ use the basic principles of a healthy and varied diet to prepare dishes ▪ understand where food comes from. <p>Key stage 2</p> <ul style="list-style-type: none"> ▪ 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. 						
Progression Aims	<ul style="list-style-type: none"> ▪ To develop their own ideas ▪ Confidence in selecting and using 	<ul style="list-style-type: none"> ▪ To build confidence in approach o new situations, 	<ul style="list-style-type: none"> ▪ To generate work showing a personal response ▪ To foster an inventive and lively attitude together 	<ul style="list-style-type: none"> ▪ to build up a vocabulary of practical experience with special attention to the environment ▪ to foster the ability to recognise and discuss different approaches to their own and other people's work 	<ul style="list-style-type: none"> ▪ to consider challenges (self-imposed or other) and respond to them, selecting appropriate tools and materials ▪ working through problems to have some understanding of the nature 		

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	<p>materials and working on processes that interest them.</p> <ul style="list-style-type: none"> Talk about their designs and models. 	<p>tools and materials</p> <ul style="list-style-type: none"> To motivate communication and expression of personal ideas through designing and making 	<p>with the ability to persevere through problems to a conclusion</p> <ul style="list-style-type: none"> To build up experience of tools and materials and to extend expectation of the nature of art and design technology 	<ul style="list-style-type: none"> to develop listening and reading skills and consider the nature of design design and make for different purposes 		<p>and possibilities of art and design experiences</p>	
Vocabulary	<p>EYFS</p> <ul style="list-style-type: none"> – build, block, stick – stack, space, balance, model, fold, bend, fasten – construct, join, fringe, tear, scrunch, link, insert, slot, tab. 	<p>Y1- Cut, measure, glue, net, fold, lid, sides, joins, corner, design, make, evaluate, decorate, stick, twist, poke, model, stronger, stable.</p> <p>Y2- Measure, met, assemble, fold, scoring, joins, sliding lid, push on lid, padding, layers, illustrate, design, make, evaluate, stretch, wrap, spin, attach, test, bend.</p>		<p>Y3- Assemble, scoring, joins, sliding lid, integrated hinge, push on lid, added hinge, padding, layers, dividers, drawers, illustrate, design, make, evaluate.</p> <p>Y4- Design, make, evaluate, improve, modify, plan, procedures, weave, prepare, apply, prepare, research, discussion, explore, compare.</p> <p>Y5- Design, make, evaluate, file, investigate, analyse, functional, components, properties, strengthen, structures, functional properties, improve.</p> <p>Y6- Design, make, evaluate, generate, develop, model, annotate, prototypes, shaping, stiffen, reinforce, aesthetic qualities, consider.</p>			
Vocabulary Skills	<ul style="list-style-type: none"> Listen to and repeat vocabulary from what is seen, built and made 	<ul style="list-style-type: none"> Develop a food vocabulary using taste, smell, texture and feel 	<ul style="list-style-type: none"> extension of colour vocabulary linking colour to items e.g. raspberry, pillar box red etc. organisation words – repeat, overlap, symmetry, regular, irregular etc. 	<ul style="list-style-type: none"> Develop sensory vocabulary/knowledge using smell, taste, texture and feel Develop vocabulary for tools, materials and their properties Develop vocabulary related to the project 		<ul style="list-style-type: none"> Use correct vocabulary appropriate to the project Use the correct terminology for tools, materials and processes 	

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			<ul style="list-style-type: none"> ▪ words describing visual and tactile qualities ▪ description of artefacts and discussion <p>comment on each others' work</p>				
Exploring and Developing Ideas	<ul style="list-style-type: none"> ▪ Children develop their own ideas Through explorations, they find out and make decisions about how media and materials can be combined and changed. 	<ul style="list-style-type: none"> ▪ Work purposefully responding to colours, shapes, materials etc. ▪ Create simple representations of people and other things. ▪ Recognise that ideas can be expressed in art work. ▪ Experiment with an open mind. 	<ul style="list-style-type: none"> ▪ Try out different activities and make sensible choices about what to do next. <ul style="list-style-type: none"> • Use drawing to record ideas and experiences. 	<ul style="list-style-type: none"> ▪ Gather and review information, references and resources related to their ideas and intentions. ▪ Use a sketchbook for different purposes, including recording observation, planning and shaping ideas. 	<ul style="list-style-type: none"> ▪ Select and use relevant resources to develop their ideas. ▪ Use sketchbooks and drawing, purposefully to improve understanding, inform ideas and plan for an outcome. For example, sketchbooks will show several different versions of an idea and how research has led to improvements in their proposed outcome. 	<ul style="list-style-type: none"> ▪ Engage in open ended research and exploration in the process of initiating and developing their own personal ideas. ▪ Confidently use sketchbooks for a variety of purposes including: recording observations, develop ideas; testing materials; planning and recording information. 	<ul style="list-style-type: none"> ▪ Independently develop a range of ideas which show curiosity, imagination and originality. ▪ Systematically investigate, research and test ideas and plans using sketchbooks and other appropriate approaches. For example, sketchbooks will show in advance how work will be produced and how the qualities of materials will be used

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Evaluating and Developing Work	<ul style="list-style-type: none"> ▪ Be excited about what they have made ▪ 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 / 	<ul style="list-style-type: none"> ▪ Explore existing products and investigate how they have been made. ▪ Decide how existing products do/do not achieve their purpose. ▪ Talk about their design as they develop and identify good and bad points. ▪ Note changes made during the making process as annotation to plans/drawings. 	<ul style="list-style-type: none"> ▪ Explore and evaluate a range of existing products ▪ Evaluate their ideas and products against design criteria ▪ 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 	<ul style="list-style-type: none"> ▪ Investigate similar products to the one to be made to give starting points for a design and a design criteria ▪ Draw/sketch products to help analyse and understand how products are made. ▪ Research needs of user. ▪ Identify the strengths and weaknesses of their design ideas in relation to purpose/user. ▪ Decide which design idea to develop. ▪ Consider and explain how the finished product could be improved. ▪ Discuss how well the finished product meets 	<ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ Research and evaluate existing products (including book and web based research). ▪ Consider user and purpose. ▪ Identify the strengths and weaknesses of their design ideas. ▪ Give a report using correct technical vocabulary. ▪ Consider and explain how the finished product could be improved related to design criteria. ▪ Discuss how well the finished product 	<ul style="list-style-type: none"> ▪ 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

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	<ul style="list-style-type: none"> materials / tools ▪ Show an interest in technological toys ▪ Describe textures 	<ul style="list-style-type: none"> ▪ Say what they like and do not like about items they have made and attempt to say why. ▪ Discuss how closely their finished product meets their design criteria and how well it meets the needs of the user. 		<ul style="list-style-type: none"> the design criteria of the user. ▪ Investigate key events and individuals in Design and Technology. 	<ul style="list-style-type: none"> ground-breaking products 	<ul style="list-style-type: none"> meets the design criteria of the user. Test on the user! ▪ Understand how key people have influenced design. 	<ul style="list-style-type: none"> ▪ 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
Food	<ul style="list-style-type: none"> ▪ Begin to understand some food preparation tools, techniques and processes ▪ Practise stirring, mixing, pouring, blending 	<ul style="list-style-type: none"> ▪ Group familiar products e.g. fruits and vegetables ▪ Explain where food comes from ▪ Cut, peel, grate and chop a range of ingredients 	<ul style="list-style-type: none"> ▪ Use the basic principles of a healthy and varied diet to prepare dishes ▪ Understand where food comes from. ▪ explain hygiene and keep a hygienic kitchen ▪ describe properties of ingredients and importance of varied diet 	<ul style="list-style-type: none"> ▪ Analyse the taste, texture smell and appearance of a range of foods (predominantly savoury) ▪ Follow instructions/recipes ▪ Make healthy eating choices- 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> ▪ Prepare food products taking into account the properties of ingredients and sensory characteristics ▪ Weigh and measure using scales ▪ Select and prepare 	<ul style="list-style-type: none"> 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

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	<ul style="list-style-type: none"> ▪ 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 <p>Children in Reception will be learning to:</p> <ul style="list-style-type: none"> ▪ manage their own needs and 	<ul style="list-style-type: none"> ▪ Work safely and hygienically ▪ Understand the need of a variety of foods in a diet ▪ Measure and weigh food items, non-statutory measures e.g. spoons, cups 	<ul style="list-style-type: none"> ▪ 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" ▪ cut, peel and grate with increasing confidence 	<ul style="list-style-type: none"> use the Eatwell plate ▪ Join and combine a range of ingredients ▪ Explore seasonality of vegetables and fruits ▪ Find out which fruits and vegetables are grown in countries/continents studied in Geography ▪ Develop understanding of how meat/fish are reared/caught 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> foods for a particular purpose ▪ Work safely and hygienically ▪ Show awareness of a healthy diet (using the Eatwell plate) ▪ Use a range of cooking techniques ▪ Know where and how ingredients are grown and processed ▪ Consider influence of chefs e.g. Jamie Oliver and school meals, Hugh Fearnley-Whittingstall and sustainable fishing etc. 	<ul style="list-style-type: none"> 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.

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	<p>personal hygiene</p> <ul style="list-style-type: none"> ▪ know and talk about the different factors that support their overall health and wellbeing including : <p>healthy eating</p> <p>3 and 4-year-olds will be learning to:</p> <ul style="list-style-type: none"> ▪ make healthy choices about food, drink, 						

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	activity and tooth brushing						
Textiles	<ul style="list-style-type: none"> ▪ Select materials and techniques needed to shape, assemble and join materials ▪ Manipulate materials to achieve a planned effect 	<ul style="list-style-type: none"> ▪ Cut out shapes which have been created by drawing round a template onto the fabric ▪ Join fabrics by using e.g. running stitch, glue, staples, over sewing, tape ▪ Decorate fabrics with attached items e.g. buttons, beads, sequins, braids, ribbons ▪ Colour fabrics using 	<ul style="list-style-type: none"> ▪ 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 made from two identical fabric shapes. 	<ul style="list-style-type: none"> ▪ Understand seam allowance ▪ Join fabrics using running stitch, over sewing, blanket stitch ▪ Prototype a product using J cloths ▪ Use a prototype to make a pattern ▪ Explore strengthening and stiffening fabrics ▪ Explore fastening (inventors?) and recreate some ▪ Sew on buttons and make loops 	<ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ Create 3D products using pattern pieces and seam allowance ▪ Understand pattern layout ▪ Decorate textiles appropriately (often before joining components) ▪ Pin and tack fabric pieces together ▪ Join fabrics using over sewing, back stitch, blanket stitch or machine stitching (closer supervision) 	<ul style="list-style-type: none"> ▪ 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.

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		a range of techniques e.g. fabric paints, printing, painting				<ul style="list-style-type: none"> ▪ Combine fabrics to create more useful properties ▪ Make quality products 	
Structures	<ul style="list-style-type: none"> ▪ Use various construction materials ▪ begin to construct, stack blocks, make enclosures and create spaces ▪ Join construction pieces together to build and balance ▪ Realise that tools can be used for a purpose ▪ Construct with a purpose in mind, using a variety of resources 	<ul style="list-style-type: none"> ▪ Explore how to make structures stronger ▪ Investigate different techniques for stiffening a variety of materials ▪ Test different methods of enabling structures to remain stable ▪ Join appropriately for different materials and situations e.g. glue, tape ▪ Mark out materials to 	<ul style="list-style-type: none"> ▪ Build structures, exploring how they can be made stronger, stiffer and more stable ▪ 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 	<ul style="list-style-type: none"> ▪ Create shell or frame structures ▪ Strengthen frames with diagonal struts ▪ Make structures more stable by giving them a wide base ▪ Measure and mark square sections, strips and dowel accurately 	<ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ Use bradawl to mark hole positions ▪ Use a hand drill to drill tight and loose fit holes ▪ Cut strip wood, dowel, square section wood accurately to 1mm ▪ Join materials using appropriate methods ▪ Build frameworks to support mechanisms ▪ Stiffen and reinforce complex structures 	<ul style="list-style-type: none"> ▪ 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

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	<ul style="list-style-type: none"> ▪ Use simple tools and techniques competently and appropriately ▪ Select appropriate resources and adapt work where necessary 	<ul style="list-style-type: none"> ▪ be cut using a template ▪ Use a glue gun with close supervision 					
Mechanisms	<ul style="list-style-type: none"> ▪ Select materials and techniques needed to shape, assemble and join materials 	<ul style="list-style-type: none"> ▪ Join appropriately for different materials and situations e.g. glue, tape ▪ Try out different axle fixings and their strengths and weaknesses ▪ Make vehicles with construction kits which 	<ul style="list-style-type: none"> ▪ Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products use levers or slides ▪ begin to understand how to use wheels and axles 	<ul style="list-style-type: none"> ▪ Use mechanical systems such as gears, pulleys, levers and linkages ▪ Incorporate a circuit into a model ▪ Use electrical systems such as switches, bulbs and buzzers ▪ Use ICT to control products ▪ Use lolly sticks/ card to make levers and linkages ▪ Use linkages to make movement 	<ul style="list-style-type: none"> ▪ 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 pneumatics to create movement 	<ul style="list-style-type: none"> ▪ Use mechanical systems such as cams, pulleys and gears ▪ Use electrical systems such as motors ▪ Program, monitor and control using ICT 	<ul style="list-style-type: none"> ▪ 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

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		contain free running wheels <ul style="list-style-type: none"> ▪ Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton, reels ▪ Roll paper to create tubes ▪ Cut dowel using hacksaw and bench hook ▪ Attach wheels to a chassis using an axle ▪ Mark out materials to be cut using a template ▪ Fold, tear and cut paper and card ▪ Cut along lines, straight and curved 		larger or more varied			

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		<ul style="list-style-type: none"> ▪ Use a hole punch ▪ Insert paper fasteners for card ▪ Experiment with levers and sliders to find different ways of making things move in a 2D plane 					
Design	<ul style="list-style-type: none"> ▪ Talk about what they want to make ▪ Select appropriate resources ▪ Use gestures, talking and arrangements of materials and components to show design ▪ Use contexts set by the 	<ul style="list-style-type: none"> ▪ Use pictures and words to convey what they want to design/make ▪ Propose more than one idea for their product ▪ Use kits/reclaimed materials to develop more than one idea ▪ Model ideas with kits or 	<ul style="list-style-type: none"> ▪ Design purposeful, functional, appealing products for themselves and other users based on design criteria ▪ Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology have own ideas and plan what to do next 	<ul style="list-style-type: none"> ▪ Develop more than one design or adaptation of an initial design. ▪ Plan a sequence of actions to make a product. ▪ Record the plan by drawing using annotated sketches. ▪ Begin to use cross-sectional and exploded diagrams. ▪ Use prototypes to develop and share ideas. 	<ul style="list-style-type: none"> ▪ 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 plan is 	<ul style="list-style-type: none"> ▪ List tools needed before starting the activity. ▪ Plan the sequence of work e.g. using a storyboard. ▪ Record ideas using annotated diagrams. ▪ Use models, kits and drawings to help 	<ul style="list-style-type: none"> ▪ 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

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	teacher and myself <ul style="list-style-type: none"> ▪ Use language of designing and making (join, build, shape, longer, shorter, heavier etc.) 	reclaimed materials <ul style="list-style-type: none"> ▪ Select appropriate technique explaining: First... Next... Last... ▪ Explore ideas by rearranging materials ▪ Select pictures to help develop ideas ▪ Use drawings to record ideas as they are developed ▪ Add notes to drawings to help explanation ▪ Describe models and drawings of ideas and intentions 	<ul style="list-style-type: none"> ▪ 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, begin to use ICT ▪ design products for myself and others following design criteria ▪ choose best tools and materials, and explain choices ▪ use knowledge of existing products to produce ideas 	<ul style="list-style-type: none"> ▪ Think ahead about the order of their work and decide upon tools and materials. ▪ Propose realistic suggestions as to how they can achieve their design ideas. ▪ Consider aesthetic qualities of materials chosen. ▪ Use CAD where appropriate. 	<ul style="list-style-type: none"> ▪ include an annotated sketch ▪ make and explain design decisions considering availability of resources ▪ explain how product will work ▪ make a prototype ▪ begin to use computers to show design. 	formulate design ideas. <ul style="list-style-type: none"> ▪ Combine modelling and drawing to refine ideas. ▪ Devise step by step plans which can be read / followed by someone else. ▪ Use exploded diagrams and cross-sectional diagrams to communicate ideas. ▪ Sketch and model alternative ideas. ▪ Decide which design idea to develop 	<ul style="list-style-type: none"> ▪ 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 and using pattern pieces ▪ use computer-aided designs

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	Foundation	KS1		Lower KS2		UPPER KS2	
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Make	<ul style="list-style-type: none"> ▪ Make models randomly ▪ 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 / component ▪ Discuss how to make an activity safe and hygienic ▪ Record experiences 	<ul style="list-style-type: none"> ▪ Discuss their work as it progresses. ▪ Select materials from a limited range that will meet the design criteria. ▪ Select and name the tools needed to work the materials. ▪ Explain what they are making. ▪ Explain which materials they are using and why. ▪ Name the tools they are using ▪ Describe what they need to do next 	<ul style="list-style-type: none"> ▪ Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing ▪ Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics ▪ 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 	<ul style="list-style-type: none"> ▪ templates for their design. ▪ Cut slots. ▪ Cut internal shapes. ▪ Select from a range of tools for cutting shaping joining and finishing. ▪ Use tools with accuracy. ▪ Select from techniques for different parts of the process. ▪ Select from materials according to their functional properties. ▪ Plan the stages of the making process. ▪ Use appropriate finishing techniques. 	<ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ Make prototypes. ▪ Develop one idea in depth. ▪ Use researched information to inform decisions. ▪ Produce detailed lists of ingredients / components / materials and tools. ▪ Use a computer to model ideas. ▪ Select from and use a wide range of tools. ▪ Cut accurately and safely to a marked line. ▪ Select from and use a wide range of materials. 	<ul style="list-style-type: none"> ▪ 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

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	Foundation	KS1		Lower KS2		UPPER KS2	
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>by drawing, writing, voice recording</p> <ul style="list-style-type: none"> ▪ Understand different media can be combined for a purpose <p>3 and 4-year-olds will be learning to:</p> <ul style="list-style-type: none"> ▪ make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park ▪ use one-handed 		<ul style="list-style-type: none"> ▪ choose suitable materials and explain choices depending on characteristics ▪ use finishing techniques to make product look good ▪ work safely and hygienically 			<ul style="list-style-type: none"> ▪ Use appropriate finishing techniques for the project. ▪ Refine their product – review and rework/improve. ▪ 	<ul style="list-style-type: none"> ▪ use techniques that involve a number of steps ▪ be resourceful with practical problems

