



EYFS	Children have access to a variety of resources within their continuous provision that helps to both develop and consolidate knowledge, skills and understanding when designing and making within their own play. DT skills are covered through the EYFS curriculum through the following EYFS strands: Communication and language, physical development, personal, social and emotional development, understanding the world and expressive arts and design.		
Year 1	<u>Moving Pictures Toys</u> The children design a sliding mechanism out of card to create their moving picture. They design their picture and add colour to their design is appealing to children. In making the moving picture they recreate the toy as a cut-out to be attached to the sliding mechanism.	<u>Food and Nutrition: Eat more vegetables</u> The children are introduced to the idea of making healthy food choices and eating more fruit and vegetables. They then design, using seasonal fruit as well as a range of other fruits a fruit salad. Apple, banana, mango, pineapple and oranges used to create the fruit salad. The children will use techniques such as cutting and peeling to prepare the fruits. Food hygiene is also a focus in the preparation of the fruit.	<u>Kites</u> The children research different types of kites and then design their own version of a kite. They work to make the framework, using dowling which they cut up. The children investigate the best materials for the kite such as fabric, paper and plastic (including recycled plastic) and then use the recycled plastic to make it.
Year 2	<u>Vehicles</u> The children begin by learning about a fixed and free pivot and how these can be used to move a vehicle. They then design and make the vehicle, by selecting from either system. They make use of various materials to bring their design to life and make the final product aesthetically pleasing.	<u>Bookmarks</u> The children commence the design process by evaluating different bookmarks and their features. The criteria for their design is an animal head for the bookmark. Before beginning to make their bookmark using card the children practise and explore using the running stitch and overstitch. They then use their skills on the fabric to create the bookmark.	<u>Food and Nutrition: Eat What you Grow, Making Pitas filled with Vegetables</u>
Year 3	<u>Christmas tree decorations or Christmas stockings</u> Children design stockings or tree decorations. They begin by first thinking of how to make the product and which materials to use. They then create their final design on paper in an easy shape that that is easily transferred into felt fabric. The stockings are sewn using a running stitch.	<u>Dragon Puppets</u> Children design a puppet using pneumatic design and incorporate further movement through a lever and pivot system. The dragons are made using recycled cardboard from egg cartons and other differently shaped boxes.	<u>Food and Nutrition: Seasonality and Making Savoury Muffins</u> Children will learn about seasonality and how it links to responsible sourcing of local fruit and vegetables in the context of food miles, import and export of foods. The children use seasonal vegetables in a savoury muffin recipe. The focus is on the preparation of the elements and following the recipe according to its instructions and ingredients.
Year 4	<u>Food and Nutrition</u> Building on the seasonality learnt in Year 3, the children will research seasonal fruits and make a fruit cake. This will be a pear and apple cake.	<u>Mechanical Posters</u> Children to design a mechanical picture or scene from the book Charlotte’s Web, using a linkage and lever system. The focus will also be on the aesthetics of the design, as well as its functionality.	<u>Light-up box</u> Children will design a light-up box that illuminates any image or words of their choice. They will include various equipment in the making of their product, including a bulb, bulb holder, a cell or battery and electrical wires. The aesthetics will include cardboard and colour felt tip pens.
Year 5	<u>Moving Cam Toys</u> The children will make a moving cam toy, to demonstrate their knowledge of cams and gears. The children design and make this with the mechanism being contained in a box that then is the operating part of the toy.	<u>Victorian Puppets</u> The children are to select from a wide range of materials, including different textiles according to their function. The puppets are to be designed in the appropriate clothing as if they are children from the Victorian era.	<u>Food and Nutrition</u> Children are to make corn tortillas with a filling of spiced chicken and other vegetables that are typically Mayan foods. In doing this they will understand and apply the principles of a healthy diet. Importantly, there must be a focus on the spices that will be used to add flavour to the meal.
Year 6	<u>Ancient Greek Buildings</u> The children will research and develop design criteria to build a Stoa using card, art straws and other construction methods; incorporating architectural features of Greek temples and statue of a Greek god.	<u>Food and nutrition</u> Cookery based on recipes from WW1. The children will work in groups to source, prepare, cook and evaluate a recipe from WW1. https://www.lavenderandlovage.com/2014/11/on-the-home-front-original-wartime-recipes-from-the-great-war-1914-to-1918.html	<u>Sewing</u> The children will make a teddy bear linked to WW2 make do and mend. They will create a plan, cut the material, using taught stitches will stich their teddy using recycled materials from home and stuff teddy bear. The children will then evaluate their bear.



Curriculum Overview

	Nursery	Reception	Year One	Year Two	End of KS expectations	Year Three	Year Four	Year Five	Year Six	End of KS expectations
Design	Hold a pencil between the thumb and two fingers, no longer using whole-hand grasp. The focus is on obtaining good control. Pencil grip unorthodox or palmer grip. Recognize a circle and a triangle, square, and oblong. Sort shapes with corners or no corners. Begin to use positional language – in, on, under, in front, behind, next to. People, culture and communities – understand the context of their designs and their purpose in the real world- links to explore how things work in the Natural world. Develop own ideas and decide how to make them.	Use talk to help work out problems and organize thinking. Explain how things work and what might happen. Show confidence in their ability to talk in a group about their ideas and choose resources. Think about perspective/ feelings of others when discussing ideas. Self- regulation and executive function→ being able to hold information, their focus and regulate their own behavior while planning what to do next. To identify 2D and 3D objects. To compare sizes of objects in terms of their size, mass and capacity. To refine their ideas and develop their ability to represent them by working collaboratively using various resources. Draw and represent a person- showing accuracy and proportion.	Develop own ideas Explain what I want to do isfor, and how it will work Use pictures and words toplan, begin to use models Design a product for myselffollowing design criteria Research similar existingproducts	* Develop own ideas and plan what to do next * explain what I want to do and describe how I may do it * explain the purpose of a product,how it will work and how it will be suitable for the user * describe design using pictures, words, models, diagrams * design products for myselfand others following design criteria * choose best tools and materials, and explain choices * use knowledge of existingproducts to produce ideas	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, IT.	Begin to research others’needs Show design meets a range of requirements Describe purpose of product Follow a given set of design criteria Show an understanding of how the product will be created from the design Create a plan of the design, make and evaluate process that clearly indicates the equipment and materials that will be used Describe design using an accurately labelled sketch Make design decisions Explain how product willwork Make a prototype Begin to use computers to show design	Use research for design ideas Show design meets a range of requirements and is fit for purpose Begin to create own design criteria Produce a design plan and be able to explain their ideas and thoughts about the process to others Be cognizant of how realistic their design plan is Include an annotated sketch Make and explain designdecisions considering availability of resources Explain how product will work Make a prototype Use computers to show design.	Use internet and questionnaires for research of the intended design 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 cross-sectional planning and annotated sketches Make design decisions considering time and resources. Clearly explain how parts of product will work. Model and refine design ideas bymaking prototypes and using pattern pieces. Use computer-aided designs	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 andspecification Come up with innovative designideas Follow and refine a logical plan. Use annotated sketches, cross-sectional planning and explodeddiagrams Make design decisions, considering,resources and cost Clearly explain how parts of designwill 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	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
Make	Explore different materials freely in order to develop their ideas about how to use them and what to make. Use materials to express their ideas, with a focus on creating closed shapes that represent real objects. Discuss whether something is heavy or light. Continue to develop their gross and fine skills	Show resilience and perseverance in the fact of a challenge. To hold scissors correctly and making independent attempts to use them. To use scissors independently. To create props for storytelling. Select tools & techniques toshape, assemble and join- such as manipulating clay and other textures	Explain what I’m making andwhy Consider what I need to donext Select tools/equipment tocut, shape, join, finish and explain choices Measure, mark out, cut andshape, with support Choose suitable materials andexplain choices Try to use finishing techniques to make productaesthetically pleasing Work in a safe and hygienicmanner	Explain what I am making and why it fits the purpose Make suggestions as to what I need to do next. Join materials and componentstogether in different ways Measure, mark out, cut and shape materials and components, with support. Describe which tools I am using and why Choose suitable materials and explain choices depending on characteristics. Use finishing techniques to make product look aesthetically pleasing Work safely and hygienically	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, textilesand ingredients, according to their characteristic s	Select suitable tools/equipment, explain choices; begin to use them accurately Select appropriate materials that are fir for purpose. work through design Plan in steps to create the product consider how successful the product will be and if any necessary changes to the design need to be made at this stage 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. Be able to assess whether the product will be of good quality and Make changes if need be measure, mark out, cut andshape materials with some accuracy assemble, join and combine materials and components with accuracy Apply a range of finishing techniques	Use selected tools 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 ensure accurate measurement, markout, cut and shape of materials components Accurately assemble, joinand combine materials components Accurately apply a range of finishing techniques Use techniques that involve a small number of steps Begin to be resourceful	Use selected tools and equipment precisely produce suitable lists of tools, equipment, materials needed. 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 toaudience; make changes to improve quality accurately measure, mark out, cutand shape materials accurately assemble, join and Combine materials accurately apply a range of finishing techniques Use techniques that involve anumber of steps be resourceful with practical problems	*Select from and use a wider range of toolsand 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 propertiesand aesthetic qualities



Evaluate	Develop communication and be able to understand why questions. Listen to others. Be able to express each one’s point of view and explain their agreement or disagreement.	Adapt work if necessary Discuss how to make an activitysafe and hygienic Talk about how things work Look at similarities and differences between existing objects / materials / tools Describe textures Continue with development of talk-including bettering vocabulary, using connectives and using talk to work through problems.	Talk about my work, linking in to the design brief and criteria Talk about own products considering: use, materials, how they work, audience, where they might be used Talk about existing products, and decide what part is a good aspect and what parts need to be changed or improved	Describe what went well, thinking about the design criteria Talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion Evaluate how successful the products are, whether they achieve the purpose for which they were designed and made Talk about what changes and improvements could be made to improve the product	<i>Explore and evaluate a rangeof existing products</i> <i>Evaluate ideas and products against the design criteria</i>	Look at design criteria while designing the product Use design criteria to evaluate finished product Evaluate existing products, considering: how well they have been made, materials, whether they work,how they have been made, fitfor purpose Begin to understand bywhom, when and where products were designed Learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products	Begin to explain how I couldimprove 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 Learn and know about some inventors/designers/ engineers/chefs/manufactu rers 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 havebeen made, fit for purpose Begin to evaluate how much products cost to make and how innovative they are Research how sustainable materials are Learn and know 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 productagainst specification, stating if it’s fitfor purpose Test and evaluate final product; explain what would improve it and the effect different resources may have had Do thorough evaluations of existingproducts considering: how well they’ve been made, materials, whether they work, how they’ve beenmade, fit for purpose Evaluate how much products cost to make and how innovative they are Research and discuss how sustainablematerials are Consider the impact of productsbeyond their intended purpose Discuss some key inventors, designers/, engineers, chefs, manufacturers of ground-breaking products	<i>*Investigate and analyse a range ofexisting products.</i> Evaluate their ideas and products against their own design criteria and consider the views of others toimprove their work. Understand how key events and individuals in design and technology have helped shape the world
Food and Nutrition	Begin to understand some food preparation tools, techniques and processes Practise stirring, mixing,pouring, blending Discuss how to make an activitysafe and hygienic Discuss use of senses Understand the need for variety in food Begin to understand that eating well contributes to good health	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 health*cut, peel and grate safely,with support	Describe textures wash hands & clean surfaces think of interesting ways to decorate the 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 healthycut, peel and grate safely,with support	<i>Use the basic principles of a healthy and varied diet to prepare dishes</i> <i>Understand where food comes from.</i>	Carefully select ingredients Use equipment safely Make product look attractive Begin to understand food comes from UK and wider world, with a focus on seasonality and food miles Describe how healthy diet= variety/balance of food/drinks Explain how food and drink are needed for active/healthybodies. 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	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 andhow a healthy diet=variety /balance of food and drinks Explain importance of foodand drink for active, healthybodies prepare and cook some dishessafely and hygienically use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Explain how to be safe / hygienic and follow own guidelines Present product well - interesting,attractive, fit for purpose Use knowledge of 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 appearance,taste, texture, aroma Explain how there are different substances in food / drink needed for health prepare and cook some savoury dishes safely and hygienically including, where appropriate, useof heat source Use range of techniques such aspeeling, chopping, slicing, grating,mixing, spreading, kneading and baking.	Understand a recipe can be adaptedby 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 orwider world Adapt recipes to change appearance,taste, texture or aroma. Describe some of the different substances in food and drink, and howthey 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 confidentlysuch as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	<i>Understand and apply the principlesof a healthy and varied diet</i> <i>Prepare and cook a variety of predominantly savoury dishes usinga range of cooking techniques</i> <i>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</i>	



Technical knowledge – Materials/structures		Begin to measure and join materials, with some support Describe differences in materials Suggest ways to make material/product stronger	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	Build structures, exploring how they can be made stronger, stiffer and more stable	Use appropriate materials Work accurately to make cuts and holes Join materials Begin to make strong structures	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 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	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	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
Technical knowledge - Mechanisms		Begin to use levers or slides	Use levers or slides Begin to understand how to use wheels and axles	Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	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	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	Refine product after testing Grow in confidence about trying new / different ideas Begin to use cams, pulleys or gears to create movement	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	Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
Technical knowledge - Textiles		Measure, cut and join textiles to make a product, with some support Choose suitable textiles	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.		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	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	Think about user and aesthetics when choosing textiles Use own template 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.	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.	
Technical knowledge – Electrical systems					Use simple circuit in product Learn about how to program a computer to control product.	use number of components in circuit Program a computer to control product	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	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	Understand and use electrical systems in their products [for example, series circuits]

