DT Overview

Cycle A						
Phase	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
EYFS	**Superheroes and celebrations** **Cooking, junk modelling, construction**		**My world and once upon a rhyme** **Cooking, junk modelling, construction, sculpture**		**Animal Boogie and a wonderful world** **Cooking, junk modelling, construction, sculpture**	
The strands of "make" and "cooking and nutrition" will be covered throughout the year						
Nursery	**Technical knowledge:** Children have opportunity to: • Begin to explore a range of different methods and techniques • Begin to make choices about the resources used.		**Design:** Children have opportunity to: • Begin to explore a range of different methods and techniques • Begin to make choices about the resources used. • Begin to talk about what I have used • Talk about what they have made		**Evaluate:** Children have opportunity to: • Begin to explore a range of different methods and techniques • Begin to make choices about the resources used.	
Reception	**Technical knowledge:** Children have opportunity to; • Explore a range of different methods and techniques • Explore different products and talk about what they see, feel, like and dislike • Choose resources for a purpose		**Design:** Children will have the opportunity to • Talk about their ideas and what they are doing/made • Talk about what I intend to make • Begin to think about how they can adapt their ideas • Explore different methods of joining • Explore a range of different materials and media • Explore a range of different methods and techniques Explore different pieces of artwork and talking about what they see, feel, like and dislike Use existing products to influence own designs		**Evaluate:** Children will have the opportunity to • Reflect on what they are doing/creating • Begin to think about how they can adapt their ideas • When things do not go as they expect, they are starting to build resilience and keep trying • When things do not go as they expect, they can explore different ways of doing things e.g. joining materials together. • Say what they like or do not like about their own and others work Reflect on what they have done/created (process as well as end product)	
Year 1	**<u>Mechanisms – Sliders and Levers</u>** Moving pictures		**<u>Textiles – templates & Joining techniques.</u>** Joining and Fastening Fabrics – Winnie Pooh bag		**<u>Food – preparing fruit and vegetables.</u>** Fruit kebabs/ smoothies	
Year 1	Children can: • Use their knowledge of existing products and their own experience to help generate their ideas; (D • Design products that have a purpose and are aimed at an intended user; (D) • Begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; (M) • Learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures; (M) • Assemble, join and combine materials, components or ingredients; (M) • Talk about and start to understand the simple working characteristics of materials and components (T)		Children can: • Design products that have a purpose and are aimed at an intended user; (D) • Understand and follow simple design criteria (D) • Begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; (M) • Use a range of materials and components, including textiles and food ingredients; (M) • Cut, shape and score materials with some accuracy;(M) • Assemble, join and combine materials, components or ingredients; (M) • Explore what materials products are made from; (E) • As they work, start to identify strengths and possible changes they might make to refine their existing design; (E)		Children can: • Understand that all food comes from plants or animals (C) • Name and sort foods into the five groups in the Eatwell Guide (C) • Understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why (C) • Cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups; (C) • Begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; (M) • Learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures; (M) • Use a range of materials and components, including textiles and food ingredients; (M) • Assemble, join and combine materials, components or ingredients; (M)	
LSK2	**<u>Structures – shell structures</u>** Pyramid shape structures – Egypt Or Banish Broken Biscuits! Box them Brilliantly		**<u>Food – Healthy and varied diet</u>** Dips and Dippers		**<u>Wood work</u>** Photo frames	

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Year 3	Children can: • Identify the design features of their products that will appeal to intended customers; (D) • When designing, explore different initial ideas before coming up with a final design; (D) • Use their knowledge of a broad range of existing products to help generate their ideas; (D) • Explain how particular parts of their products work; (D) • Test ideas out through using prototypes (D) • With growing confidence, carefully select from a range of tools and equipment, explaining their choices; (M) • With growing independence, measure and mark out to the nearest cm and millimeter; (M) • Evaluate their product against their original design criteria (E) • Talk about key individuals and events that have shaped technological advances (E)	Children can: • Start to understand seasonality (C) • With support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven; © • Use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking; (C) • Understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body; (C) • Explore what materials/ingredients products are made from and suggest reasons for this; (E)	Children can: • Use their knowledge of a broad range of existing products to help generate their ideas; (D) • Explain how particular parts of their products work; (D) • Test ideas out through using prototypes (D) • Demonstrate how to measure, cut, shape and join materials with some accuracy to make a simple product; (M) • Use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components; (M) • With growing confidence, carefully select from a range of tools and equipment, explaining their choices (M) • With growing independence, measure and mark out to the nearest cm and millimetre (M) • Understand that materials have both functional properties and aesthetic qualities (T)
UKS2	**<u>Food – Celebrating culture & seasonality.</u>** Harvest Festival: Soups – Celebrating Culture and Seasonality.	**<u>Mechanical Systems – Pulleys and Gears</u>** Fairground rides (Wood work)	**<u>Textiles – combining different fabric shapes</u>** Designer bags – West African country pattern (Benin)
Year 5	Children can: • Know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world; (C) • Demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;(C) • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe (C) • Independently follow a recipe (C) • Explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes (C)	Children can: • Use their knowledge of a broad range of existing products to help generate their ideas;(D) • Design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user; (D) • Explain how particular parts of their products work; (D) • Generate a range of design ideas and clearly communicate final designs (D) • Evaluate some of the qualities of design, manufacture and fitness for purpose of products as they design and make (E) • **Create a multi-step computer program. (T)** • **Understand and demonstrate that mechanical systems have an input, process and output; (T)** • **Understand and demonstrate that electrical systems have an input, process and output; (T)** • Select from a range of materials and components according to their functional properties and aesthetic qualities; (M) • Independently take exact measurements and mark out, to within 1 millimeter; (M) • **Create a multi-step computer program.(T)** • **Understand and demonstrate that mechanical systems have an input, process and output (T)** • **Understand and demonstrate that electrical systems have an input, process and output; (T)**	Children can: • Design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user; (D) • Analyse successful products in the market today (D) • Select from a range of materials and components according to their functional properties and aesthetic qualities; (M) • Independently take exact measurements and mark out, to within 1 millimeter; (M) • **Join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch; (M)** • Cut, shape, score, assemble, join and combine materials with precision and accuracy;(M) • Evaluate products against the original design criteria, making changes if needed (E) • Evaluate some of the qualities of design, manufacture and fitness for purpose of products as they design and make (E)

DT Overview

Cycle B						
Phase:	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
The strands of "make" and "cooking and nutrition" will be covered throughout the year						
EYFS	**Superheroes and celebrations** **Cooking, junk modelling, construction**		**My world and once upon a rhyme** **Cooking, junk modelling, construction, sculpture**		**Animal Boogie and a wonderful world** **Cooking, junk modelling, construction, sculpture**	
Nursery	**Technical knowledge:** Children have opportunity to: • Begin to explore a range of different methods and techniques • Begin to make choices about the resources used.		**Design:** Children have opportunity to: • Begin to explore a range of different methods and techniques • Begin to make choices about the resources used. • Begin to talk about what I have used Talk about what they have made		**Evaluate:** Children have opportunity to: • Begin to explore a range of different methods and techniques • Begin to make choices about the resources used.	
Reception	**Technical knowledge:** Children have opportunity to; • Explore a range of different methods and techniques • Explore different products and talk about what they see, feel, like and dislike • Choose resources for a purpose		**Design:** Children will have the opportunity to • Talk about their ideas and what they are doing/made • Talk about what I intend to make • Begin to think about how they can adapt their ideas • Explore different methods of joining • Explore a range of different materials and media • Explore a range of different methods and techniques Explore different pieces of artwork and talking about what they see, feel, like and dislike Use existing products to influence own designs		**Evaluate:** Children will have the opportunity to • Reflect on what they are doing/creating • Begin to think about how they can adapt their ideas • When things do not go as they expect, they are starting to build resilience and keep trying • When things do not go as they expect, they can explore different ways of doing things e.g. joining materials together. • Say what they like or do not like about their own and others work Reflect on what they have done/created (process as well as end product)	
KS1	**Mechanisms – Wheels & Axles** Woodwork- cars		**Structures – Freestanding structures** Making Tudor/Stuart Era houses		**Food – Preparing fruit & vegetables.** Milkshakes/Smoothies	
Year 2	Children can: • Explain how their products will look and work through talking and simple annotated drawings; (D) • Plan and test ideas using templates and mock-ups; (D) • Evaluate their products and ideas against their simple design criteria; (E) • Start to understand that the iterative process sometimes involves repeating different stages of the process. (E) • Explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations; (E) • Explore and create products using mechanisms, such as levers, sliders and wheels (T)		• **Design models using simple computing software; (D)** • **Build simple structures, exploring how they can be made stronger, stiffer and more stable (T)**		Children can: • Use what they know about the Eatwell Guide to design and prepare dishes (C) • Understand that food has to be farmed, grown elsewhere (e.g. Home) or caught (C) • Explain where in the world different foods originate from (C)	
LSK2	**Food – Healthy and Varied Diet** Super Salads		**Electrical Systems – simple circuits & switches** Beowulf design light person - Develop handmade switches.		**Textiles – 2D shape to 3D product** Creating a Viking bag (Drawtring bag	
Year 4	Children can:		Children can:		Children can:	

	• Prepare ingredients using appropriate cooking utensils; (C) Understand how to prepare and cook a variety of predominantly savory dishes safely and hygienically; (C) Explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes; (C) • Measure and weigh ingredients to the nearest gram and milliliter (C) • Start to independently follow a recipe; (C) • Start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world; (C)	• When designing, explore different initial ideas before coming up with a final design; (D) • Use annotated sketches and cross sectional drawings to develop and communicate their ideas;(D) • Use computer-aided design to develop and communicate their ideas (D) • Cut, shape and score materials with some degree of accuracy; (M) • Assemble, join and combine material and components with some degree of accuracy;(M) • Begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics. (M) • Consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product; (E) • Identify key individuals and events that have shaped technological advances (E) • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products; (T) • Make and represent simple electrical circuits, such as a series and parallel, and components to create functional products; (T) • Explain how mechanical systems such as levers and linkages create movement; (T) • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products; (T) • Program a 2 step output such as turn and go (T)	• Design innovative and appealing products that have a clear purpose and are aimed at a specific user;(D) • Use annotated sketches and cross sectional drawings to develop and communicate their ideas;(D) • When planning, start to explain their choice of materials and components including function and aesthetics; (D) Select from a range of materials and components according to their functional properties and aesthetic qualities; (M) • **Join textiles with an appropriate sewing technique; (M)** • **Begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics. (M)**
UKS2	**<u>Structures – Frame Structures</u>** Ancient Greece - Designing a small-scale structure Wood work	**<u>Food – celebrating culture & seasonality (Chinese New Year)</u>**	**<u>Electrical Systems – more complex switches & circuits</u>** Loop wire game linked to switches.
Year 6	Children can: • Refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.(M) • Create step-by-step plans as a guide to making;(M) • Use a full range of materials and components, including construction materials and kits, textiles, and mechanical components; (M) • Identify their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products (T)	Children can: • Demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling; (C) • Adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma; (C) • Alter methods, cooking times and/or temperatures; (C) • Understand about seasonality, how this may affect the food availability and plan recipes according to seasonality (C)	Children can: • Generate a range of design ideas and clearly communicate final designs (D) • Use research to inform and develop detailed design criteria to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market;(D) • Use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas; (D) • Consider the availability and costings of resources when planning out designs; (D)

	• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products (T) • Complete detailed competitor analysis of other products on the market (E) • Evaluate their ideas and products against the original design criteria, making changes as needed-: • -Identify their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products (T) • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products (T)	• Explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes (C) • Critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make (E)	• Explain how mechanical systems, such as cams, create movement and use mechanical systems in their products; (T) • Use an electrical system for a purpose. (T) • Create a complex program for a desired outcome i.e. A continuous cycle. (T)