Design Technology Curriculum Intention

	The EYFS framework is organised across seven areas of learning rather than subject areas. It demonstrates which early years outcomes are prerequisite skills for design and technology within the national curriculum. The table below outlines the most relevant early years outcomes from 30-50 months to ELG, brought together from different areas of the Early Years Foundation Stage, to match the programme of study for design and technology. The most relevant early years outcomes for design and technology are taken from Expressive Arts and Design.	The national curriculum for design and technology aims to ensure that all pupils: • 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 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.	
	EYFS	**KS1**	**KS2**
Design	EAD: Exploring and using media and materials • manipulates materials to achieve a planned effect. • constructs with a purpose in mind, using a variety of resources. EAD: Being Imaginative Uses what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through *design and technology,* art, music, dance, role play and stories.	• 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.	• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at 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	EAD: Exploring and using media and materials • uses various construction materials. • beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. • joins construction pieces together to build and balance. • realises tools can be used for a purpose. • uses simple tools and techniques competently and appropriately. • selects tools and techniques needed to shape, assemble and join materials they are using. • safely uses and explores a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. EAD: Being Imaginative • uses available resources to create props to support role-play. • captures experiences and responses with a range of media, such as music, dance and paint and o*ther materials or* words.	• 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.	• 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.
Evaluate	EAD: Exploring and using media and materials • selects appropriate resources and adapts work where necessary.	• explore and evaluate a range of existing products. • evaluate their ideas and products against design criteria.	• 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.
Technical knowledge		• 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.	• 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.
Food and Nutrition		• use the basic principles of a healthy and varied diet to prepare dishes. • understand where food comes from.	• 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.

Design and Technology Curriculum Implementation

	Autumn		Spring	Summer	
Nursery	**Autumn 1: Marvellous Me**	**Autumn 2: Let's Celebrate**	**Spring 1: Traditional Tales** **Spring 2: Blast Off**	**Summer 1: Growing and Change**	**Summer 2: All Around the World**
Reception	**Autumn 1: Ourselves** The focus this term is being able to look at the different resources on offer and how children can use them safely. Teachers will observe who can use small tools such as scissors and they will support who can't.	**Autumn 2: Celebrations** Children build on their skills from last term and they will use different resources to create Christmas decorations, cards and calendars.	**Spring 1: Traditional Tales** Children make props for their story retelling and explore making masks. **Spring 2: Blast Off** Children are given the opportunity to create different types of transport using junk box modelling.	**Summer 1: Growing and Change**	**Summer 2: Animals** Recreating animal habitats.
Year 1	**Food and Nutrition** Prototype: Fruit salad Techniques: Cutting and peeling Cross curricular: English (sequencing sentences)		**Structures: stronger, stiffer and more stable** Product: Playground equipment; chair for Goldilocks. Knowledge and understanding: Build structures, exploring how they can be made stronger, stiffer and more stable. Cross curricular: Science (everyday materials)	**Mechanisms: levers and sliders** Product: Moving picture/card Knowledge and understanding: Explore and use mechanisms (levers and sliders). Cross curricular: Science (animal including humans).	
Year 2	**Food and Nutrition** Product: Healthy sandwich using bread, wraps, rolls or pitta bread Techniques: Cutting, peeling and grating (spreading) Cross-curricular: English (instructions)		**Mechanisms: wheels and axles** Product: Vehicles Knowledge and understanding: Explore and use mechanisms (wheels and axles). Cross curricular: Science (use of everyday materials)	**Textiles** Product: Puppet Techniques: Running stitch Cross curricular: History (seaside topic, links with Punch and Judy show); Science (uses of everyday materials)	
Year 3	**Food and Nutrition** Prototype: Pizza (using bread/pitta bread/pre-made pizza base) Techniques: Peeling, chopping, slicing, grating and spreading		**Structures: shell structures** Prototype: Gift box; desk tidy Knowledge and understanding: Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Cross-curricular: English (magical box from: Leon and the Place Between)	**Mechanisms: pneumatic systems** Prototype: Moving character (pneumatic systems) linked to English/favourite book Knowledge and understanding: understand and use mechanical systems in their prototypes. Cross-curricular: Science (forces)	
Year 4	**Food and Nutrition** Prototype: Bread Techniques: Mixing, kneading and baking Cross-curricular: English (instructions for show off)		**Textiles (pencil case or money wallet)** Prototype: Pencil case; money wallet or device case. Techniques: Overstitch, fastenings (e.g. zip, button, velcro) and decoration (e.g. buttons, beads, sequins)	**Control** Prototype: Torch/night light Knowledge and understanding: understand and use electrical systems in their prototypes [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Cross-curricular: Science (electricity)	
Year 5	**Food and Nutrition** Prototype: Sweet biscuits Techniques: Peeling, chopping, slicing, grating, mixing, spreading, kneading and baking Cross-curricular: Science (properties and changes of materials)		**Structure: bridges** Prototype: Bridges Knowledge and understanding: Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Cross-curricular: Science (forces)	**Mechanisms: gears, pulleys or cams** Prototype: Moving toy Knowledge and understanding: Understand and use mechanical systems in their prototypes. Cross-curricular: Science (forces)	
Year 6	**Food and Nutrition** Prototype: Savoury scones Techniques: Peeling, chopping, slicing, grating, mixing, spreading, kneading and baking		**Textiles** Prototype: Pillow with embroidery Techniques: Blanket stitch, back stitch	**Control** Prototype: Fairground ride Knowledge and understanding: Apply their understanding of computing to program, monitor and control their prototypes. Cross-curricular: Science (electricity)	

	Nursery	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Structures			✓		✓		✓	
Mechanisms			✓	✓	✓		✓	
Textiles				✓		✓		✓
Control						✓		✓
Food and Nutrition			✓	✓	✓	✓	✓	✓

EYFS Design and Technology Impact: Early Years Knowledge and Skills
Physical Development, Understanding the World and Expressive Arts and Design

	PD: Moving and Handling	PD: Health and Self-Care	UW: Technology	EAD: Exploring and Using Media and Materials	EAD: Being Imaginative
Nursery	• uses one-handed tools and equipment, e.g. makes snips in paper with child scissors. • understands that equipment and tools have to be used safely.	• understands that equipment and tools have to be used safely.	• shows an interest in technological toys with knobs or pulleys, or real objects. • shows skill in making toys work by pressing parts or lifting flaps to achieve effects, such as sound, movements or new images.	• uses various construction materials. • beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. • joins construction pieces together to build and balance. • realises tools can be used for a purpose. • uses available resources to create props to support role-play. • captures experiences and responses with a range of media, such as music, dance and paint and *other materials* or words.	• uses available resources to create props to support role-play.
Reception	• handles equipment and tools effectively, including pencils for writing.	• shows understanding of the need for safety when tackling new challenges and consider and manage some risks. • shows understanding of how to transport and store equipment safely. • practises some appropriate safety measures without direct supervision.	• Children recognise that a range of technology is used in places such as homes and schools. • They select and use technology for particular purposes.	• manipulates materials to achieve a planned effect. • constructs with a purpose mind, using a variety of resources. • uses simple tools an techniques competently and appropriately. • selects appropriate resources and adapt work where necessary. • selects tools and techniques needed to shape, assemble and join materials they are using. • safely uses and explores variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	• uses what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through *design and technology,* art, music, dance, role play and stories.

KS1 Design and Technology Curriculum Impact

	Year 1	Year 2
Design	• use own ideas to design something and describe how their own idea works • design a product which moves. • think of an idea and plan what to do next. • explain why they have chosen specific textiles. • explain to someone else how they want to make their product and make a simple plan before making.	• think of an idea and plan what to do next. • explain why they have chosen specific textiles.
Make	• use own ideas to make something. • make a product which moves. • choose appropriate resources and tools.	• choose tools and materials and explain why they have chosen them. • join materials and components in different ways. • measure materials to use in a model or structure.
Evaluate	• describe how something works. • explain what works well and not so well in the model they have made.	• explain what went well with their learning.
Technical Knowledge	• make their own model stronger.	• make a model stronger and more stable. • use wheels and axles, when appropriate to do so.
Food and Nutrition	• cut food safely.	• weigh ingredients to use in a recipe. • describe the ingredients used when making a dish or cake.

KS2 Design and Technology Curriculum Impact

	Year 3	Year 4	Year 5	Year 6
Design	• prove that a design meets a set criteria. • design a product and make sure that it looks attractive. • choose a material for both its suitability and its appearance.	• use ideas from other people when designing. • produce a plan and explain it. • persevere and adapt work when original ideas do not work. • communicate ideas in a range of ways, including by sketches and drawings which are annotated.	• come up with a range of ideas after collecting information from different sources. • produce a detailed, step-by-step plan. • explain how a product will appeal to a specific audience. • design a product that requires pulleys or gears.	• use market research to inform plans and ideas. • follow and refine original plans. • justify planning in a convincing way. • show that culture and society is considered in plans and designs.
Make	• follow a step-by-step plan, choosing the right equipment and materials. • select the most appropriate tools and techniques for a given task. • make a product which uses both electrical and mechanical components. • work accurately to measure, make cuts and make holes.	• know which tools to use for a particular task and show knowledge of handling the tool. • know which material is likely to give the best outcome. • measure accurately.	• use a range of tools and equipment competently. • make a prototype before making a final version. • make a product that relies on pulleys or gears.	• know which tool to use for a specific practical task. • know how to use any tool correctly and safely. • know what each tool is used for. • explain why a specific tool is best for a specific action.
Evaluate	• explain how to improve a finished model. • know why a model has, or has not, been successful.	• evaluate and suggest improvements for design. • evaluate products for both their purpose and appearance. • explain how the original design has been improved. • present a product in an interesting way.	• suggest alternative plans; outlining the positive features and draw backs. • evaluate appearance and function against original criteria.	• know how to test and evaluate designed products. • explain how products should be stored and give reasons. • evaluate product against clear criteria.
Technical Knowledge	• know how to strengthen a product by stiffening a given part or reinforce a part of the structure. • use a simple IT program within the design.	• links scientific knowledge by using lights, switches or buzzers. • use electrical systems to enhance the quality of the product. • use IT, where appropriate, to add to the quality of the product.	• links scientific knowledge to design by using pulleys or gears. • uses more complex IT program to help enhance the quality of the product produced.	• use electrical systems correctly and accurately to enhance a given product. • know which IT product would further enhance a specific product. • use knowledge to improve a made product by strengthening, stiffening or reinforcing.

Food and Nutrition	• describe how food ingredients come together. • weigh out ingredients and follow a given recipe to create a dish. • talk about which food is healthy and which food is not. • know when food is ready for harvesting.	• know how to be both hygienic and safe when using food. • bring a creative element to the food product being designed.	• be both hygienic and safe in the kitchen. • know how to prepare a meal by collecting the ingredients in the first place. • know which season various foods are available for harvesting.	• explain how food ingredients should be stored and give reasons. • work within a budget to create a meal. • understand the difference between a savoury and sweet dish.