KINNERLEY CE PRIMARY SCHOOL - DESIGN TECHNOLOGY

Intent, Implementation and Impact

Our knowledge and skills rich curriculum builds from the Early Learning Goals in the EYFS statutory framework and Development Matters to the National Curriculum Objectives for Y1-6. The curriculum makes links with the wider world, advancing the Spiritual, Moral, Social and Cultural development of our learners and growing their understanding of British Values. Our curriculum is delivered as part of cohesive units of work, promoting the School Motto 'Dream, Believe, Aspire, Achieve' and underpinned by our school vision:

To create a school community based on Christian values, in which we strive to foster a love of learning, pride in achievement, and the spiritual and moral compass of our children, equipping them to find their own special place in society and the world. We are inspired by the Bible verse, Philippians 4v8, which encourages us to think and strive for the good, 'Whatever is true…noble…honest…just…. think on these things.'

EYFS		
Two and Three year olds	Personal, Social and Emotional Development	• Play with increasing confidence on their own and with other children, because they know their key person is nearby and available • Begin to show 'effortful control'. For example, waiting for a turn and resisting the strong impulse to grab what they want or push their way to the front
	Physical Development	• Develop manipulation and control. • Explore different materials and tools. • Use large and small motor skills to do things independently, for example manage buttons and zips, and pour drinks.
	Understanding the World	• Explore materials with different properties • Explore natural materials, indoors and outside
	Expressive Arts and Design	• Use their imagination as they consider what they can do with different materials. • Make simple models which express their ideas. • Explore different materials, using all their senses to investigate them. Manipulate and play with different materials.
Three and Four Year olds	Personal, Social and Emotional Development	Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.
	Physical Development	• Use large-muscle movements to wave flags and streamers, paint and make marks. • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors.
	Understanding the World	Explore how things work.
	Expressive Arts and Design	• Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
Reception	Physical Development	• Progress towards a more fluent style of moving, with developing control and grace. • Develop their small motor skills so that they can use a range of tools competently, safely and confidently.

			• Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
	Expressive Arts and Design		• Explore, use and refine a variety of artistic effects to express their ideas and feelings. • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills
ELG	Physical Development	Fine Motor Skills	• Use a range of small tools, including scissors, paintbrushes and cutlery.
	Expressive Arts and Design	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used

Key Stage 1 National Curriculum Expectations	Key Stage 2 National Curriculum Expectations
Design Pupils should be taught to: 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. **Make** Pupils should be taught to: 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. **Evaluate** Pupils should be taught to: explore and evaluate a range of existing products; evaluate their ideas and products against design criteria. **Technical Knowledge** Pupils should be taught to: build structures, exploring how they can be made stronger, stiffer and more stable;explore and use mechanisms [for	**Design** Pupils should be taught to: • 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** Pupils should be taught to: • 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** Pupils should be taught to: • 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** • 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

example, levers, sliders, wheels and axles], in their products. **Cooking and Nutrition** Pupils should be taught to: use the basic principles of a healthy and varied diet to prepare dishes;understand where food comes from.	incorporating switches, bulbs, buzzers and motors]; • apply their understanding of computing to program, monitor and control their **products.** **Cooking and Nutrition** Pupils should be taught to: • 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.

Please note, the National Curriculum for KS2 states that children should 'generate, develop, model and communicate their ideas through computer-aided design'. In most units, there will be lessons where children focus on creating designs for their products: these designs could easily be created using computer-aided design according to the software our school has access to.

Intent

Our Design and Technology curriculum, based on Planbee, offers sequences of lessons to ensure pupils have progressively covered the knowledge, understanding and skills required in the National Curriculum. Design and Technology aims to inspire children through a broad range of practical experiences to create innovative designs which solve real and relevant problems within a variety of different contexts. The iterative design process is fundamental and runs throughout our units. This iterative process encourages children to identify real and relevant problems, critically evaluate existing products and then take risks and innovate when designing and creating solutions to the problems. As part of the iterative process, time is built in to reflect, evaluate and improve on prototypes using design criteria throughout to support this process. Opportunities are provided for children to evaluate key events and individuals who have helped shape the world, showing the real impact of design and technology on the wider environment and helping to inspire children to become the next generation of innovators.
Through these lessons, we intend to inspire pupils to develop a love of Design and Technology and see how it has helped shaped the ever-evolving technological world they live in.

Implementation

Design and Technology skills and understanding are built into lessons, following an iterative process. In KS2 a sequence of lessons takes place over a half termly block alternating with another subject, or where deemed to be beneficial, takes place in longer sessions, such as 2 mornings.
In EYFS/ early Key stage 1 and in the Hub, Art and DT may have shorter sequences of lessons, and be less discrete from one another.
A scheme is used to ensure common language, progression and continuity.
Through revisiting and consolidating skills, the lessons and resources help children build on prior knowledge alongside introducing new skills, knowledge and challenge. Units of work are often based on class themes to give purpose and meaningfulness as well as creating a cohesion and interest. The revision and introduction of key vocabulary is built into each lesson.

Impact

The impact of implementing the full programme will be seen across the school with an increase in the profile of Design and Technology, with pupils proud of their accomplishments, confident to talk about their processes, successes, and learning points. The learning environment across the school will be consistent with design and technology technical vocabulary displayed as appropriate, and spoken and used by all learners. Whole-school and parental engagement will be improved through the use of Seesaw to share children's work. We want to ensure that Design and Technology is loved by teachers and pupils across school, therefore encouraging them to want to continue building on this wealth of skills and understanding, now and in the future. Impact can also be measured through key questioning skills built into lessons, child-led assessment such as success criteria grids, jigsaw targets and KWL grids and summative assessments aimed at targeting next steps in learning.