



Stoke Row Church of England Primary School

Curriculum Statement for Design Technology

Level Expected at the End of EYFS

The main Early Years Outcomes covered are:

- Use a range of small tools, including scissors, paintbrushes and cutlery (PD)
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (EAD)
- Share their creations, explaining the process they have used (EAD)

During years 1 and 2, pupils should be taught the knowledge, understanding and skills needed to engage in a process of designing and making.

1. 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].
2. When designing and making, 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
3. Make and select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
4. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
5. Explore and evaluate a range of existing products and evaluate their ideas and products against design criteria
6. Build structures, exploring how they can be made stronger, stiffer and more stable

Food and Nutrition

Use the basic principles of a healthy and varied diet to prepare dishes and understand where food comes from.

During years 3, 4, 5 and 6 pupils should be taught the knowledge, understanding and skills needed to engage in a process of designing and making.

1. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].
2. When designing and making, pupils should be taught to: Design and 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
3. Make and 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 features.
4. Evaluate, investigate and analyse a range of existing products and evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
5. Understand how key events and individuals in design and technology have helped shape the world technical knowledge and apply their understanding of how to strengthen, stiffen and reinforce more complex structures and understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

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| | <p>6. 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> <p><u>Food and Nutrition</u></p> <p>Understand and apply the principles of a healthy and varied diet and prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown.</p> |
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Intent

At Stoke Row School we intend to build a Design Technology curriculum which is inspiring, rigorous, and practical and ensures our children are able to shine their unique light and embrace their **Bright Futures**. We want our children to use creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We intend for all children to acquire appropriate subject knowledge, skills and understanding as set out in the National Curriculum. It is our aim to create strong cross curricular links with other subjects, such as Mathematics, Science, Computing, and Art. We want Design and Technology to prepare our children, to give them the opportunities, responsibilities, and experiences they need to excel in their **Bright Futures**.

Implementation

Design and Technology is a crucial part of school life and learning and it is for this reason that as a school we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum. This is implemented through:

- A well thought out, whole school, yearly overview of the DT curriculum which allows for progression across year groups in all areas of DT (textiles, mechanisms, structures, food and electrical systems)
- Well planned and resourced projects providing children with a hands-on and enriching experience
- A range of skills being taught ensuring that children are aware of health and safety issues related to the tasks undertaken
- Teachers being given ownership and flexibility to plan for Design and Technology to be taught in a block of lessons to allow the time needed for the children to be critical, inventive and reflective on their work.
- Each project from Year 1 to Year 6 addressing the principles of designing, making, and evaluating and incorporating relevant technical knowledge and understanding in relevant contexts.
- Pupils being introduced to specific designers, chefs, nutritionists, etc. helping to engender an appreciation of human creativity and achievement and increase the cultural capital from which they can draw in their **Bright Future**.

We try to flex to the individual child's learning style in order to underpin their learning and to ensure that they are able to shine in their own individual way.

Impact

Children will have clear enjoyment and confidence in Design and Technology that they will then apply to other areas of the curriculum. Through carefully planned and implemented learning activities the pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently

and to participate successfully in an increasingly technological world. They gain a firm foundation of knowledge and skills to see them equipped to take on further learning in Secondary School.

	Development of learning across the school			
	Reception	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Design		use knowledge of existing products to help generate ideas explain to someone else how I want to make my product create a simple plan before making design products that have a purpose and are aimed at an intended user think of an idea and plan what to do next plan and test ideas using templates and mock-ups	design an appealing product that has a clear purpose develop and follow simple design criteria explain how particular parts of their products work use knowledge of broad range of existing products to help generate ideas produce a plan and explain it use annotated sketches and cross-sectional drawings to communicate ideas start to explain their choices of materials and components	come up with a range of ideas after collecting information from different sources produce a detailed step-by-step plan explain how particular parts of their products work make a prototype before make a final version use market research to inform my plans and ideas follow and refine my plans justify my plans in a convincing way consider culture and society in my plans work within a budget
	Development of learning across the school			
	Reception	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Make		learn to use hand tools and equipment safely and appropriately use a range of materials and components follow a simple plan cut, shape and score materials with some accuracy choose tools and materials and explain why I have chosen them explain why I have chosen specific textiles measure materials to use in a model or structure assemble, join and combine materials and components use a basic running stitch	follow a step-by-step plan, choosing the right equipment and materials use a range of tools and equipment safely, appropriately and accurately select the most appropriate tools and techniques for a given task use a wider range of materials and components, including mechanical and electrical components work accurately to measure, cut, shape and score materials begin to select and use appropriate finishing techniques to improve the appearance of a product (hemming, decorating etc.) join textiles with an appropriate sewing technique	use a range of tools and equipment competently select from a range of tools and materials for their functional and aesthetic qualities cut a range of materials with precision and accuracy demonstrate how to make a seam allowance, tape, pin, cut, shape and join fabric with precision assemble, join and combine materials and components with accuracy join textiles using a greater variety of stitches (back stitch, whip stitch, blanket stitch) refine and finish using techniques to improve the appearance of the product (sanding etc.)
	Development of learning across the school			
	Reception	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Evaluate		explore and evaluate existing products through discussions and comparisons explore what materials products are made from talk about their design ideas and what they are making	explore and evaluate products, explaining the purpose of the product and whether it meets this prove that my design meets some set criteria explore what materials/ingredients products are made from and suggest reasons for this evaluate and suggest improvements for my designs explain how I have improved my original design	explain how a product will appeal to a specific audience evaluate appearance and function against original criteria test and evaluate my products

	Development of learning across the school			
	Reception	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
		explore and evaluate existing products through simple written evaluations explain positives and things to improve for existing products identify strengths and changes they want to make to their design evaluate their product against their simple design criteria		evaluate my product against a clear criteria, making changes as needed
	Development of learning across the school			
	Reception	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Technical Knowledge		explore how to make my model stronger talk about and start to understand the simple working characteristics of materials and components explore how to make my model more stable make a product which moves using levers, sliders and wheels	understand that materials have both functional and aesthetic qualities explain how mechanical systems such as levers and linkages create movement apply understanding of how to reinforce complex structures make a product which uses both electrical and mechanical components	explain how products should be stored and give reasons apply understanding of computing to program, monitor and control a product
	Development of learning across the school			
	Reception	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Cooking and Nutrition		explain where in the world different foods originate from understand that all food comes from plants or animals cut, peel and grate food safely name and sort foods measure and weigh ingredients using measuring cups describe the ingredients I am using design and prepare healthy dishes	start to know when, where and how food is grown prepare ingredients using appropriate cooking utensils measure and weigh ingredients to the nearest gram and millilitre with support, use a heat source to cook ingredients know how to be both hygienic and safe when using food use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking start to independently follow a recipe start to understand seasonality	give examples of food that is grown, reared and caught understand how seasonality can affect the availability of foods show that I can be both hygienic and safe in the kitchen adapt and refine recipes to change the appearance, taste or texture demonstrate how to use a range of cooking techniques, such as griddling, frilling, frying and boiling alter cooking methods, times and/or temperatures measure accurately and calculate ratios to scale up or down from a recipe independently follow a recipe

