



Hoylake Holy Trinity Primary School

A Hoylake Holy Trinity Historian

*Learning for Life
Caring for All
Living each Day to the Full
Together as a Community
With Jesus by our Side*

We want our curriculum to be

- enjoyable - engaging - meaningful - relevant - progressive - risky - empowering- memorable - develop a love of learning -challenging -accessible/inclusive - creative -knowledgeable -experiences

We want our learners to be

-curious- obsessed - inspired - invested - engaged - happy - safe - confident- risk-takers - comfortable in failure - reflective - collaborators - resilient - bothered - global citizens -empathetic

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Why is Design Technology important?

Hoylake Holy Trinity's vision for Design Technology

National Curriculum

Early Years Foundation Stage: Expressive Arts and Design



Why is Design Technology Important?

Design and technology prepare pupils to participate in tomorrow's rapidly changing technologies. They learn to think and intervene creatively to improve their quality of life. The subject calls for pupils to become autonomous and creative problem-solvers, as individuals and members of a team. They must look for needs, wants and opportunities and respond to them by developing a range of ideas and making products and systems. They combine practical skills with an understanding of aesthetics, social and environmental issues, function and industrial practices. As they do so, they reflect on and evaluate present and past design and technology, its uses and effects. Through design and technology, all pupils can become discriminating and informed users of products, and become innovators.

Hoylake's Vision for Design Technology

On completion of the design technology curriculum at Hoylake Holy Trinity, pupils will have developed:

- Originality and the ability to convey ideas and produce prototypes.
- Good use of time and the ability to work constructively and productively with others.
- An understanding of research and the ability to ask questions to develop a good knowledge of users' needs.
- A good knowledge of which tools, equipment and materials to use to make their products and how to use them responsibly and safely.
- The ability to design and make products for a purpose.
- A knowledge of important inventors and their inventions and how they have improved people's lives.
- An enjoyment for design and technology.



National Curriculum for Design Technology

Key stage 1

Pupils should be taught:

Design

- 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

- 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

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

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.



Key stage 2

Pupils should be taught:

Design

- 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

- 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

- 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 incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.



Early Years: Understanding the World

The development of children's artistic and cultural awareness supports their imagination and creativity. The quality and variety of what children see, hear and participate in are crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts.

Design Technology in the Early years			
F1	Creating with Materials		• I can explore different materials freely, to develop ideas about how to use them and what to make. • I can develop their own ideas and then decide which materials to use to express them. • I can join different materials and explore different textures. • I can choose the right resources to carry out my own plan. For example, choosing a spade to enlarge a small hole they dug with a trowel. • I can collaborate with others to manage large items, such as moving a long plank safely, and carrying large hollow blocks.
F2	Creating with Materials		• I can return to and build on their previous learning, refining ideas and developing their ability to represent them. • I can create collaboratively sharing ideas, resources and skills.
ELG	Exploring and using media and materials	Being Imaginative	• I can safely use and explore a variety of materials, tools and techniques • I can experiment with colour, design, texture, form and function. • I can use what I have learnt about media and materials in original ways, thinking about uses and purposes. • I can represent my own ideas, thoughts and feelings through design and technology and art.



Year Group	Developing, planning and communicating ideas	Working with tools, equipment, materials and components to make quality products	Evaluating processes and products	Food and Nutrition
Year 1	I can begin to draw on my own experience to help generate ideas and research conducted on criteria. I can begin to understand the development of existing products: What they are for, how they work, materials used. Start to suggest ideas and explain what they are going to do. I can understand how to identify a target group for what they intend to design and make based on design criteria. I can begin to develop my ideas through talk and drawings. Make templates and mockups of my ideas in card and paper or using ICT.	I can begin to make my design using appropriate techniques. I can begin to build structures, exploring how they can be made stronger, stiffer and more stable. In my products, I can explore and use mechanisms [for example, levers, sliders, wheels and axles. I can mark out, cut and shape a range of materials with help. I can explore using tools e.g. scissors and a hole punch safely. I can begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. I can begin to use simple finishing techniques to improve the appearance	I can start to evaluate my product by discussing how well it works in relation to the purpose (design criteria). I can explain what I like and dislike about products and why when looking at existing products. I can begin to evaluate my products as they are developed, identifying strengths and possible changes I might make.	I can begin to understand that all food comes from plants or animals. I can explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught. I can start to understand how to name and sort foods into the five groups in 'The Eat well plate' I can begin to understand that everyone should eat at least five portions of fruit and vegetables every day. I can prepare simple dishes safely and hygienically, without using a heat source. I can use techniques such as cutting, peeling and grating.



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		of my product.		
Year 2	I can start to generate ideas by drawing on my own and other people's experiences. I can begin to develop my design ideas through discussion, observation, drawing and modelling. I can identify a purpose for what I intend to design and make. I can identify a target group for what I intend to design and make based on a design criteria. I can develop my ideas through talk and drawings and label parts. Make templates and mockups of my ideas in card and paper or using ICT.	I can begin to select tools and materials; use correct vocabulary to name and describe them. I can build structures, exploring how it can be made stronger, stiffer and more stable. I can measure, cut and score with some accuracy I can learn to use hand tools safely and appropriately. I can start to assemble, join and combine materials in order to make a product. I can demonstrate how to cut, shape and join fabric to make a simple product. Use basic sewing techniques. I can start to choose and use appropriate finishing techniques based on my own ideas	I can evaluate my work against my design criteria. I can look at a range of existing products and explain what I like and dislike about products and why. I can start to evaluate my products as they are developed, identifying strengths and possible changes I might make. I can, with confidence, talk about my ideas, saying what I like and dislike about them	I can explain that all food comes from plants or animals. I can explain that food has to be farmed, grown elsewhere (e.g. home) or caught. I can name and sort foods into the five groups in 'The Eat well plate' I can explain why it is important that everyone should eat at least five portions of fruit and vegetables every day.



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Year 3	I can generate ideas for an item, considering its purpose and the user/s with confidence. I can start to order the main stages of making a product. Identify a purpose and establish criteria for a successful product. I recognise how well products have been designed, and made, what materials have been used and the construction technique. I can learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. I can start to understand whether products can be recycled or reused. I can make drawings with labels when designing. I can, when planning, explain my choice of materials and components including function and aesthetics	I can select a wider range of tools and techniques for making my product i.e. construction materials and kits, textiles, food ingredients, and mechanical components and electrical components. I can explain my choice of tools and equipment in relation to the skills and techniques I will be using. I can start to understand that mechanical and electrical systems have an input, process and output. I can start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement. I can explain how simple electrical circuits and components can be used to create functional products. I can measure, mark out, cut, score and assemble components with more accuracy.	I can start to evaluate my product against original design criteria e.g. how well it meets its intended purpose I can begin to disassemble and evaluate familiar products and consider the views of others to improve them. I can evaluate the key designs of individuals in design and technology have helped shape the world.	I can start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.
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		I can start to work safely and accurately with a range of simple tools. I can start to think about my ideas as I make progress and be willing to change things if this helps me to improve my work. I can start to measure, tape or pin, cut and join fabric with some accuracy.		
Year 4	I can start to generate ideas, considering the purposes for which I am designing- link with Mathematics and Science. I can confidently make labelled drawings from different views showing specific features. I can develop a clear idea of what has to be done, plan how to use materials, equipment and processes, and suggest alternative methods of making if the first attempts fail. Identify the strengths and areas for development in my ideas and products.	I can select a wider range of tools and techniques for making my product safely. I can measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. I can start to join and combine materials and components accurately in temporary and permanent ways. I can explain how mechanical systems such as cams or pulleys or gears create movement.	I can evaluate my products by carrying out appropriate tests. I can start to evaluate my work both during and at the end of the assignment. I can disassemble and evaluate familiar products and consider the views of others to improve them. I can evaluate the key designs of individuals in design and technology has helped shape the world.	I can explain that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. I can explain that a healthy diet is made up of a variety and balance of



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	I can, when planning, consider the views of others, including intended users, to improve my work. I can learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. I can explain my choice of materials and components according to function and aesthetics when planning.	I can explain how more complex electrical circuits and components can be used to create functional products. I can continue to learn how to program a computer to monitor changes in the environment and control my products. I can explain how to reinforce and strengthen a 3D framework. I can sew using a range of different stitches, to weave and knit. I can demonstrate how to measure, tape or pin, cut and join fabric with some accuracy. I can begin to use finishing techniques to strengthen and improve the appearance of my product using a range of equipment including ICT		different food and drink, as depicted in 'The Eat well plate' I can explain that to be active and healthy, food and drink are needed to provide energy for the body.
Year 5	I can start to generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.	I can select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing, accurately.	I can start to evaluate a product against the original design specification and by carrying out tests.	I can understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such



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	I can begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. I can apply a range of finishing techniques, including those from art and design, with growing confidence. I can draw up a specification for my design- linked with Mathematics and Science. I can use the results of investigations, and information sources, including ICT when developing design ideas. I can select appropriate materials, tools and techniques, with growing confidence. I can start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.	I can 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. I can understand how mechanical systems such as cams or pulleys or gears create movement. I can explain now how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control my products. I can explain how mechanical and electrical systems have an input, process and output. I can begin to measure and mark out more accurately. I can demonstrate how to use skills in using different tools and equipment safely and accurately with growing confidence and cut and join with	I can evaluate my work both during and at the end of the assignment. I can begin to evaluate it personally and seek evaluation from others. I can evaluate the key designs of individuals in design and technology has helped shape the world.	as fish) in the UK, Europe and the wider world. I can begin to understand that seasons may affect the food available. I can explain how food is processed into ingredients that can be eaten or used in cooking.
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		accuracy to ensure a good quality finish to the product. I can weigh and measure accurately (time, dry ingredients, liquids). I can use finishing techniques to strengthen and improve the appearance of my product using a range of equipment including ICT.		
Year 6	I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, and pattern pieces. I can use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. I can accurately apply a range of finishing techniques, including those from art and design.	I can confidently select appropriate tools, materials, components and techniques and use them. I can use tools safely and accurately. I can assemble components to make working models. I can make and achieve a quality product. I can confidently pin, sew and stitch materials together to create a product. I can make modifications as I go along to improve my product.	I can evaluate my products, identify strengths and areas for development, and carry out appropriate tests. I can evaluate my work both during and at the end of the assignment. I can record my evaluations using drawings with labels. I can evaluate against my original criteria and suggest ways that my product could be improved. I can evaluate the key designs of individuals in design and technology have helped shape the world.	I can explain how food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. I can explain that seasons may affect the food available. I can explain how food is processed into ingredients that can be eaten or used in cooking. I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.



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	I can draw up a specification for my design- linked with Mathematics and Science. I can plan the order of my work, choosing appropriate materials, tools and techniques. I can suggest alternative methods of making if the first attempts fail. I can identify the strengths and areas for development in my ideas and products. I can explain how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.	I can construct products using permanent joining techniques. I can explain how mechanical systems such as cams or pulleys or gears create movement. I can explain how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control my products. I can reinforce and strengthen a 3D framework. I can explain how mechanical and electrical systems have an input, process and output. I can use finishing techniques to strengthen and improve the appearance of my product using a range of equipment including ICT.		I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. I can explain how food and drink contain different substances – nutrients, water and fibre – that are needed for health.
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