

Subject: DT Overview with National Curriculum Objectives

Design Technology

DT Intent

'Good buildings come from good people, and all problems are solved by good design.' Stephen Gardiner.

High-quality Design and Technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. At Oughton, children are given opportunities to design and make products that solve real and relevant problems while building up their resilience. They learn how to take risks and become resourceful, innovative, enterprising and resilient citizens. During the research stage, children have opportunities to learn about real life designers.

We aim to ensure children:

- Develop the creative, technical and practical expertise needed to perform everyday tasks and to participate successfully in an increasing technological world.
- develop a wealth of DT vocabulary
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make products.
- Critique, evaluate and test their ideas and products.
- Understand and apply the principles of nutrition and learn how to cook.

We follow the Health and Safety 'Make it Safe' document produced by DATA (Design and Technology Association).

We are following the National Curriculum in DT for Years 1 to 6 and we use the D&T Primary Association scheme, which builds upon knowledge and skills. Each Year group follows this scheme, incorporates the four key learning areas – Designing, making, Evaluating, Technical Knowledge. We assess using our Knowledge sheets, which highlight the core knowledge and skills to be taught within each unit of work.

Subject: DT Overview with National Curriculum Objectives

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Early Years Foundation Nursery and Reception	<p>DT focuses on Expressive Art and Design (EAD) as part of the EYFS Curriculum.</p> <p>Join different materials and explore different textures</p> <ul style="list-style-type: none"> - Develop own ideas and decide which materials to use to express them - Develop own ideas through experimentation with diverse materials, to express and communicate their discoveries and understanding - Notice what other children and adults do, mirroring what is observed - Practise different artist's techniques - Discuss likes and dislikes about artwork - Respond imaginatively to artworks and objects - Explore, use and refine a variety of artistic effects to express their ideas and feelings - Expresses and communicate working theories, feelings and understandings in the form of art work and objects <p><i>At the end of EYFS children at the expected level of development will:</i></p> <ul style="list-style-type: none"> - 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 - Make use of props and materials when role-playing characters in narratives and stories. 					

Subject: DT Overview with National Curriculum Objectives

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<p>Playground Equipment—free standing structures</p> <p>Design</p> <ul style="list-style-type: none"> • Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <p>Make</p> <ul style="list-style-type: none"> • Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] <p>Evaluate</p> <ul style="list-style-type: none"> ▪ Explore and evaluate a range of existing products ▪ Evaluate their ideas and products against design criteria <p>Technical Knowledge</p> <ul style="list-style-type: none"> • Explore products and use mechanisms (for example sliders, levers wheels and axles) in their products • Build structures, exploring how they can be made stronger, stiffer and more stable 		<p>Cards and Pictures Sliders and Leavers</p> <p>Design</p> <ul style="list-style-type: none"> • Design purposeful, functional, appealing products for themselves and other users based on design criteria. <p>Make</p> <ul style="list-style-type: none"> • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> ▪ Explore and evaluate a range of existing products ▪ Evaluate their ideas and products against design criteria <p>Technical Knowledge</p> <ul style="list-style-type: none"> • Explore and use mechanisms (for example sliders, levers) in their products 		<p>Healthy Picnic – Fruit Kebabs</p> <p>Design</p> <ul style="list-style-type: none"> • Design appealing products for a particular user, based on simple design criteria. • Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. • Communicate these ideas through talk and drawings. <p>Make</p> <ul style="list-style-type: none"> • Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. • Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. <p>Evaluate</p> <ul style="list-style-type: none"> • Taste and evaluate a range of fruit and vegetables to determine the intended user’s preferences. • Evaluate ideas and finished products against design criteria, including intended user and purpose. <p>Technical Knowledge</p> <ul style="list-style-type: none"> • Use the basic principle of a healthy and varied diet to prepare dishes • Understand where food comes from 	

Subject: DT Overview with National Curriculum Objectives

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2	<p>Healthy Snack – preparing fruit and vegetables</p> <p>Design</p> <ul style="list-style-type: none"> Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Communicate these ideas through talk and drawings. <p>Make</p> <ul style="list-style-type: none"> Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. <p>Evaluate</p> <ul style="list-style-type: none"> Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. Evaluate ideas and finished products against design criteria, including intended user and purpose <p>Technical Knowledge</p> <ul style="list-style-type: none"> Use the basic principle of a healthy and varied diet to prepare dishes Understand where food comes from 		<p>Puppets, textiles, templates and joining</p> <p>Design</p> <ul style="list-style-type: none"> 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. <p>Make</p> <ul style="list-style-type: none"> 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 <p>Evaluate</p> <ul style="list-style-type: none"> Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria <p>Technical Knowledge</p> <ul style="list-style-type: none"> Build structures, exploring how they can be made stronger, stiffer and more stable. 		<p>Making a car Wheels and Axels</p> <p>Design</p> <ul style="list-style-type: none"> 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. <p>Make</p> <ul style="list-style-type: none"> 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. <p>Evaluate</p> <ul style="list-style-type: none"> Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria <p>Technical Knowledge</p> <ul style="list-style-type: none"> Build structures, exploring how they can be made stronger, stiffer and more stable Explore products and use mechanisms (for example sliders, levers wheels and axles) in their products 	

Subject: DT Overview with National Curriculum Objectives

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	<p style="text-align: center;">Shell Structures</p> <p>Designing</p> <ul style="list-style-type: none"> • Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and purpose of the product. • Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas. <p>Making</p> <ul style="list-style-type: none"> • Select and use appropriate tools to measure, mark out, cut, score, and shape and assemble with some accuracy. • Explain their choice of materials according to functional properties and aesthetic qualities. • Use finishing techniques suitable for the product they are creating. <p>Evaluating</p> <ul style="list-style-type: none"> • Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used. • Test and evaluate their own products against design criteria and the intended user and purpose. • Understand how key events and individuals in design and technology have helped shape the world <p>Technical knowledge</p> <ul style="list-style-type: none"> • Know and use technical vocabulary relevant to the project. 		<p style="text-align: center;">Designing Creating and evaluating a volcano - Card/ product leavers and linkages</p> <p>Design</p> <ul style="list-style-type: none"> • 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 <p>Make</p> <ul style="list-style-type: none"> • 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 <p>Evaluate</p> <ul style="list-style-type: none"> • 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 <p>Technical Knowledge</p> <ul style="list-style-type: none"> • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures • Understand and use mechanical systems in their products [eg gears, pulleys, cams, levers and linkages]. 		<p style="text-align: center;">Party snacks, cooking and nutrition</p> <p>Design</p> <ul style="list-style-type: none"> • Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. • Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. <p>Make</p> <ul style="list-style-type: none"> • Plan the main stages of a recipe, listing ingredients, utensils and equipment. • Select and use appropriate utensils and equipment to prepare and combine ingredients. • Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. <p>Evaluate</p> <ul style="list-style-type: none"> • Understand how key events and individuals in design and technology have helped shape the world. <p>Technical Knowledge</p> <ul style="list-style-type: none"> • 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 food comes from 	

Subject: DT Overview with National Curriculum Objectives

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 4	<p>Making Pencil cases/masks and textiles</p> <p>Design</p> <ul style="list-style-type: none"> 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 <p>Make</p> <ul style="list-style-type: none"> 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 <p>Evaluate</p> <ul style="list-style-type: none"> 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 <p>Technical Knowledge</p> <ul style="list-style-type: none"> Measure, mark out, cut and shape materials with some accuracy Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques 		<p>Perfect picnic, making a bread based product.</p> <p>Design</p> <ul style="list-style-type: none"> Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas <p>Make</p> <ul style="list-style-type: none"> Plan the main stages of a recipe, listing ingredients, utensils and equipment. Select and use appropriate utensils and equipment to prepare and combine ingredients. Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. <p>Evaluate</p> <ul style="list-style-type: none"> Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. <p>Technical Knowledge</p> <ul style="list-style-type: none"> 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 food comes from 		<p>Creating a reading Lamp and electrical circuits</p> <p>Design</p> <ul style="list-style-type: none"> Design purposeful, functional, appealing products for themselves & other users based on design criteria <p>Make</p> <ul style="list-style-type: none"> 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 <p>Evaluate</p> <ul style="list-style-type: none"> 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 <p>Technical Knowledge</p> <ul style="list-style-type: none"> Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Understand and use electrical systems in their products Select from and use a wider range of materials, components and tools 	

Subject: DT Overview with National Curriculum Objectives

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	<p style="text-align: center;">Combining different fabrics- textiles</p> <p>Design</p> <ul style="list-style-type: none"> 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 <p>Make</p> <ul style="list-style-type: none"> 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 <p>Evaluate</p> <ul style="list-style-type: none"> 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 <p>Technical Knowledge</p> <ul style="list-style-type: none"> Measure, mark out, cut and shape materials with some accuracy Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques 		<p style="text-align: center;">Building a toy – pulleys and gears</p> <p>Design</p> <ul style="list-style-type: none"> 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 <p>Make</p> <ul style="list-style-type: none"> 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 <p>Evaluate</p> <ul style="list-style-type: none"> 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 understand how key events and individuals in design and technology have helped shape the world <p>Technical Knowledge</p> <ul style="list-style-type: none"> Understand and use mechanical systems in their products (for example gears, pulleys,) Understand and use electrical systems in their products (eg series circuits, switches, buzzers, bulbs and motors) 		<p style="text-align: center;">Savoury snacks – Pizza cooking and nutrition</p> <p>Design</p> <ul style="list-style-type: none"> Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. <p>Make</p> <ul style="list-style-type: none"> Write a step-by-step recipe, including a list of ingredients, equipment and utensils Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. Make, decorate and present the food product appropriately for the intended user and purpose. <p>Evaluate</p> <ul style="list-style-type: none"> Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. <p>Technical Knowledge</p> <ul style="list-style-type: none"> 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, caught and processed. 	

Subject: DT Overview with National Curriculum Objectives

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 6	<p style="text-align: center;">Create a frame structure</p> <p>Design</p> <ul style="list-style-type: none"> 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 <p>Make</p> <ul style="list-style-type: none"> 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 <p>Evaluate</p> <ul style="list-style-type: none"> 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 <p>Technical Knowledge</p> <ul style="list-style-type: none"> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Use a wider range of tools and materials and components to perform practical tasks, according to their functional properties and aesthetic qualities. 		<p style="text-align: center;">Celebrating culture and seasonality</p> <p style="text-align: center;">Create a savoury dish cooking and nutrition</p> <p>Design</p> <ul style="list-style-type: none"> Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. <p>Make</p> <ul style="list-style-type: none"> Write a step-by-step recipe, including a list of ingredients, equipment and utensils Make, decorate and present the food product appropriately for the intended user and purpose. <p>Evaluate</p> <ul style="list-style-type: none"> Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. Understand how key chefs have influenced eating habits to promote varied and healthy diets. <p>Technical Knowledge</p> <ul style="list-style-type: none"> 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. 		<p style="text-align: center;">Complex electrical systems</p> <p>Design</p> <ul style="list-style-type: none"> 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 <p>Make</p> <ul style="list-style-type: none"> 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. <p>Evaluate</p> <ul style="list-style-type: none"> 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 <p>Technical Knowledge</p> <ul style="list-style-type: none"> 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. 	

Subject: DT Overview with National Curriculum Objectives

At Oughton, our DT Curriculum follows the DT Primary Association Scheme of work which shows progression and the building of skills following the National Curriculum. The topics in each year may change term. Our Knowledge Sheets complement this overview and focus on the core knowledge, key vocabulary and prior learning.

We comply with the Equality Act 2010 and the Special Educational Needs and Disability Regulation 2014 by ensuring that the DT Curriculum is accessible for **all** learners through adaptations to meet the needs of our children.

Promoting British Values at Oughton Primary and Nursery School:

There are opportunities for the promotion of British Values throughout the DT Curriculum, focusing on:

Democracy

The Rule of Law

Individual Liberty

Mutual Respect

Tolerance of those of different faiths and beliefs

DT promotes these values through discussions and enquiries, understanding how people live and inspiration figures. **The Rule of Law** is demonstrated through the school's promotion, sharing and adherence to our Promoting Positive Behaviour Policy. Behaviour for Learning, determination and resilience is promoted throughout DT as designs are adapted.

Parents / Carers - if you wish to find out more about our DT Curriculum, please email admin@oughton.herts.sch.uk and ask the DT Subject Leader to contact you.