

Curriculum Overview



Subject: Design Technology	Subject Leader: Mrs T Argrave
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Rationale

We deliver our ambitious DT curriculum through a variety of creative and practical activities which develop the knowledge and skills needed to engage in the iterative process of designing and making. The children work in a range of relevant contexts (for example home, school, leisure, culture, enterprise, industry and the wider environment) and within a number of design and technology themes (structures, cooking, textiles, electrical systems and mechanical systems). Our school values are at the heart of what we do as we encourage children to show their ambition, creative thinking and teamwork in how they design and make their products and their connection to the local community in what they make.

At Spurcroft, we use the DT Association's Projects on a Page to realise our aim to provide excellent learning within DT. These projects are underpinned by a clear progression of knowledge and skills in both the generic elements of designing and making and within specific areas such as cooking. Our approach is focussed on building long-term memory and improved retrieval of knowledge, focussing on learning key knowledge and vocabulary.

DT has been carefully mapped across the school to ensure broad and balanced coverage and to establish relevant links to other curriculum subjects and our own locality. We have an inclusive curriculum where the learning of SEND pupils is at the heart of learning in the classroom and all pupils are given the opportunities that learning in DT has to offer.

Structure

Learning in DT begins in Early Years through pupils being given opportunities to design and make through the Expressive Arts and Design area of learning. From Year 1 to Year 6 each year group has 3DT units taught per year with blocks of 6-7 lessons.

Our teaching sequence is:

Real world application

How have key individuals, local businesses, inventions shaped our world? These links are made across the curriculum. This will be presented to the children or form part of independent research or reading.

Review

A review of the required skills and knowledge gained in prior years, required for new learning will be presented to the children to remind them of the things they have already learnt.

Need or wants

Identification of a need or want of an individual or group. This will drive the project forward as they aim to fulfil this.

Research

Children research existing products and possible construction materials/ingredients/ tools.

Design Brief

The teacher develops, with the class, a design brief which dictates how the children can be successful in what they design and make.

Knowledge/Skills taught and practiced

Children need to first be taught key knowledge and practice the skills required for them to be successful in designing and making their product. If children do not know how to do something their design may be inhibited.

Design

Children develop their designs, in response to the brief and research. Children's ideas are communicated through discussion, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces or computer-aided design. This is where children are given the opportunities for exploring functionality, making design decisions, and innovating. Support is given to children with SEND in small guided groups.

Create

Children select from available tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) with increasing precision. With sustainability and conservation in mind children select from and use a selection of available materials and components (for example, construction materials, textiles and ingredients) based on what they believe to be the most appropriate for the function and aesthetics of their products. Children create the product using materials and skills which they have learnt.

Exhibit

Children show case their products to an audience for which, a need or want was identified. This might be younger school children, families or a local community group. Work is show cased as a working display, supervised play, a tasting, formal presentation or in assembly. Working towards this step ensures children are engaged throughout the DT process and that the children are motivated to design and create products for a specific user, have a purpose and are something they can believe in (authenticity).

Evaluate

Children are guided to evaluate their work based on the original design brief stating where the design brief was met and where it was not.

Reformulate

Where the design brief was not met, changes to improve the product design or the skills used to make the product are discussed and where appropriate, listed. In some instances, children may suggest modifying the design brief to something more appropriate or manageable due to resource constraints.



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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	Exploring different materials freely in order to develop their ideas about how to use them and what to make.					
Reception	Safely use and explore a variety of materials, tools and techniques, experimenting with design, form and function					
Year 1		Structures: freestanding Bridge for Billy Goats Gruff		Mechanical systems - sliders and levers: Class/Group Story book		Food: preparing fruit and vegetables: Fruit salad
Year 2	Structures: freestanding Bridges (2022/2023) Axles - Making Fire Engines – (2023/2024)		Mechanical systems - Sliding mechanisms: Moving Pictures		Preparing Fruit and Vegetables: fruit smoothie	
Year 3/4	Structures – shelters: Waterproof shelter for teddy		Mechanical systems: Cams		Food - celebrating culture:	
					Scones & CAD	
Year 5/6	Textiles - combining fabrics and shapes, stitching: Pucker People			Food - celebrating culture & seasonality	Mechanical systems - pulleys & gears: Fairground ride	
				& TinkerCAD: Biscuits & CAD		

DT Themes Key

Textiles	Structures
Electrical Systems	Mechanical systems
Food	CAD