

Nurture and Challenge

Our children will be inspired through a broad range of practical experiences to create innovative designs which solve real and relevant problems within a variety of different contexts. Our children will understand how technology has and is shaping our world. They will become proficient in designing, making and evaluating their own products, using tools and materials effectively.

Design and Technology Year 1	<p>The following early years goals are prerequisite skills for DT in KS1.</p> <p>Expressive Arts and Design (Exploring and Using Media and Materials) Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Expressive Arts and Design (Being Imaginative) Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.</p> <p>Physical Development (Moving and Handling) Children handle equipment and tools effectively, including pencils for writing.</p>					
Design and Technology	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Understand how key events and groups and individuals in design and technology have helped shape our world.	Flight, technology, leisure - The Wright Brothers Kites - Mo Di and Luc Ban	Space stations and travel, technology – NASA Tudor Architecture – Christopher Wren	Food technology, enterprise - Peter Boizot Architecture – Brunel	Food technology, enterprise – Thomas Warburton	Toy designers, leisure, enterprise -	WW2 Architecture, technology – Anderson and Morrison
Design	Design purposeful, functional, appealing products for themselves and other users. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and where appropriate ICT.		Use research and criteria to develop products which are fit for purpose. Use annotated sketches and prototypes to explain ideas.		Use research and criteria to develop products which are fit for purpose and aimed at specific groups. Use annotated sketches, cross sectional, exploded diagrams and computer aided design.	
	Aeroplanes Kite making; paper, fabric, cutting, shaping, joining	Puppet making; sewing Tudor box Houses; cutting, joining Sewn hand puppets	Egyptian pyramid framework; woodwork joining	Sandwich packaging; appropriate materials	Beanbags; sewing Planet mobile; cutting, joining	Woven fabric art pieces. Anderson Shelter; cutting, joining

Make	Select from and use a range of tools and equipment. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients.		Select from and use a range of tools and equipment accurately.		Select from and use a wider range of materials and components, including construction materials, textiles and ingredients.	
	Aeroplane with propeller; axle Kite making; paper and fabric Crumble Ingredients; types of apple	Shadow puppet; lever, slider Space buggy; wheels axles Sewn hand puppets; felt Wrap ingredients Tudor Houses	Egyptian pyramid framework; woodwork joining	Roman chariot; wheels, axles Pop-up book; levers, sliders	Beanbags; fabric Mexican delicacies	Bread making Woven fabric art pieces.
Evaluate	Explore and evaluate a range of existing products as well as their own ideas.		Evaluate existing products and improve own work.		Analyse and evaluate existing products (own and others) and improve own work.	
	Fruit crumbles	Tudor house Space buggy	Bridges; linkages Egyptian pyramid winches; gears, pulleys	Roman chariot Sandwiches and packaging	Moving toys	Anderson Shelter
Technical Knowledge	Explore, build and improve structure and mechanisms.		Apply their own understanding of how to strengthen, stiffen and reinforce more complex structures.		Understand and use mechanical and electrical systems in their products [e.g. gears, pulleys, cams, levers, linkages, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products.	
	Aeroplanes Kite making	Tudor house Space buggy Shadow puppets	Bridges; linkages Egyptian pyramid winches; gears, pulleys	Christmas lights; bulbs, circuits, switches	Moving toys Planet mobile	Fairground attractions; lights, buzzers, circuits, switches
Cooking and nutrition	Understand where food comes from. Prepare a basic healthy dish.		Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed; prepare and cook mainly savoury dishes.		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.	
	Fruit crumble	Healthy wrap making	Pizza making	Sandwich making	Mexican delicacies	Bread making

Vocabulary

Functional, design, generate, communicate, mock up, technology, joining, characteristics, evaluate, mechanism, leisure, culture, enterprise, industry, innovative, cross sectional, exploded diagrams, prototypes, components, gears, pulleys, linkages, levers, circuits, switches, motors,

Characteristics for Effective Learning

Analysing and Evaluating	Making Connections	Asking Questions	Constructing Arguments
Thinking Critically	Collaborating with Others	Showing Empathy	Reflecting