

**Aims**

The national curriculum for design and technology aims to ensure that all pupils:

- ☐ develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- ☐ build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- ☐ critique, evaluate and test their ideas and products and the work of others
- ☐ understand and apply the principles of nutrition and learn how to cook.

**EYFS**

Through 'Expressive Art and Design' FS2 children will be involved in activities that develop their designing, making and evaluating skills. Throughout a range of learning opportunities including:

- ☐ Safely using and exploring a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- ☐ Representing their own ideas, thoughts and feelings through design and technology.

This will then be the foundations for DT learning through KS1 and KS2.

Autumn			
EYFS/Year 1/Year 2	Year 3	Year 4/Year 5	Year 6
<b><u>Structures and mechanical systems</u></b> Houses	<b><u>Mechanical systems</u></b> Pop-up cards	<b><u>Electrical systems</u></b> Lighthouses	<b><u>Food</u></b> Making bread
Spring			
EYFS/Year 1/Year 2	Year 3	Year 4/Year 5	Year 6
<b><u>Textiles</u></b> Fabric bookmark	<b><u>Structures</u></b> Photo frames	<b><u>CAD</u></b> Temperature sensor	<b><u>Mechanical systems</u></b> Catapults
Summer			
EYFS/Year 1/Year 2	Year 3	Year 4/Year 5	Year 6
<b><u>Food</u></b> Coronation picnic food	<b><u>Food</u></b> Fruit scones	<b><u>Food</u></b> Pizza	<b><u>Woodwork</u></b> Birdhouses

Design						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Draw a simple design on what they would like their product to look like.	Know how to design purposeful, functional, appealing products for themselves and other users based on design criteria.	Know how to generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups.	Know how to use research to develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.	Know how to use research to develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.	Know how to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.	Know how to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.
Vocabulary						
	Joining Purpose Appeal Moving Design	+ Model Generate Communicate Templates/ Mock up	+ Research Innovate Function Product	+ Develop Research Inform Bridges (Different types)	+ CAD Annotate Diagrams Prototypes	+ Discussion Exploded diagrams Patterned pieces Moving clocks- automatic

Make						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Make a product using a range of materials. To construct with a purpose in mind.	Know how to select from and use a wide range of materials and components, including construction materials, textiles and ingredients.  To know the characteristics of different materials.	Know how to select from and use a wider range of tools and equipment to perform practical tasks accurately.  To know the function of tools.	Know how to select from and use a wider range of tools and equipment to perform practical tasks accurately.  To know the function of different equipment and how to use it safely.	Know how to select from and use a wider range of materials and components, including construction materials, textiles and ingredients.  To know the functional properties	Know how to select from and use a wider range of materials and components, including construction materials, textiles and ingredients.  To know the functional properties	Know how to select from and use a range of tools and equipment to perform practical tasks  To know the function of tools and equipment.

				and aesthetic qualities of materials.	and aesthetic qualities of materials.	
Vocabulary						
Make Material	+ Select Components Construction Textiles	+ Use Perform Equipment Accuracy	+ Tools	+ Function Properties Aesthetics	+ Micro-bit sensors	+ Practicality Joining

Evaluate						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To be able to explain what went well.	Know how to explore and evaluate a range of existing products.  To know what makes a product effective.	Know how to evaluate their ideas and products against design criteria.  Know what a design criteria is.	Know how to investigate and analyse a range of existing products.	Know how to investigate and analyse a range of existing products. Know how to evaluate their ideas and products against their own design criteria.  To know what a design criteria is.	Know how to evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.  To know what a design criteria is.	Understand how key events and individuals in design and technology <u>have helped to shape the world.</u>  To know the key events and individuals in design and technology.
Vocabulary						
	Explore Evaluate Product	+ Ideas Design	+ Analyse Investigate Products	+ Design criteria	+ Improve	+ Key events Impact Innovation

Technical Knowledge						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

To develop skills to know how to use simple tools.	To know how to build structures, exploring how they can be made stronger, stiffer and more stable and include sliders and levers.  To know the purpose of sliders and levers.	Explore and use mechanisms in their products, including axels, levers, pulleys and wheels.  To know the purpose of axels, levers, pulleys and wheels.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures, including linkages.  To know the function of linkages.	Understand and use mechanical systems in their products, including linkages. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.  To know the function of linkages.	Understand and use mechanical systems in their products, including, levers, pulleys and gears. Understand and use electrical systems in their products. Apply their understanding of computing to program, monitor and control their products.  To know the function of levers, pulleys and gears. To know how electrical systems work.	Understand and use mechanical systems in their products, including, gears, pulleys and cams. Understand and use electrical systems in their products.  To know how electrical systems work. To know the function of gears, pulleys and cams.
--	---	---	---	--	--	---

#### Vocabulary

Tools	+ Build Structures Stiffen/ strengthen Sliders Levers	+ Explore Mechanisms Axles Wheels Pulleys Levers	+ Reinforce Linkages	+ Mechanisms Linkages Products Systems	+ Gears Electrical systems Program Monitor CAD Control	+ Cams Mechanisms
-------	--	--	----------------------------	--	--	-------------------------

#### Food Technology

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To know where fruit comes from.	To know where food comes from.	To know and use the basic principles of a healthy and varied diet to prepare dishes.	Understand and apply the principles of a healthy and varied diet.  To know which food groups are needed	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	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.

		To know what is required for a healthy diet.	in a healthy and varied diet.	To know what seasonality is. To know a range of cooking techniques such as dicing and chopping.	To know a range of cooking techniques such as dicing and chopping.	To know what seasonality is. To know where ingredients originate from.
Vocabulary						
	Origins Food groups	+ Health/well being Diet Balanced	+ Varied Prepare	+ Cook Savoury Techniques Seasoning	+ Ingredients Seasonality	+ Growing/ cultivation Rearing Processing Organic Free range