

St Margaret Clitherow Catholic Primary school
DT Progression of Skills and Knowledge

		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cooking and nutrition	Knowledge	To understand why we wash our hands. To understand why it is important to be clean	To know about a balanced diet. To understand and know where food comes from	To know about the principles of a balanced and varied diet	To understand seasonality, and where ingredients come from	To understand seasonality, where ingredients come from, and how they are grown	To understand seasonality, where ingredients come from, how they are reared, caught or grown. To understand a healthy and varied diet and demonstrate this through project design	To understand and apply the principles of a healthy and varied diet and demonstrate this through project design To understand seasonality, where ingredients come from, how they are reared, caught, grown or processed
	Skills	To make healthy choices about food, drink, activity handwashing. To manage their own basic hygiene and personal needs including dressing, going to the toilet and understanding the importance of healthy food choices. To make food safely and hygienically with support	To prepare ingredients safely and hygienically with support To measure and assemble ingredients	To cut, peel or grate ingredients safely and hygienically with support To measure, assemble and cook ingredients using measures To understand where food comes from	To prepare ingredients safely and hygienically To apply knowledge of a healthy and varied diet	To prepare and assemble ingredients hygienically using appropriate utensils and cooking methods To measure ingredients using scales and follow a recipe To apply growing knowledge of a healthy and varied diet	To prepare and cook a variety of savoury ingredients hygienically using appropriate utensils and cooking methods To measure accurately and calculate ratios of ingredients to scale up from a recipe	To use a range of cooking techniques to cook a variety of savoury ingredients hygienically using appropriate utensils and cooking methods To measure accurately to the nearest gram and calculate ratios of ingredients to scale up or down from a recipe
Design	Knowledge	To know that different materials have different purposes	To understand structures need to be strong and stable To know materials have different properties	To understand how materials can be combined for different functions	To understand the purpose of a design criteria To know the 3 key aims for a design criteria (something for someone for some purpose)	To know the fundamentals of creating a design (features – diagram with labels)	To understand computing applications that support design	To know the fundamentals of creating a design to support annotated sketch and exploded diagrams
	Skills	Safely explore a variety of materials to plan	To design products that have a clear purpose and an intended user through talking and drawing To demonstrate a range of joining techniques (such as gluing or combining materials to strengthen) – mock-up	To design functional products through talking and drawing that meets a design criteria To demonstrate a range of joining techniques for a mock up and develop design accordingly	To develop a design criteria to develop with purpose To generate and develop ideas through annotated sketches and prototypes. To use computers to design where appropriate	To develop a design for a functional and appealing product aimed at a specific audience To generate an annotated cross-sectional diagram to communicate ideas	To develop a design for a functional, appealing and fit for purpose product aimed at a specific audience To generate, develop, model and communicate their ideas through computer-aided design To consider and use scientific knowledge of forces when designing for a function	To 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 To generate, develop, model and communicate their ideas through annotated sketches, exploded diagrams and pattern pieces

Make	Knowledge	To know a range of ways to join materials (glue, tape) To know how to use equipment safely and responsibly when exploring	To understand methods for strengthening materials	To know which materials and joining techniques will be most effective for the product outcome	To know and be aware of different tools that will support an informed choice when making	To understand purposes of different tools and utensils	To understand purposes and practicalities of a wider range of tools To understand the properties of a wider range of materials	To know purposes and practicalities of a wider range of tools To know the properties of a wider range of materials
	Skills	To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	To cut and join materials safely using tools provided with support To use materials such as: glue, split pins and single hole punches and materials to make and strengthen products To make products, discussing the design as work progresses	To select from and use a range of tools and equipment to perform practical tasks (cutting, joining, shaping and finishing) To select from and use a wide range of materials and components, including construction materials and textiles according to their characteristics To make products, refining the design as work progresses	To choose suitable techniques, tools and materials to construct products or to repair items To refine work and techniques as work progresses, continually evaluating the product design	To select from and use a range of tools, materials and equipment to perform practical tasks To refine work and techniques as work progresses, continually evaluating the product design and suggesting improvements	To select from and use a range of tools and equipment to perform practical tasks for example, cutting, shaping, joining and finishing To select from and use a wider range of materials and components, including construction materials, and, according to their functional properties	To select from and use a wider range of tools and equipment to perform practical tasks for example, cutting, shaping, joining and finishing accurately To select from and use a wider range of materials and components, including construction materials, textiles and, according to their functional properties and aesthetic qualities
Evaluate	Knowledge	To know sequencing vocabulary (first I, then I...)	To understand the concept of evaluation	To understand why we evaluate	To know some key individuals that have helped shape the world of DT To understand how to evaluate	To understand how key individuals in design and technology have helped shape the world To understand how to evaluate constructively	To understand how key events and individuals in design and technology have helped shape the world To understand the concept of being analytical about products To understand how to evaluate constructively and suggest improvements	To understand how key events and individuals in design and technology have helped shape the world and justify how this impact life today To understand how to evaluate constructively and suggest improvements for others
	Skills	To share their creations, explaining the process they have used.	To explore objects and designs to identify likes and dislikes To disassemble products to evaluate the product prior to designing own model To evaluate their own ideas and products	To explore and evaluate a range of existing products, suggesting improvements To evaluate their own ideas and products against design criteria	To investigate existing products To self-evaluate own products made	To investigate and analyse existing products To evaluate their ideas and products against their own design criteria	To investigate and analyse a range of existing products To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	To research, investigate and analyse a range of existing products To self and peer evaluate ideas and products against design criteria to improve product

Technical Knowledge	Knowledge	To know how to use equipment correctly and responsibly when exploring	To name simple mechanisms	To understand a product/ material can be adapted to make it more functional	To understand how to strengthen and reinforce	To understand electrical systems to support product	To understand mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	To understand computing to program, monitor and control their products
	Skills	To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function To use a range of small tools, including scissors and paint brushes	To build structures, exploring how they can be made stronger and stiffer To explore and use mechanisms [levers and sliders], in their products	To build or make products, exploring how they can be made stronger, stiffer and more stable To explore and use mechanisms [wheels and axles], in their products	To use their understanding of how to strengthen and reinforce structures To explore and use nets in their products. To apply their understanding of computing to design nets for their products	To apply their understanding of how to strengthen and stiffen products To use electrical systems in their products [for example, series circuits incorporating switches and bulbs]	To apply their understanding of how to strengthen, stiffen and reinforce more complex structures To use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] To know how a range of pulleys work and use them in their products	To apply their understanding of how to strengthen, and reinforce more complex products To understand and use electrical systems in their products [for example, series circuits incorporating switches and motors]

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.

Nutrition:

ELG: Personal, Social and Emotional development

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.
- 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

Design:

ELG Expressive Arts and 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,

- 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:

ELG: Creating with Materials

- 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
- 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

ELG: Creating with Materials

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