

KS2 DT Curriculum NC End Points:**Designing**

- Can 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.
- Is able to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

Making:

- Is able to select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing],
- Can accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

Evaluating:

- Is able to investigate and analyse a range of existing products.
- Can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- Understands how key events and individuals in design and technology have helped shape the world.

Technical Knowledge:

- Applies their understanding of how to strengthen, stiffen and reinforce more complex structures.
- Understands and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].
- Understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].
- Applies their understanding of computing to program, monitor and control their products.

Food technology:

- Understand and can apply the principles of a healthy and varied diet.
- Can 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

| Term | Learning Focus | | Cross Curricular links |
|----------|--|---|------------------------|
| | Knowledge | Skills | |
| Spring 1 | Textiles <i>Jane Morris – textiles. 1839 – 1914</i> <ul style="list-style-type: none"> • To know how to specify a design to make it more appealing to a specific target group. • To know different types of stitches for the purpose of functionality and aesthetics. • To explain how to join materials in different ways. • Know and use technical vocabulary relevant to the project. • Know how to evaluate their product against the product criteria they have generated individually, as a means to improve their work. | <ul style="list-style-type: none"> • Design and make a functional bookmark, communicating initial ideas through annotated sketches • Use research into the features of an appealing functional bookmark to inform design criteria • Select and use a range of tools to perform practical tasks; stitching and sewing (joining), cutting and systematically work through phases of a design. • Investigate the effect of different stitches in joining seams and how they contribute to the overall effectiveness and durability of the product. • Evaluate the outcome with reference to the design criteria | |

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| <p>Summer 1</p> | <p>Food Technology – baking bread</p> <ul style="list-style-type: none"> • To know about the benefits of whole grain flour, opposed to a plain flour and the reasons why some types of bread, such as wholemeal, are healthier than others and can be a source of carbohydrate in a healthy balanced diet. • To know that a wheat grain is a seed and how it is harvested and ground at a mill to make flour. https://m.youtube.com/watch?v=y8vLjPctrcU • To know about the influence of specific manufacturers and consider the importance and usefulness of market research in this context. • To know the importance of clear and accurate food labelling and knowledge of ingredients, with particular reference to food allergies. • To know the different tools and ingredients typically involved in bread making and the steps involved in the bread making process • Kneading is pulling and squeezing dough to make it smooth. • Bran is the hard protective shell of a grain of wheat. • Dough is a mixture of flour, yeast and water before it is cooked. • Endosperm is the store of food inside a seed. • Germ – part of the seed where the root and shoots grow from. • Yeast is a tiny plant which makes bubbles of carbon dioxide when mixed with flour and warm water. • Unleavened bread – flat bread where yeast has not been added | <ul style="list-style-type: none"> • Evaluate a range of bread, through taste, to inform own design criteria which children subsequently review their own product against, considering appearance, flavour, texture and ingredients. • Record evaluative data in a table to support comparison • Carrying out and articulating the findings of research carried out in groups. • Reviewing, considering and suggesting ways in which a recipe could be adapted to be made healthier (eg recipes involving white flour/salt/sugar) • Preparing and baking a savoury dish, using specific techniques for purpose | <p>Math - calculate the cost of the ingredients used in our bread rolls</p> <p>English - create a recipe for making bread by taking notes while watching a recipe video, using features of instructional writing</p> <p>Science – changing materials</p> |
| <p>Summer 2</p> | <p>Electrical & mechanical components – a torch</p> <ul style="list-style-type: none"> • Understand and use electrical systems in their products • Select from and use a wider range of tools and equipment to perform practical tasks • 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 their ideas and products against their own design criteria and consider the views of others to improve their work | <ul style="list-style-type: none"> • To be able to show expertise when using a range of tool and equipment. • To be able to explain how product will appeal to the given audience • To select and use the correct tools, equipment, materials • Write a step by step set of instructions to follow for building their torch, including the tools and materials. • To be able to say I will ensure my product works • To test my product • To begin to explain how the original design could be improved • To be able to say what improvements were made along the way and why. • To evaluate my product- what went well what didn't- evaluate against appearance and the way it works. | <p>Science - electricity</p> |

Ambition / Intent:

At Camrose Primary School, we believe that Design Technology is essential to a rich and balanced education that develops the whole child. The study of Design Technology gives children an insight into how the world is being shaped around them for the evolving needs of people and communities from past to present. In a rapidly changing age of technology, it is essential that children are equipped with the knowledge and technical skills to creatively solve real life problems, so that they have the ability to make their own impact on the world around them.

Design / Implementation:

The National Curriculum provides the structure and skill development for the Design & Technology curriculum being taught throughout the school. At Camrose, we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum through well planned and resourced projects and experiences.

We have determined that Design Technology will be taught in two or three units across the school year. During Design and Technology units, our children draw upon subject knowledge and skills within Mathematics, Science, History, Computing and Art. Through the evaluation of past and present technology they can reflect upon the impact of Design Technology on everyday life and the wider world.

Impact:

At Camrose, we ensure all of our pupils are able to approach problems creatively and in a range of ways. By providing a range of contexts and the necessary skills, we endeavour to support pupils in their future educational journey and in the understanding of the ever-developing world around them.

The skills and attributes they develop will benefit them beyond school and into adulthood: the ability to use time efficiently, work with others productively, show initiative, independence, resilience and manage risks effectively will ensure well-rounded citizens who will make a difference in the wider world.