

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	
Autumn 2	Textiles – use patterns (design & make a bag) <ul style="list-style-type: none"> • To Research and discuss some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products, considering their impact beyond their intended purpose and discuss how sustainable materials are • 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. • Understand that a single 3D textiles project can be made from a combination of fabric shapes • Select and refine materials carefully, so a product is fit for purpose, meeting the functionality of the design, making the product attractive and strong. • Know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> • Use surveys, interviews, questionnaires and web-based resources to find out about the needs and wants of particular individuals and groups; taking these into account • Design and make a functional cloth bag, communicating initial ideas and Review and update step-by-step plans during the designing process • Select appropriate tools, equipment and materials needed to make a product • Plan, create, follow, adapt detailed step-by-step plans and evaluate any changes to improve quality • Accurately measure, mark out, cut, shape and assemble materials/components, applying a range of finishing techniques • Review and update step-by-step plans during the designing process • Investigate the effect of different stitches in joining 	

	<ul style="list-style-type: none"> Evaluate and test ideas and finished product against specification, stating if it's fit for purpose and offer ideas to improve it and the effect different resources may have had 	<p>seams and how they contribute to the overall effectiveness and durability of the product.</p> <ul style="list-style-type: none"> Evaluate the outcome with reference to the design criteria 	
Summer 1	<p>Cooking & Nutrition – Adapted Cottage Pie</p> <ul style="list-style-type: none"> Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed Know and can describe some food processing methods Know the importance of food and drink for active, healthy bodies and can use nutritional information to plan a meal that's healthy Know how to specify a design to make it more appealing to a specific target group Know how to prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. Know about the work of chefs and how this has changed over time 	<ul style="list-style-type: none"> Name a variety of ingredients from different places. Identify on a map places where different ingredients flourish. Say how an ingredient might be prepared and used Explain the importance of a balanced diet Can explain the impact food can have on our body. Use surveys, interviews, questionnaires and web-based resources to find out about the needs and wants of particular individuals and groups; taking these into account Select appropriate tools, equipment and ingredients needed to make a product Can use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking Plan, create, follow, adapt detailed step-by-step plans and evaluate any changes to improve quality Evaluate and test ideas and finished product against specification, stating if it's fit for purpose and offer ideas to improve it and the effect different resources may have had Research and discuss some key chefs/manufacturers of ground-breaking products, considering their impact beyond their intended purpose and discuss sustainability 	<p>Science : Observing changes of state, understanding allergies and bacteria, questioning and exploring these concepts</p> <p>Maths : through market research recording feedback and establishing results. Through pricing and budgeting products.</p> <p>Geography: Climates</p>
Summer 2	<p>Mechanisms - Levers, Gears & Pulleys</p> <ul style="list-style-type: none"> Carry out research of existing products considering: when made, how well they've been made, materials used, how they've been made, fit for purpose Understand mechanical systems in a product. Investigate, analyse and evaluate existing everyday products and existing or pre-made toys that incorporate gear or pulley systems Recognise levers, gears and pulleys and what they are used for Begin to use levers, pulleys or gears to create movement. 	<ul style="list-style-type: none"> Pupils can explain what each mechanism is and how it has changed / been used over time Use surveys, interviews, questionnaires and web-based resources to find out about the needs and wants of particular individuals and groups; taking these into account Develop ideas through discussion and annotated drawings Plan, create, follow, adapt detailed step-by-step plans and evaluate any changes to improve quality 	

	<ul style="list-style-type: none"> • Compare final product to design specification. • Understand how key events and individuals in design and technology have helped shape the world 	<ul style="list-style-type: none"> • Select appropriate tools, equipment and materials needed to make a product • Complete thorough evaluations of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose • Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose 	
--	--	--	--

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 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.