INTENT	The intent of our Design Technology curriculum:	Our DT curriculum is designed to enhance and strengthen children's creativity. Children will develop the skills needed to perform daily tasks confidently which will enable then to grow through learning and experience in an increasingly technological world. The curriculum stimulates imagination and provides practical hands-on experience whilst encouraging children to become innovative risk-takers. Through the Design and Technology curriculum, children will be inspired by engineers, designers, chefs and architects to enable them to design and create a range of structures, mechanisms, textiles, electrical systems and food products with a real-life purpose, considering their own and others' needs, wants and values. Children will be given the opportunities to critique, evaluate and test their own and others' products. The knowledge and skills taught will prepare pupils for their life beyond primary school, supporting their overall knowledge of careers and broadening their aspirations.
IMPLEMENTATION	The experiences your children will receive:	We implement a Design and Technology curriculum that ensures high standards of teaching and learning. Design and Technology is built around essential knowledge, understanding and key skills stated in the National Curriculum. The teaching of Design and Technology follows the cycle: evaluate existing products then design, make and evaluate own products, introducing new technical knowledge as required. The design process is relevant in context, giving purpose and meaning to learning. While making, children are given choice and a range of materials and tools to choose freely from. Children are either given a criteria or they can design their own criteria as a class together. When evaluating, children are able to evaluate their own and others' products against a design criteria.
IMPACT	By the end of their time at Caedmon Primary, we hope:	Children will have clear enjoyment and confidence in design and technology that they will then apply to other areas of the curriculum. Children will ultimately know more, remember more and understand more about Design Technology, demonstrating this knowledge when using tools or skills in other areas of the curriculum and in opportunities out of school. As designers, children will develop skills and attributes they can use beyond school and into adulthood. Children will have an increased awareness of careers relating to design. The large majority of children will achieve age related expectations in Design Technology.

EYFS

Children will learn about:	**Designing**
• Constructing for a purpose • Different structures and joins • Using a range of tools safely • Basic cooking techniques • Exploring every day objects and their mechanisms • Discussing their ideas and thoughts about other products	• Use their imagination as they consider what they can do with different materials • Explores different materials, using all their senses to investigate them • Children to think about and discuss what they want to make • Learn how everyday objects work by dismantling things.
Making	**Evaluating**
• Create closed shapes with continuous lines, and begin to use these shapes to represent objects • Creates collaboratively sharing ideas, resources and skills • Collect natural materials from around school • Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces • Safely uses and explores a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function • Can manipulate and play with different materials • Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park • To learn to construct with a purpose in mind	• Share their creations with the class • Shows an interest in the way sound makers and instruments can be altered • Develops their own ideas through experimentation with diverse materials • Learning about planning and adapting initial ideas to make them better
Technical Knowledge	**Cooking &Nutrition**
• Begin to use the language of designing and making, e.g. join, build and shape • Selects tools and techniques needed to shape, assemble and join materials • To learn how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters.	• Practise basic methods such as stirring, mixing and blending ingredients • Explain how ingredients change during cooking e.g. the cake rises • Children have basic hygiene awareness

KS1

<table>
<tr><th>Ready to progress EYFS statements</th><th>Children will learn about:</th><th>Designing</th></tr>
<tr><td rowspan="3">Children can …

Design
Use their imagination to create products, utilising available materials

Make
Use different materials, tools and joins to create simple products for a purpose

Evaluate
Share their ideas with their peers / class / adults

Technical Knowledge
Use some simple language to explain their method and name the basic tools they used

Cooking & Nutrition
Join in with simple cooking actions, suggesting ingredient names and basic hygiene steps.</td><td>Rolling Programme 1:

Mechanisms - Sliders and Levers: fairy-tale storyboard

Food – Preparing Fruit and Vegetables: fruit and vegetable kebabs

Rolling Programme 2:

Mechanisms - Wheels and axles: moving fire engines

Textiles - Templates and Joining Techniques: Sewing 3D Felt flowers

Structures - Freestanding Structures: Lighthouse models</td><td>Understanding contexts, users and purposes:
work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment
state what products they are designing and making
say whether their products are for themselves or other users
describe what their products are for
say how their products will work
say how they will make their products suitable for their intended users
use simple design criteria to help develop their ideas
Generating, developing, modelling and communicating ideas:
generate ideas by drawing on their own experiences
use knowledge of existing products to help come up with ideas
develop and communicate ideas by talking and drawing
model ideas by exploring materials, components and construction kits and by making templates and mock-ups
use information and communication technology, where appropriate, to develop and communicate their ideas</td></tr>
<tr><td>Making</td><td>Evaluating</td></tr>
<tr><td>Planning
plan by suggesting what to do next
select from a range of tools and equipment, explaining their choices</td><td>Own ideas and products
talk about their design ideas and what they are making
make simple judgements about their products and ideas against design criteria
suggest how their products could be improved</td></tr>
</table>

	• select from a range of materials and components according to their characteristics Practical skills and techniques • follow procedures for safety and hygiene • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • measure, mark out, cut and shape materials and components • assemble, join and combine materials and components • use finishing techniques, including those from art and design	Existing products • what products are • who products are for • what products are for • how products work • how products are used • where products might be used • what materials products are made from • what they like and dislike about products
	Technical Knowledge	**Cooking &Nutrition**
	Making products work • about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • how freestanding structures can be made stronger, stiffer and more stable • that a 3-D textiles product can be assembled from two identical fabric shapes • that food ingredients should be combined according to their sensory characteristics • the correct technical vocabulary for the projects they are undertaking	Where food comes from • that all food comes from plants or animals • that food has to be farmed, grown elsewhere (e.g. home) or caught Food preparation, cooking and nutrition • how to name and sort foods into the five groups in The eatwell plate • that everyone should eat at least five portions of fruit and vegetables every day • how to prepare simple dishes safely and hygienically, without using a heat source • how to use techniques such as cutting, peeling and grating

LKS2

<table>
<tr><th>Ready to progress KS1 statements</th><th>Children will learn about:</th><th>Designing</th></tr>
<tr><td rowspan="2">Children can …

Design
• Explain the purpose of their design including: context, audience and purpose
• Create plans for ideas using simple draws or models and by looking at examples similar to their intended design for ideas

Make
• Choose the correct tools and materials to create their design, explaining what their next step will be
• Complete their designs safely, with an increasing awareness of different joins or finishing techniques to create their desired effect

Evaluate
• Discuss their product, suggesting strengths and development areas
• Consider the audience and purpose of existing products, looking at the way it is designed to make</td><td>Rolling Programme 1:

Food – Healthy & Varied Diet: Healthy kitchen meals

Textiles - 2D Shape to 3D product: Roman Purses

Electrical Systems – Simple circuits & switches: Lighting up local landmarks

Rolling Programme 2:

Structures - Shell Structures: Tudor Houses

Eco Explorer Enrichment Project

Mechanical Systems - Levers & Linkages: Making a Shaduf</td><td>Understanding contexts, users and purposes
• work within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment
• describe the purpose of their products
• indicate the design features of their products that will appeal to intended users
• explain how particular parts of their products work
• gather information about the needs and wants of particular individuals and groups
• develop their own design criteria and use these to inform their ideas
Generating, developing, modelling and communicating ideas
• share and clarify ideas through discussion
• model their ideas using prototypes and pattern pieces
• use annotated sketches to develop and communicate their ideas
• use computer-aided design to develop and communicate their ideas (To be introduced after new curriculum is implemented)
• generate ideas, focusing on the needs of the user</td></tr>
<tr><td>Making</td><td>Evaluating</td></tr>
<tr><td>Planning
• select and explain tools and equipment suitable for the task
• select and explain materials and components suitable for the task
• order the main stages of making
Practical Skills & Techniques
• follow procedures for safety and hygiene
• use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components</td><td>Own Ideas & Products
• identify the strengths and areas for development in their ideas and products
• consider the views of others to improve their work
• refer to their design criteria as they design and make
• use their design criteria to evaluate their completed products
Existing Products
• how well products have been designed
• how well products have been made
• why materials have been chosen
• what methods of construction have been used
• how well products work</td></tr>
</table>

plausible suggestions about how it works **Cooking & Nutrition** • An awareness of where food comes from • Understand a healthy diet including the eatwell plate • Demonstrate basic kitchen safety and hygiene	• measure, mark out, cut and shape materials and components with some accuracy • assemble, join and combine materials and components with some accuracy • apply a range of finishing techniques, including those from art and design, with some accuracy	• how well products achieve their purposes • how well products meet user needs and wants • who designed and made the products • where products were designed and made • when products were designed and made • whether products can be recycled or reused Key events and individuals • about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
	Technical Knowledge	**Cooking &Nutrition**
	Making products work • to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking • how mechanical systems such as levers and linkages or pneumatic systems create movement • how simple electrical circuits and components can be used to create functional products • how to program a computer to control their products • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product • that food ingredients can be fresh, pre-cooked and processed	Where food comes from • that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world Food preparation, cooking and nutrition • how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate • that to be active and healthy, food and drink are needed to provide energy for the body

UKS2

<table>
<tr><th>Ready to progress LKS2 statements</th><th>Children will learn about:</th><th>Designing</th></tr>
<tr><td rowspan="2">Children can …

Design
• Explain the purpose of their design, including context, audience and purpose, explaining how parts will work and how their research has influenced their design
• Create plans, including annotated sketches, to show their design

Make
• Select tools and materials and explain their choices for these as part of a sequenced step by step making plan
• Use an increasing range of tools and materials with some accuracy when measuring and cutting and begin to think about finishing techniques

Evaluate
• Evaluate their own product with reference to the design criteria given
• Evaluate existing products critically, relating to design intention and purpose</td><td>Rolling Programme 1:

Food – Celebrating Culture & Seasonality: Mexican Food

Mechanical Systems – Pulleys or Gears: Mars Rover

Structures - Frame Structures: Longboats

Rolling Programme 2:

Mechanical systems – Cams

Electrical systems monitoring and controlling - Crumbles

Textiles – Combining different fabric shapes</td><td>Understanding contexts, users and purposes
• describe the purpose of their products
• indicate the design features of their products that will appeal to intended users
• explain how particular parts of their products work drawing upon appropriate technical vocabulary
• carry out research, using surveys, interviews, questionnaires and web-based resources
• identify the needs, wants, preferences and values of particular individuals and groups
• develop a simple design specification to guide their thinking
Generating, developing, modelling and communicating ideas
• share and clarify ideas through discussion
• model their ideas using prototypes and pattern pieces
• use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas
• use computer-aided design to develop and communicate their ideas
• generate innovative ideas, drawing on research
• make design decisions, taking account of constraints such as time, resources and cost</td></tr>
<tr><td>Making</td><td>Evaluating</td></tr>
<tr><td>Planning
• select tools and equipment suitable for the task
• explain their choice of tools and equipment in relation to the skills and techniques they will be using
• select materials and components suitable for the task
• explain their choice of materials and components according to functional properties and aesthetic qualities
• produce appropriate lists of tools, equipment and materials that they need
• formulate step-by-step plans as a guide to making
Practical Skills & Techniques
• follow procedures for safety and hygiene</td><td>Own Ideas & Products
• identify the strengths and areas for development in their ideas and products
• consider the views of others, including intended users, to improve their work
• critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make
• evaluate their ideas and products against their original design specification Existing Products
• how well products have been designed
• how well products have been made
• why materials have been chosen</td></tr>
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<td rowspan="2">

- Identify key designers within the technical subjects they have explored

Cooking & Nutrition

- An awareness of where food comes from across the globe
- Understand a healthy diet, including the eatwell plate, and the importance of being balanced
- Explain what a savoury dish is and some of the techniques / ingredients used to create one

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- accurately measure, mark out, cut and shape materials and components
- accurately assemble, join and combine materials and components
- accurately apply a range of finishing techniques, including those from art and design
- use techniques that involve a number of steps
- demonstrate resourcefulness when tackling practical problems

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- what methods of construction have been used
- how well products work
- how well products achieve their purposes
- how well products meet user needs and wants
- how much products cost to make
- how innovative products are
- how sustainable the materials in products are
- what impact products have beyond their intended purpose

Key events and individuals

- about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products

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<td>

Technical Knowledge

Making products work

- to use learning from science to help design and make products that work
- how to use learning from mathematics to help design and make products that work
- that materials have both functional properties and aesthetic qualities
- that materials can be combined and mixed to create more useful characteristics
- that mechanical and electrical systems have an input, process and output
- the correct technical vocabulary for the projects they are undertaking
- how mechanical systems such as cams or pulleys or gears create movement
- how more complex electrical circuits and components can be used to create functional products
- how to program a computer to monitor changes in the environment and control their products
- how to reinforce and strengthen a 3D framework
- that a 3D textiles product can be made from a combination of fabric shapes
- that a recipe can be adapted by adding or substituting one or more ingredients

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Cooking &Nutrition

Where food comes from

- that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world
- that seasons may affect the food available
- how food is processed into ingredients that can be eaten or used in cooking

Food preparation, cooking and nutrition

- how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source
- how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
- that recipes can be adapted to change the appearance, taste, texture and aroma
- that different food and drink contain different substances – nutrients, water and fibre – that are needed for health

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