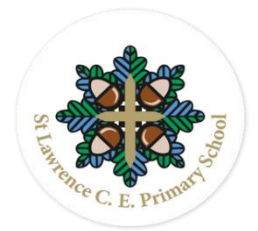



Curriculum Subject: Design and Technology

Subject Working Group: Alison Moore, Emily Barker and Laith Al-Asmar



Curriculum Overview and Statement of Intent, Implementation, and Impact.

<p style="text-align: center;">Motto</p> <p style="text-align: center;">“Being the best we can be, because with God all things are possible”</p> <p>‘For I know the plans for you,’ declares God, ‘plans to prosper you and not harm you, plans to give you hope and a future.’ Jeremiah 29:11</p>	<p style="text-align: center;">Our Core Christian Values</p> <p style="text-align: center;">Compassion Courage Respect Honesty Thankfulness Forgiveness</p>  A colorful poster titled 'Our Core Values' with a decorative border. It features six small illustrations: a person helping another, a person holding a heart, a person with a crown, a person with a star, a person with a flower, and a person with a gift. The text 'Our Core Values' is written in a stylized font at the top.
<p style="text-align: center;">Vision & Intent</p> <p style="text-align: center;">Together, through ‘The St Lawrence Way’ we will embrace the love of learning, be curious of, and be inspired by the endless possibilities that our wonderful world can offer.</p>	
<p>Mission/Implementation Through the ‘St. Lawrence Way’ we will.....</p> <ul style="list-style-type: none">➤ Design a curriculum that: recognises children’s prior learning, providing first-hand learning experiences, allowing the children to build resilience and become creative, critical thinkers who have the courage to become lifelong learners fulfil their aspirations.➤ Recognise every child as a unique individual. We teach the children to be tolerant of one another whilst understanding and respecting difference and diversity, knowing that all have been created in the image of God.➤ Help pupils and adults to develop lifelong learning habits so that they can contribute successfully to their local community and navigate an increasingly complex national and global community so that they recognise their place in the world and show thankfulness for what they have.➤ Foster a Christian community whereby everyone feels valued and has a strong sense of belonging building upon strong, caring relationships that are based on mutual respect; demonstrated through courtesy, forgiveness and reconciliation.➤ Value the community to which we belong by listening, being honest with each other whilst showing compassion, and creating opportunities for the pupil voice to be heard, which will support good mental health and the wellbeing for all.	



Intent, Implementation and Impact for Design Technology

Intent	Implementation	Impact
<p>Here at St. Lawrence CE Primary School, we intend to build a Design Technology curriculum which is inspiring, rigorous, and practical. We want our children to use creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We intend for all children to acquire appropriate subject knowledge, skills and understanding as set out in the National Curriculum. It is our aim to create strong cross curricular links with other subjects, such as Mathematics, Science, Computing, and Art. We want Design and Technology to prepare our children, to give them the opportunities, responsibilities, and experiences they need to be successful in later life.</p>	<p>Design and Technology is a crucial part of school life and learning and it is for this reason that as a school we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum.</p> <p>This is implemented through:</p> <ul style="list-style-type: none">• A well thought out, whole school, yearly overview of the DT curriculum which allows for progression across year groups in all areas of DT (textiles, mechanisms and structures, Food and Nutrition)• Well planned and resourced projects providing children with a hands-on and enriching experiences• A range of skills being taught ensuring that children are aware of health and safety issues related to the tasks undertaken• Teachers being given ownership and flexibility to plan for Design and Technology; often teaching DT as a block of lessons to allow the time needed for the children to be critical, inventive and reflective on their work.• Each project from Year 1 to Year 6 addressing the principles of designing, making, and evaluating and incorporating relevant technical knowledge and understanding in relevant contexts.• Pupils being introduced to specific designers, chefs, nutritionists, etc. helping to engender an appreciation of human creativity and achievement and increase the cultural capital from which they can draw in the future.• Promoting gardening sessions across school where children learn about where our food comes from by growing their own.	<p>Children will have clear enjoyment and confidence in Design and Technology that they will then apply to other areas of the curriculum. Through carefully planned and implemented learning activities the pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They gain a firm foundation of knowledge and skills to see them equipped to take on further learning. Pupil's skills and knowledge are assessed, throughout lessons and a summative assessment is completed termly. This informs the Design and Technology team of any further areas for curriculum development, pupil support and/or training requirements for staff.</p>



Yearly DT Overview Cycle A


Cycle A	Autumn Textiles	Spring Structures and Mechanisms	Summer Food and Nutrition
Class 1 Reception	<p>Why do we celebrate? (Autumn 2) Design, Make and Evaluate Delightful Decorations</p>	<p>Where is that bear? (Spring 2) Design, Make and Evaluate Moving Bear</p>	<p>How does my garden grow? (Summer 1) Design, Make and Evaluate Grow a vegetable – cutting, slicing, grating</p>
Class 2 Y1/2	<p>Why am I proud to be British? (Autumn 1) – Geography Driver Topic</p> <p>Design, Make and Evaluate Textiles – Making a money pouch Kapow unit</p>	<p>What are the hidden gems in our garden? (Spring 2) – Geography Driver Topic</p> <p>Design, Make and Evaluate Mechanisms – Making a moving story book Kapow Unit (linked to minibeasts)</p>	<p>Why is the amazon amazing? (Summer 2) –Geography Driver topic</p> <p>Design, Make and Evaluate A balanced diet – Making a wrap Kapow unit</p>
Class 3 Y3/4	<p>How far is it from Land’s End to John O’Groats? (Autumn 2) – Geography Driver</p> <p>Design, Make and Evaluate Textiles – Make a Cushion Kapow Unit</p>	<p>Why travel to a European country? (Spring 2)</p> <p>Design, Make and Evaluate Electrical Systems – Torches Kapow Unit</p>	<p>What do we know about France? (Summer 2) – Geography Driver</p> <p>Design, Make and Evaluate Food: Eating Seasonally Kapow Unit</p>
Class 4 Y5/6	<p>America: Comparative study? (Autumn 2) – Geography/Science Driver</p> <p>Design, Make and Evaluate Textiles – Stuffed Toys Kapow Unit</p>	<p>How has the monarchy shaped British culture? (Spring 2) – History</p> <p>Design, Make and Evaluate Mechanical Systems – Automata Toys Kapow Unit</p>	<p>Extreme Earth: What is a natural disaster? (Summer 2) – Geography</p> <p>Design, Make and Evaluate Making Burgers (PlanBee)</p>

Yearly DT Overview Cycle B



Cycle B	Autumn Textiles	Spring Structures and Mechanisms	Summer Food and Nutrition
Class 1 Reception	<p>Why do we celebrate? (Autumn 2) Design, Make and Evaluate Delightful Decorations</p>	<p>Where is that bear? (Spring 2) Design, Make and Evaluate Moving Pictures</p>	<p>How does my garden grow? (Summer 1) Design, Make and Evaluate Grow a vegetable – cutting, slicing, grating</p>
Class 2 Y1/2	<p>Would you play with a Victorian toy? (Autumn 2) – History Driver</p> <p>Design, Make and Evaluate Textiles – Making a Puppet Kapow Unit (linked to Toys)</p>	<p>What is like to be Royal? (Spring 2) – History Driver</p> <p>Design, Make and Evaluate Structures – Make a throne for the Queen Kapow unit linked to Royal life</p>	<p>Have policemen/women changed over the years? (Summer 2) – History Driver</p> <p>Design, Make and Evaluate Food Detective – Make a fruit smoothie Kapow Unit</p>
Class 3 Y3/4	<p>Are all parts of the UK the same? (Autumn 2) – Geography driver</p> <p>Design, Make and Evaluate Textiles: Fastenings Kapow Unit</p>	<p>Can you hear the rhythm of the rain? (Spring 2) – Geography driver</p> <p>Design, Make and Evaluate Structures - Making mini greenhouses PlanBee Unit</p>	<p>North and South America: Countries or continents? (Summer 2) – Geography driver</p> <p>Design, Make and Evaluate American Food – PlanBee</p>
Class 4 Y5/6	<p>Who lived in England 1500 years ago? (Autumn 1) – History Driver</p> <p>Design, Make and Evaluate Textiles: Waistcoats Kapow Unit (linked to Anglo Saxons)</p>	<p>Where was Charles Darwin born? (Spring 2) – Geography/Science</p> <p>Design, Make and Evaluate Structures Making bird boxes – PlanBee</p>	<p>What would it have been like to be an evacuee? (Summer 1) – History Driver</p> <p>Design, Make and Evaluate Food –Come Dine with Me Kapow Unit Great British dishes (WW2) -Rationing</p>

RECEPTION

<p>EYFS Document:</p> 	<p>Development Matters (DfE 2020) Nursery - Creating with Materials</p> <ul style="list-style-type: none"> • Make imaginative and complex ‘small worlds’ with blocks and construction kits, such as a city with different buildings and a park. • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Join different materials and explore different textures. 	<p>Development Matters (DfE 2020) Reception - Creating with Materials</p> <ul style="list-style-type: none"> • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces • Uses tools for a purpose 	<p>EYFS (ELG) End of Reception - Creating with Materials</p> <ul style="list-style-type: none"> • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used.
Design	Make	Evaluate	
<ul style="list-style-type: none"> ➤ Begin to use the language of designing and making, e.g. join, build and shape. – ➤ Learning about planning and adapting initial ideas to make them better. 	<ul style="list-style-type: none"> ➤ To learn to construct with a purpose in mind. ➤ Selects tools and techniques needed to shape, assemble and join materials. 	<p>Begin to talk about changes made during the making process, e.g. making a decision to use a different joining method.</p>	
Technical Knowledge	Cooking and Nutrition	Planned Projects	
<ul style="list-style-type: none"> ➤ -To learn how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters. ➤ Learn how everyday objects work by dismantling things. 	<ul style="list-style-type: none"> ➤ To begin to understand some of the tools, techniques and processes involved in food preparation. – ➤ Children have basic hygiene awareness. 	<p>Autumn – Textiles Make a Christmas Tree Decoration Spring – Structures and Mechanisms Moving Bear Summer – Food and Nutrition Grow a Vegetable and use it for preparation</p>	

Key Stage 1 National Curriculum Objectives

National Curriculum Objectives for end of KS1:



Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should be taught to:

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, templates, mock-ups and, where appropriate, information and communication technology

Make

- 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

Evaluate

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

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Cooking and Nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to: Key stage 1

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

Year 1

Substantive Knowledge and Skills Progression

Developing planning and communicating ideas

- Begin to draw on their own experience to help generate ideas and research conducted on criteria.
- Begin to understand the development of existing products: What they are for, how they work, materials used.
- Start to suggest ideas and explain what they are going to do.
- Understand how to identify a target group for what they intend to design and make based on a design criteria.
- Begin to develop their ideas through talk and drawings
- Make templates and mock ups of their ideas in card and paper or using ICT.

Working with tools, equipment, materials and components to make quality products

- Begin to make their design using appropriate techniques.
- Begin to build structures, exploring how they can be made stronger, stiffer and more stable.
- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Projects

Textiles

Making a money pouch
Making a puppet

Mechanisms

Making a moving story book

Structures - Make a throne for the Queen

Food and Nutrition

A balanced diet –
Making a wrap
Make a fruit smoothie

Evaluating processes and products

- Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria).
- When looking at existing products explain what they like and dislike about products and why.
- Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.

Food and Nutrition

- Begin to understand that all food comes from plants or animals. Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught.
- Start to understand how to name and sort foods into the five groups in 'The Eat well plate'
- Begin to understand that everyone should eat at least five portions of fruit and vegetables every day.
- Know how to prepare simple dishes safely and hygienically, without using a heat source.
- Now how to use techniques such as cutting, peeling, and grating.

Year 2

Substantive Knowledge and Skills Progression

Developing planning and communicating ideas

- Start to generate ideas by drawing on their own and other people's experiences.
- Begin to develop their design ideas through discussion, observation, drawing and modelling.
- Identify a purpose for what they intend to design and make. Understand how to identify a target group for what they intend to design and make based on a design criteria
- Develop their ideas through talk and drawings and label parts.
- Make templates and mock ups of their ideas in card and paper or using ICT.

Working with tools, equipment, materials and components to make quality products

- Begin to select tools and materials; use correct vocabulary to name and describe them.
- Build structures, exploring how they can be made stronger, stiffer and more stable.
- With help measure, cut and score with some accuracy. Learn to use hand tools safely and appropriately.
- Start to assemble, join and combine materials in order to make a product.
- Demonstrate how to cut, shape and join fabric to make a simple product. Use basic sewing techniques.
- Start to choose and use appropriate finishing techniques based on their own ideas.

Projects

Textiles

Making a money pouch
Making a puppet

Mechanisms

Making a moving story book
Make a throne for the Queen

Food and Nutrition

A balanced diet –
Making a wrap
Make a fruit smoothie

Evaluating processes and products

- Evaluate their work against their design criteria.
- Look at a range of existing products explain what they like and dislike about products and why.
- Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. With confidence talk about their ideas, saying what they like and dislike about them.

Food and Nutrition

- Understand that all food comes from plants or animals.
- Know that food has to be farmed, grown elsewhere (e.g. home) or caught.
- Understand how to name and sort foods into the five groups in 'The Eat well plate'
- Know that everyone should eat at least five portions of fruit and vegetables every day.
- Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source.
- Demonstrate how to use techniques such as cutting, peeling and grating.

Key Stage 2 National Curriculum Objectives

National Curriculum Objectives for end of KS2:



Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- 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

- 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

- 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

Technical Knowledge

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

Cooking and Nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to: Key Stage 2

- 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.

Year 3

Substantive Knowledge and Skills Progression

Developing planning and communicating ideas

- With growing confidence generate ideas for an item, considering its purpose and the user/s.
- Start to order the main stages of making a product.
- Identify a purpose and establish criteria for a successful product.
- Understand how well products have been designed, made, what materials have been used and the construction technique.
- Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.
- Start to understand whether products can be recycled or reused.
- Know to make drawings with labels when designing. When planning explain their choice of materials and components including function and aesthetics.

Working with tools, equipment, materials and components to make quality products

- Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components.
- Explain their choice of tools and equipment in relation to the skills and techniques they will be using.
- Start to understand that mechanical and electrical systems have an input, process and output.
- Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.
- Know how electrical circuits and components can be used to create functional products.
- Measure, mark out, cut, score and assemble components with more accuracy.
- Start to work safely and accurately with a range of simple tools. Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work.
- Start to measure, tape or pin, cut and join fabric with some accuracy,

Projects

Textiles

Make a Cushion

Textiles: Fastening

Mechanisms

Electrical Systems –

Torches

Structures – Making

mini greenhouses

Food and Nutrition

Eating Seasonally

American Food

Evaluating processes and products

- Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose
- Begin to disassemble and evaluate familiar products and consider the views of others to improve them.
- Evaluate the key designs of individuals in design and technology has helped shape the world.

Food and Nutrition

- Start to know 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.
- Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.
- Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
- Start to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate.'
- Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.

Year 4

Substantive Knowledge and Skills Progression

Developing planning and communicating ideas

- Start to generate ideas, considering the purposes for which they are designing- link with Mathematics and Science.
- Confidently make labelled drawings from different views showing specific features.
- Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail. Identify the strengths and areas for development in their ideas and products.
- When planning considers the views of others, including intended users, to improve their work.
- Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground -breaking products.
- When planning explain their choice of materials and components according to function and aesthetic.

Working with tools, equipment, materials and components to make quality products

- Select a wider range of tools and techniques for making their product safely.
- Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.
- Start to join and combine materials and components accurately in temporary and permanent ways.
- Know how mechanical systems such as cams or pulleys or gears create movement.
- Understand how more complex electrical circuits and components can be used to create functional product
- Understand how to reinforce and strengthen a 3D framework.
- Now sew using a range of different stitches, to weave and knit.
- Demonstrate how to measure, tape or pin, cut and join fabric with some accuracy.
- Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.

Projects

Textiles

Make a Cushion

Textiles: Fastening

Mechanisms

Electrical Systems –

Torches

Structures – Making

mini greenhouses

Food and Nutrition

Eating Seasonally

American Food

Evaluating processes and products

- Evaluate their products carrying out appropriate tests.
- Start to evaluate their work both during and at the end of the assignment.
- Be able to disassemble and evaluate familiar products and consider the views of others to improve them.
- Evaluate the key designs of individuals in design and technology has helped shape the world.

Food and Nutrition

- Understand 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.
- Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.
- Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
- Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'
- Know that to be active and healthy, food and drink are needed to provide energy for the body.

Year 5

Substantive Knowledge and Skills Progression

Developing planning and communicating ideas

- Start to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.
- Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
- With growing confidence apply a range of finishing techniques, including those from art and design.
- Draw up a specification for their design- link with Mathematics and Science.
- Use results of investigations, information sources, including ICT when developing design ideas.
- With growing confidence select appropriate materials, tools and techniques.
- Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.

Working with tools, equipment, materials and components to make quality products

- Select appropriate materials, tools and techniques e.g. 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. Understand how mechanical systems such as cams or pulleys or gears create movement.
- Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products.
- Begin to measure and mark out more accurately.
- Demonstrate how to use skills in using different tools and equipment safely and accurately with growing confidence cut and join with accuracy to ensure a good-quality finish to the product.
- Weigh and measure accurately (time, dry ingredients, liquids).
- Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.

Projects

- Textiles
- Stuffed Toys
- Waistcoats
- Mechanical Systems
- Automata Toys
- Structures
- Making Bird boxes
- Food and Nutrition
- Making Burgers
- Come Dine with me

Evaluating processes and products

- Start to evaluate a product against the original design specification and by carrying out tests
- Evaluate their work both during and at the end of the assignment.
- Begin to evaluate it personally and seek evaluation from others.
- Evaluate the key designs of individuals in design and technology has helped shape the world.

Food and Nutrition

- Understand 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.
- Begin to understand that seasons may affect the food available. Understand how food is processed into ingredients that can be eaten or used in cooking.
- Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.
- Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
- Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.

Year 6

Substantive Knowledge and Skills Progression

Developing planning and communicating ideas

- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.
- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
- Accurately apply a range of finishing techniques, including those from art and design.
- Draw up a specification for their design- link with Mathematics and Science.
- Plan the order of their work, choosing appropriate materials, tools and techniques.
- Suggest alternative methods of making if the first attempts fail.
- Identify the strengths and areas for development in their ideas and products.
- Know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.

Working with tools, equipment, materials and components to make quality products

- Confidently select appropriate tools, materials, components and techniques and use them.
- Use tools safely and accurately. Assemble components to make working models.
- Aim to make and to achieve a quality product.
- With confidence pin, sew and stitch materials together to create a product. Demonstrate when make modifications as they go along.
- Construct products using permanent joining techniques.
- Understand how mechanical systems such as cams or pulleys or gears create movement.
- Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products.
- Know how to reinforce and strengthen a 3D framework.
- Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.

Projects

Textiles

Stuffed Toys

Waistcoats

Mechanical Systems

Automata Toys

Structures

Making Bird boxes

Food and Nutrition

Making Burgers

Come Dine with me

Evaluating processes and products

- Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests.
- Evaluate their work both during and at the end of the assignment.
- Record their evaluations using drawings with labels. Evaluate against their original criteria and suggest ways that their product could be improved.
- Evaluate the key designs of individuals in design and technology has helped shape the world.

Food and Nutrition

- Know 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.
- Understand that seasons may affect the food available. Understand how food is processed into ingredients that can be eaten or used in cooking.
- Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.
- Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
- Know different food and drink contain different substances – nutrients, water and fibre – that are needed for health.

