



# Design and Technology Curriculum Overview

## Silverdale St John's CE Primary School



Year A	Autumn - How Does It Work?	Spring - Watery Worlds	Summer - The Great Outdoors
Curlews Year R/1	MECHANISMS CLASS CHRISTMAS DESIGN PROJECT – DESIGN AND MAKE A MOVING CHRISTMAS CARD/DECORATION	DESIGN, MAKE, EVALUATE ENTRIES FOR SPRING HORICULTURAL SHOW	FOOD - DESIGN, MAKE, EVALUATE ENTRIES FOR GRAND SUMMER BAKE-OFF
Bitterns Year 2/3	MECHANISMS (Y3 – ELECTRICAL SYSTEMS)	DESIGN, MAKE, EVALUATE ENTRIES FOR SPRING HORICULTURAL SHOW	FOOD
Harriers Year 4/5/6	MECHANISMS & ELECTRICAL SYSTEMS	DESIGN, MAKE, EVALUATE ENTRIES FOR SPRING HORICULTURAL SHOW	FOOD
Year B	Autumn - Happy, Healthy Me!	Spring - Time Travel	Summer - Here, There & Everywhere
Curlews Year R/1	FOOD LINK TO SCIENCE – FOOD AND NUTRITION	STRUCTURES LINK TO ART - 3D ART	TEXTILES LINK TO ART – COLLAGE
Bitterns Year 2/3	FOOD	STRUCTURES	TEXTILES
Harriers Year 4/5/6	FOOD	STRUCTURES	TEXTILES

# Design & Technology - Year A

2023/2024 2025/2026	Autumn - How Does It Work?	Spring - Watery Worlds LINK TO ART - PRINTING	Summer - The Great Outdoors
<b>Curlews Year R/1</b>	<b>MECHANISMS CLASS CHRISTMAS DESIGN PROJECT – DESIGN AND MAKE A MOVING CHRISTMAS CARD/DECORATION</b>	<b>DESIGN, MAKE, EVALUATE ENTRIES FOR SPRING HORICULTURAL SHOW</b>	<b>FOOD - DESIGN, MAKE, EVALUATE ENTRIES FOR GRAND SUMMER BAKE-OFF</b>
<b>NC Links</b>	generate, develop, model and communicate their ideas through talking, drawing, templates and mock-ups explore and use mechanisms (levers, sliders, wheels and axles) in their products	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 select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing)	use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from explore and evaluate a range of existing products evaluate their ideas and products against design criteria
<b>Topic outcomes</b>	To join appropriately for different materials and situations e.g. glue, tape. To mark out materials to be cut using a template. To fold, tear and cut paper and card. To cut along lines, straight and curved. To use a hole punch. To insert paper fasteners for card. To experiment with levers and sliders to find different ways of making things move in a 2D plane.	<b>DESIGN</b> Use pictures and words to convey what they want to design/make. Propose more than one idea. Select appropriate technique explaining: First... Next... Last.... explore ideas by rearranging materials. Use drawings to record ideas as they are developed. Add notes to drawings to help explanations. <b>MAKE</b> Discuss their work as it progresses. Select materials from a limited range that will meet the design criteria. Select and name the tools needed to work the materials. Explain what they are making and which materials they are using and why. Name the tools they are using. Describe what they need to do next. <b>EVALUATE</b> Explore existing products and investigate how they have been made. Talk about their design as they develop and identify good and bad points. Say what they like and do not like about items they have made and attempt to say why. Discuss how closely their finished product meets their design criteria and how well it meets the needs of the user.	To develop a food vocabulary using taste, smell, texture and feel. To group familiar food products. To explain where food comes from. To cut, peel, grate, chop a range of ingredients. To work safely and hygienically. To understand the need for a variety of foods in a diet. To measure and weigh food items using non-statutory measures e.g. spoons, cups.
<b>Bitterns Year 2/3</b>	<b>MECHANISMS (Y3 – ELECTRICAL SYSTEMS)</b>	<b>DESIGN, MAKE, EVALUATE ENTRIES FOR SPRING HORICULTURAL SHOW</b>	<b>FOOD</b>
<b>NC Links</b>	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 explore and use mechanisms (levers, sliders, wheels and axles) in their products apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use electrical systems in their products (series circuits incorporating switches, bulbs, buzzers and motors)	use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individual or groups	understand where food comes from. understand and apply the principles of a healthy and varied diet generate, develop, model and communicate their ideas through discussion and annotated sketches prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
<b>Topic outcomes</b>	To join appropriately for different materials and situations e.g. glue, tape. To try out different axle fixings and their strengths and weaknesses. To use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels. To cut dowel using hacksaw and bench hook. To attach wheels to a chassis using an axle. To mark out materials to be cut using a template. To cut along lines, straight and curved. To use mechanical systems such as gears, pulleys, levers and linkages (lolly sticks and card). To incorporate a circuit into a model. To use electrical systems such as switches bulbs and buzzers.	<b>DESIGN</b> - Develop more than one design Plan a sequence of actions to make a product and record the plan by drawing using annotated sketches. Plan order of work and decide upon tools and materials. <b>MAKE</b> - Prepare pattern pieces as templates for their design, cut slots and internal shapes. Select from a range of tools for cutting shaping joining and finishing, use tools with accuracy. Select from techniques for different parts of the process. Select from materials according to their functional properties. Use appropriate finishing techniques. <b>EVALUATE</b> - Investigate similar products to the one to be made. Draw/sketch products to help analyse and understand how products are made. Identify the strengths and weaknesses of their design ideas in relation to purpose/user. Decide which design idea to develop. Discuss how well the finished product meets the design criteria of the user.	To develop sensory vocabulary/knowledge using, smell, taste, texture and feel. To analyse the taste, texture, smell and appearance of a range of foods (predominantly savoury). To follow instructions/recipes. To join and combine a range of ingredients. To explore seasonality of vegetables and fruit. To find out which fruit and vegetables are grown in countries/continents studied in Geography. To develop an understanding of how meat/fish are reared/caught.
<b>Harriers Year 4/5/6</b>	<b>MECHANISMS &amp; ELECTRICAL SYSTEMS</b>	<b>DESIGN, MAKE, EVALUATE ENTRIES FOR SPRING HORICULTURAL SHOW</b>	<b>FOOD</b>
<b>NC Links</b>	investigate and analyse a range of existing products understand how key events and individuals in design and technology have helped shape the world apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products (gears, pulleys, cams, levers and linkages) apply their understanding of computing to program, monitor and control their products	use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individual or groups	generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and computer-aided design 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
<b>Topic outcomes</b>	To develop a technical vocabulary appropriate to the project. To use mechanical systems such as cams, pulleys and gears. To use linkages to make movement larger or more varied. To use electrical systems such as motors. To program, monitor and control using ICT.	<b>DESIGN</b> - List tools needed - plan the sequence of work - record ideas using annotated diagrams. Devise step by step plans which can be read / followed by someone else. Use exploded diagrams and cross-sectional diagrams to communicate ideas. Decide which design idea to develop. <b>MAKE</b> - Make prototypes. Produce detailed lists of ingredients / components / materials and tools. Cut accurately and safely to a marked line. Select from and use a wide range of materials. Use appropriate finishing techniques for the project. Refine their product - review and rework/improve. <b>EVALUATE</b> - Research and evaluate existing products. Consider user and purpose. Identify strengths and weaknesses of design ideas. Consider and explain how the finished product could be improved related to design criteria. Discuss how well the finished product meets the design criteria of the user.	To prepare food products, taking into account, the properties of ingredients and sensory characteristics. To weigh and measure using scales. To select and prepare foods for a particular purpose. To work safely and hygienically. To use a range of cooking techniques. To know where and how ingredients are grown and processed.

# Design & Technology - Year B

2022/2023 2024/2025	<b>Autumn Happy, Healthy Me!</b>	<b>Spring Time Travel</b>	<b>Summer Here, There and Everywhere</b>
<b>Curlews Year R/1</b>	<b>FOOD LINK TO SCIENCE – FOOD AND NUTRITION</b>	<b>STRUCTURES LINK TO ART - 3D ART</b>	<b>TEXTILES LINK TO ART – COLLAGE</b>
<b>NC Links</b>	use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from	build structures, exploring how they can be made stronger, stiffer and more stable select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing)	select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) select from and use a range of materials and components, including textiles, according to their characteristics
<b>Topic outcomes</b>	To develop a food vocabulary using taste, smell, texture and feel. To group familiar food products e.g. fruit and vegetables. To explain where food comes from. To understand the need for a variety of foods in a diet.	To explore how to make structures stronger. To investigate different techniques for stiffening a variety of materials. To test different methods of enabling structures to remain stable. To join appropriately for different materials and situations e.g. glue, tape. To mark out materials to be cut using a template. To use a glue gun with close supervision.	To cut out shapes which have been created by drawing round a template onto the fabric. To join fabrics by using methods such as running stitch, glue, staples, over sewing, tape. To decorate fabrics with attached items such as buttons, beads, sequins, braids, ribbons. To colour fabrics using a range of techniques (fabric paints, printing, painting).
<b>Bitterns Year 2/3</b>	<b>FOOD</b>	<b>STRUCTURES</b>	<b>TEXTILES</b>
<b>NC Links</b>	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	build structures, exploring how they can be made stronger, stiffer and more stable apply their understanding of how to strengthen, stiffen and reinforce more complex structures select from and use a wide range of materials and components, including construction materials, 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 wide range of materials and components, including textiles, according to their characteristics and properties
<b>Topic outcomes</b>	To make healthy eating choices – use the Eatwell plate. To develop sensory vocabulary/knowledge using, smell, taste, texture and feel. To analyse the taste, texture, smell and appearance of a range of foods (predominantly savoury). To follow instructions/recipes. To join and combine a range of ingredients.	To explore how to make structures stronger. To investigate different techniques for stiffening a variety of materials. To test different methods of enabling structures to remain stable. To make structures more stable by giving them a wide base. To strengthen frames with diagonal struts. To create shell or frame structures. To join appropriately for different materials and situations. To mark out materials to be cut using a template. To use a glue gun with close supervision. To measure and mark square section, strip and dowel accurately to 1cm.	To develop vocabulary for tools materials and their properties. To understand seam allowance. To join fabrics using running stitch, over sewing, blanket stitch. To use a prototype to make pattern. To explore strengthening and stiffening of fabrics. To explore fastenings (inventors?) and recreate some. To sew on buttons and make loops. To use appropriate decoration techniques.
<b>Harriers Year 4/5/6</b>	<b>FOOD</b>	<b>STRUCTURES</b>	<b>TEXTILES</b>
<b>NC Links</b>	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.	apply their understanding of how to strengthen, stiffen and reinforce more complex structures apply their understanding of computing to program, monitor and control their products.	generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design 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.
<b>Topic outcomes</b>	To prepare food products, taking into account, the properties of ingredients and sensory characteristics. To show awareness of a healthy diet (using the eatwell plate). To use a range of cooking techniques. To know where and how ingredients are grown and processed. To consider influence of chefs.	To use the correct terminology for tools materials and processes. To use a bradawl to mark hole positions. To use a hand drill to drill tight and loose fit holes. To cut strip wood, dowel, square section wood accurately to 1mm. To join materials using appropriate methods. To build frameworks to support mechanisms. To stiffen and reinforce complex structures.	To use the correct vocabulary appropriate to the project. To create 3D products using patterns pieces and seam allowance. To understand pattern layout. To decorate textiles appropriately (often before joining components). To pin and tack fabric pieces together. To join fabrics using over sewing, back stitch, blanket stitch or machine stitching (closer supervision). To combine fabrics to create more useful properties. To make quality products.