WCPS Design & Technology Curriculum Overview 2025-2026

WYMONDHAM COLLEGE PREP SCHOOL

WCPS Curriculum Intent for Design & Technology

Design and technology is an inspiring, rigorous and practical subject. In KS1 & KS2 the curriculum is taught the Design and Technology Association's 'Projects On a Page' scheme. Using creativity and imagination, pupils 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 aim to deliver a purposeful and engaging curriculum which allows children to feel they can contribute ideas to an ever-evolving world of invention. We expose children to a range of inventors, designers and inventions so they can reflect on and evaluate past and present technology, its uses and impacts. Children draw on subjects such as mathematics, science, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.

Design & Technology at WCPS is framed as Something for… Somebody for… Some purpose…

WCPS Design & Technology Curriculum: EYFS – Year 6

WYMONDHAM COLLEGE PREP SCHOOL

EYFS Statutory Framework Design & Technology Related Objectives
Creating with materials • 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 • Develop fine Motor Skills • Use a range of small tools, including scissors, paint brushes and cutlery • Begin to show accuracy and care when drawing
EYFS Design & Technology Curriculum
During the Early Years Foundation Stage, the essential building blocks of children's design and technology capability are established. There are many opportunities for carrying out D&T related activities across all areas of learning. Core Knowledge 1. Pupils will be able to construct with a purpose in mind, using a variety of resources 2. Pupils will use simple tools and techniques competently and appropriately. 3. Pupils will build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary. 4. Pupils will select the tools and techniques they need to shape, assemble and join materials they are using. Hinterland Knowledge • Pupils will know that we can create minibeasts using material and thread • Pupils will know how to construct a model of their house • Pupils will know how to mould clay to make minibeasts • Pupils will know how to make Diya lamps to celebrate Diwali • Pupils will know how to make fruit kebabs, pancakes, biscuits, soup Skills • Pupils will develop being able to understand that we can use different materials for artwork

- Pupils will develop being able to make a range of objects out of clay
- Pupils will develop being able to use a range of tools in their artwork

Experiences & Provocations

- Pupils will experience the curriculum by:
    - Being exposed to a range of materials, clay, paint, pencils, felt tips, junk modelling
    - Having access to D & T supplies in independent learning time
    - Using the DT room for cooking

Vocabulary - create, tools, build, join, purpose, design, plan, bend, move

KS1 National Curriculum
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: ▪ use the basic principles of a healthy and varied diet to prepare dishes ▪ understand where food comes from

Year 1 Design & Technology Curriculum		
Autumn Term 2	Spring Term 2	Summer Term 2
Structures – Freestanding structures *Design, Make & Evaluate Assignment* *Design, make and evaluate a model house for themselves to use as a toy* Core Knowledge 1. Pupils will know what a designer is. 2. Pupils will know why people have to design products (the importance of purpose). 3. Pupils will be familiar with a range of examples of freestanding structures. 4. Pupils will know how to design and plan by drawing. 5. Pupils will know how to use basic tools to build frames. 6. Pupils will know how to make a hinge flap. 7. Pupils will know how to make their structure stronger, stiffer and more stable. Hinterland Knowledge • Pupils will know which type of model houses are the most popular to play with among their friends	Food – preparing fruit *Investigative & Evaluative Activities* *Design, make and evaluate a fruit smoothie for their class for a juice bar* Core Knowledge 1. Pupils will know examples of common fruits. 2. Pupils will know how to describe fruits using their senses. 3. Pupils will know what we must do before we prepare food. 4. Pupils will know how to prepare food safely. 5. Pupils will know how to express our opinion when trying new things. 6. Pupils will know why it is important to have fruit as part of our everyday diet. Hinterland Knowledge • Pupils will know where some fruits can be grown. • Pupils will know why some fruits can be grown in other countries but not in the UK. • Pupils will know how preparing fruit is different to preparing other foods.	Mechanisms – sliders and levers *Focused tasks* *Design, make and evaluate a mini pop-up book for themselves for entertainment purposes* Core Knowledge 1. Pupils will be familiar with a range of card levers and sliders. 2. Pupils will know how to cut, shape and join using scissors, glue and tape. 3. Pupils will know why sliders and levers may be used in books. 4. Pupils will know how some sliders work. 5. Pupils will know how some levers work. 6. Pupils will know how to make a page with both a slider and lever component. Hinterland Knowledge • Pupils will know which their favourite pop-up books are and why • Pupils will know which are the most successful components to use in a pop up book

• Pupils will know that model houses were sometimes made from different materials in the past
 	
Skills
• Pupils will develop being able to design their own model house
• Pupils will develop being able to make their own free standing structure, using new and reclaimed materials
• Pupils will develop being able to evaluate their house by discussing how well it has worked in relation to its purpose (a toy)
 	
Wonder
• *I wonder how tall the largest freestanding structure ever made was…*
• *I wonder how people discovered materials that were stronger and more stable…*
 	
Experiences & Provocations
• Pupils will experience the curriculum by:
  ○ D&T visitor to year one to talk about what an engineer is and allow children to experience hands on some work of an engineer.
 	
Vocabulary - Tier 3 Subject Specific
	Skills
	• Pupils will develop being able to design their own smoothie
	• Pupils will develop being able to make their smoothies using a range of different utensils
	• Pupils will develop being able to evaluate their product by discussing how much it was enjoyed by their classmates
	
	Wonder
	• *I wonder how many different types of fruit there are…*
	• *I wonder if there are any fruits we don't have in this country…*
	• *I wonder if I can describe the fruits look, taste, smell, feel…*
	
	Experiences & Provocations
	• Pupils will experience the curriculum by:
	  ○ Celebrating by hosting a Juice Bar event.
	  ○ Exploring many common and uncommon fruits
	
	Vocabulary - Tier 3 Subject Specific
	fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp,
		Skills
		• Pupils will develop being able to generate ideas based on simple design criteria for their pop-up books
		• Pupils will develop being able to select tools to cut, shape and join their paper and card
		• Pupils will develop being able to evaluate their pop-up book in relation to its purpose (entertainment)
		
		Wonder
		• *I wonder how they hide sliders and levers in books…*
		• *I wonder who made the first mechanism…*
		• *I wonder how many slider designs there can be in one story…*
		
		Experiences & Provocations
		• Pupils will experience the curriculum by:
		  ○ Making use of our school library to experience many high-quality texts with sliders and levers.
		  ○ Opportunities to experiment in and out of the curriculum building mini-book pages with sliders and levers.
		
		Vocabulary - Tier 3 Subject Specific

cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder design, make, evaluate, user, purpose, ideas, design criteria, product, function	sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria	slider, lever, pivot, slot, bridge/guide card, masking tape, paper fastener, join pull, push, up, down, straight, curve, forwards, backwards design, make, evaluate, user, purpose, ideas, design criteria, product, function

KS1 National Curriculum
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:

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

Year 2 Design & Technology Curriculum

Autumn Term 1	Autumn Term 2	Summer Term 1
Mechanisms – wheels and axles *Focused tasks* ***Design, make and evaluate a moving fire engine.***	**Textiles – templates and joining techniques** *Design, Make and Evaluate Assignment* ***Design, make and evaluate a hand puppet for myself for Christmas.***	**Food – preparing vegetables** *Investigative and Evaluative Activities* ***Design, make and evaluate a vegetable kebab for their families for a healthy snack.***
Core Knowledge 1. Pupils will know what a wheel is. 2. Pupils will know what an axle is. 3. Pupils will know what an axle holder is. 4. Pupils will know the difference between fixed and freely moving axles. 5. Pupils will know how push/pull toys move through wheels and axles. 6. Pupils will know a range of joining and finishing techniques.	**Core Knowledge** 1. Pupils will know what a puppet is. 2. Pupils will know what the purpose of the product is. 3. Pupils will know how 3D textile products are made. 4. Pupils will know the different ways fabrics are joined together. 5. Pupils will know a range of different finishing techniques.	**Core Knowledge** 1. Pupils will know a range of vegetables. 2. Pupils will know where vegetables come from. 3. Pupils will know the basic principles of a healthy and varied diet. 4. Pupils will know what the Eatwell Plate is. 5. Pupils will know the technical vocabulary relevant to the project e.g., fruit, vegetable, knife.
Hinterland Knowledge	**Hinterland Knowledge** • Pupils will know the difference between joining techniques used now and in the past.	**Hinterland Knowledge**

• Pupils will know a range of ways they can make their push/pull toy move faster or slower. • Pupils will know how push/pull mechanisms are used in other areas, not just within toys. **Skills** • Pupils will develop being able to discuss their design for a push/pull toy. • Pupils will develop being able to reason which tool and equipment they will use. • Pupils will develop being able to select from and use range of materials and components. • Pupils will develop being able to cut and join materials. • Pupils will develop being able to explore and evaluate a range of products with wheels and axles. • Pupils will develop being able to evaluate and compare their product to their design. **Wonder** • *I wonder what the first fire engine looked like?* • *I wonder how vehicles have changed?*	• Pupils will know that every piece of textile created uses a plan. **Skills** • Pupils will develop being able to design a functional and appealing product based on simple design criteria. • Pupils will develop being able to generate, develop, model and communicate their ideas through talking and drawing. • Pupils will develop being able to use a range of tools and equipment for joining and finishing. • Pupils will develop being able to select from and use textiles according to their characteristics. • Pupils will develop being able to explore and evaluate existing textile products. • Pupils will develop being able to evaluate their ideas compared to their design. **Wonder** • *I wonder when the first glove puppet was made?* • *I wonder when sewing machines were invented?* **Experiences & Provocations**	• Pupils will know why we can only grow certain types of fruit and vegetables in the UK. • Pupils will know why certain fruit and vegetables grow in certain seasons. **Skills** • Pupils will develop being able to design a plan for their healthy meal. • Pupils will develop being able to discuss their ideas for their design. • Pupils will develop being able to investigate a variety of fruit and vegetables. • Pupils will develop being able to use utensils and equipment to peel, cut, slice etc. • Pupils will develop being able to identify a range of fruit and vegetables. • Pupils will develop being able to select from a range of fruit and vegetables according to their characteristics. • Pupils will develop being able to evaluate fruit and vegetables through taste to determine the user's preference. • Pupils will develop being able to evaluate their final product compared to the design. **Wonder** • *I wonder when fruit and vegetables started being transported?*

• *I wonder what was used before fire engines?*
•
• **Experiences & Provocations**
• Pupils will experience the curriculum by:
  ○ Designing and creating a fire engine.
•
• **Vocabulary - Tier 3 Subject Specific**
• vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used design, make, evaluate, purpose, user, criteria, functional,
	• Pupils will experience the curriculum by:
	  ○ Designing and making their own glove puppets.
	
	Vocabulary - Tier 3 Subject Specific
	products, joining and finishing techniques, tools, fabrics and components template, pattern pieces, mark out, join, decorate, finish features, suitable, quality mock-up, design brief, design criteria, make, evaluate, user, purpose, function
		• *I wonder what the most popular fruit/vegetable is?*
		• *I wonder what the most expensive fruit/vegetable is?*
		
		Experiences & Provocations
		• Pupils will experience the curriculum by:
		  ○ Creating their own vegetable kebabs.
		
		Vocabulary - Tier 3 Subject Specific
		fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria

KS2 National Curriculum

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:

- 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 Design & Technology Curriculum		
Autumn Term 1	Spring Term 1	Summer Term 2
Food: Healthy and Varied Diet *Investigative and Evaluative Activities* *Design, make and evaluate a sandwich (product) for friends and family (user) for a picnic (purpose)* Core Knowledge 1. Pupils will know some ways to prepare ingredients safely and hygienically 2. Pupils will have some basic knowledge and understanding about healthy eating and The eatwell plate 3. Pupils will know the basic principles of a healthy and varied diet. 4. Pupils will generate and clarify ideas through discussion with peers and adults to develop design criteria 5. Pupils will use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.	Textiles- 2D shape to 3D product Can I make a Roman purse? *Design, Make and Evaluate Assignment* *Design, make and evaluate a purse (product) for a Roman (user)* Core Knowledge 1. Pupils will know how to generate realistic ideas through discussion and investigate a range of 3D textile products relevant to their project 2. Pupils will know how to produce annotated sketches, prototypes, final product sketches and pattern pieces. 3. Pupils will know how to plan the main stages of making 4. Pupils will know how to choose and use appropriate materials and tools for the task 5. Pupils will know how to select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern.	Structures – Building Structures *Design, Make and Evaluate Assignment* *Design and make a European structure.* Core Knowledge 1. Pupils will know how to generate realistic ideas and design criteria through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the product. 2. Pupils will know how to develop ideas through the analysis of existing building structures and communicate ideas. 3. Pupils will know how to select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with some accuracy. 4. Pupils will know how to explain their choice of materials according to functional properties and aesthetic qualities. 5. Pupils will know how to use computer-generated finishing techniques suitable for the product they are creating

6. Pupils will plan the main stages of a recipe, listing ingredients, utensils and equipment 7. Pupils will select and use appropriate utensils and equipment to prepare and combine ingredients 8. Pupils will select from a range of ingredients to make appropriate food products 9. Pupils will evaluate the ongoing work and the final product with reference to the design criteria and the views of others. Hinterland Knowledge • Pupils will know the history of the sandwich • Pupils will know how humans get nutrition from what they eat Skills • Pupils will develop being able to use appropriate equipment and utensils to prepare and combine food. • Pupils will develop being able to know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.	6. Pupils will know how to evaluate their finished piece of work and critique it against their initial design and with the intended user Hinterland Knowledge • Pupils will know the different types of material suitable for making a purse • Pupils will know why it is important to select materials that are appropriate for their intended audience • Pupils will know why it is important to do research before designing and planning a project. Skills • Pupils will know how to strengthen, stiffen, and reinforce existing fabrics. • Pupils will know how to securely join two pieces of fabric together • Pupils will understand the need for patterns and seam allowances Pupils will know and use technical vocabulary relevant to the project. Wonder • *I wonder what size of purse would be the best?* • *I wonder what would make the strongest purse?* Experiences & Provocations	6. Pupils will know how to test and evaluate their own products against design criteria and the intended user and purpose Hinterland Knowledge • Pupils will know a range of suitable materials for making structure • Pupils will know the skill of improving their work rather than starting again when things go wrong. Skills • Pupils will develop being able to use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes • Pupils will develop being able to use knowledge of how to construct strong, stiff structures • Pupils will develop being able to know and use technical vocabulary relevant to the project. Wonder • *I wonder what the strongest material would be to use?* • *I wonder how other designers have created their designs?*

• Pupils will develop being able to know how to use relevant technical and sensory vocabulary appropriately.
 	
Wonder
• *I wonder what the first sandwich was and when it was made?*
• *I wonder what the most popular sandwich is?*
 	
Experiences & Provocations
• Pupils will experience the curriculum by:
  ○ Making their own sandwich
  ○ Hosting a picnic
 	
Vocabulary - Tier 3 Subject Specific
name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet planning, design criteria, purpose, user, annotated sketch, sensory evaluations
	• Pupils will experience the curriculum by:
	  ○ Researching a wide range of purse and their uses
	  ○ Making their own purse
	
	Vocabulary - Tier 3 Subject Specific
	fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, aesthetics, function, pattern pieces
		Experiences & Provocations
		• Pupils will experience the curriculum by:
		  ○ Creating their product.
		  ○ Practicing skills before they begin.
		
		Vocabulary - Tier 3 Subject Specific
		shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating font, lettering, text, graphics, decision, evaluating, design brief design criteria, innovative, prototype

KS2 National Curriculum
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: ▪ 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 4 Design & Technology Curriculum		
Autumn Term 2	**Spring Term 1**	**Summer Term 1**
Unit Title – Electrical systems - Simple circuits and switches Can I design, make, and evaluate a night light for a young child? Core Knowledge 1. Pupils will know how to make manually controlled, simple series circuits with batteries and different types of switches, bulbs and buzzers. 2. Pupils will know the components of a circuit and how to find a simple fault. 3. Pupils will know how to make a variety of switches by using simple classroom materials e.g. card, corrugated plastic, aluminium foil, paper fasteners and paper clips. 4. Pupils will know how to use a simple computer control program with an interface box or standalone control box to physically control output devices e.g. bulbs and buzzers. 5. Pupils will know how to avoid making short circuits.	Unit Title – Food Can I design, make, and evaluate an appealing bread to be tasted on our Saxon Day? Core Knowledge 1. Pupils will know some ways to prepare ingredients safely and hygienically. 2. Pupils will know how to use some equipment and utensils safely to prepare and combine ingredients to make a Saxon bread. 3. Pupils will know the importance of following instructions for example a recipe. 4. Pupils will know how to plan a recipe, listing ingredients, utensils and equipment. 5. Pupils will know how to evaluate their final product with reference to the design criteria and the views of others. 6. Pupils will know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. 7. Pupils will know and use relevant technical and sensory vocabulary appropriately.	Unit Title – Levers & Linkages Can I design, make, and evaluate a draw Bridge / water wheel for myself for a class display? Core Knowledge 1. Pupils will understand and use lever and linkage mechanisms. 2. Pupils will be able to distinguish between fixed and loose pivots. 3. Pupils will generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. 4. Pupils will know how to use appropriate tools with some accuracy to cut, shape and join paper and card. 5. Pupils will select from and use finishing techniques suitable for the product they are creating. 6. Pupils will evaluate their own products and ideas against criteria and user needs, as they design and make. 7. Pupils will know and use technical vocabulary relevant to the project.

6. Pupils will know how to generate, develop and plan a design by gathering information about needs and wants to fit their product for purpose. 7. Pupils will know how to develop, model and communicate their ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. 8. Pupils will know how to cut, join and shape a variety of construction materials, such as wood, card, plastic, reclaimed materials and glue. Hinterland Knowledge • Pupils will know the dangers of electricity. • Pupils will Investigate and analyse a range of existing battery-powered products. • Pupils will know how to make switches that operate in different ways e.g. when you press them, when you turn them, when you push them from side to side. • Pupils will make a nightlight by selecting and using a variety of tools and equipment to cut, shape, join and finish with some accuracy. Skills • Pupils will develop being able to select from and use materials and components,	Hinterland Knowledge • Pupils will know about the importance of healthy eating and The Eatwell plate. • Pupils will know how to follow a recipe. • Pupils will practice food preparation and cooking techniques by making a food product using an existing recipe. Skills • Pupils will be able to select from a range of ingredients to make an appealing Saxon bread, thinking about sensory characteristics. • Pupils will know how to prepare ingredients hygienically including the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking. • Pupils will develop being able to record their work using annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. • Pupils will know the importance of following instructions to control risk ? Discuss basic food hygiene practices when handling food including the importance of following instructions to control risk e.g.	Hinterland Knowledge • Pupils will know how to make a variety of levers from recycled materials. • Pupils will know how to use annotated sketches and prototypes to develop, model and communicate ideas. • Pupils will know which part of the system is the input and which part the output. Skills • Pupils will develop being able to demonstrate a range of lever and linkage mechanisms using prepared teaching aids. • Pupils will develop being able to order the main stages of making. • Pupils will develop being able to use a variety of tools with some accuracy. • Pupil will develop being able to use accurate measuring, marking out, cutting, joining and finishing skills and techniques. • Pupils will develop their knowledge and skills by replicating one or more of the teaching aids. identify / recognise / describe / observe / recall / compare / contrast / infer / sequence / summarise / categorise / reason / interpret /

including construction materials and electrical components according to their functional properties and aesthetic qualities. • Pupils will develop being able to evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. • Pupils will develop technical knowledge and understanding when using electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. • Pupils will develop their understanding of computing to program and control their products. • Pupils will develop their knowledge of technical vocabulary relevant to the project. identify / recognise / describe / observe / recall / compare / contrast / infer / sequence / summarise / categorise / reason / interpret / synthesise / explain / justify / conclude / judge / evaluate / critique / empathise / hypothesise Wonder • *I wonder who invented electricity?* • *I wonder what other products contain circuits?*	• Pupils will develop their knowledge of technical vocabulary relevant to the project. identify / recognise / describe / observe / recall / compare / contrast / infer / sequence / summarise / categorise / reason / interpret / synthesise / explain / justify / conclude / judge / evaluate / critique / empathise / hypothesise Wonder • *I wonder what other foods Saxons ate?* • *I wonder how to cook without electricity?* • *I wonder where do different meats/fish/cheese/eggs come from?* • *I wonder how food is processed?* • *I wonder how germs grow?* • *I wonder what a germ looks like?* • *I wonder what happens if you don't follow an instruction?* • *I wonder what it would taste like if I added ?* Experiences & Provocations • Pupils will experience the curriculum by: ○ Designing and making a Saxon loaf basing this around different criteria including appearance, taste, texture and aroma for an appealing product.	synthesise / explain / justify / conclude / judge / evaluate / critique / empathise / hypothesise Wonder • *I wonder what other everyday objects use lever mechanisms?* • *I wonder when the wheel was invented?* • *I wonder what other everyday objects used a wheeled mechanism?* • *I wonder what happens if I make a sequence of mechanisms?* • *I wonder what force is used?* Experiences & Provocations • Pupils will experience the curriculum by: ○ Investigating and analysing books and, where available, other products with lever and linkage mechanisms. ○ Exploring and using mechanisms such as flaps, sliders and levers. ○ Gaining experience of measuring, cutting, joining and finishing techniques with paper and card. Vocabulary - Tier 3 Subject Specific mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear,

• *I wonder what other types of switches there are and how they work?* • *I wonder what other products are manually controlled or controlled by a computer?* • *I wonder what other materials conduct electricity?* Experiences & Provocations • Pupils will experience the curriculum by: ○ Exploring a range of other battery – powered products by disassembling them to locate and name components and explore how they work. ○ Designing and making a night light for a particular audience; selecting, cutting and joining a variety of different materials. Vocabulary - Tier 3 Subject Specific series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip control, program, system, input device, output device user, purpose, function, prototype, design criteria, innovative, appealing, design brief	○ Exploring with their senses a variety of ingredients and products and recording these evaluations using e.g. tables and simple graphs. ○ Carrying out taste testing to evaluate products. Vocabulary - Tier 3 Subject Specific name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet planning, design criteria, purpose, user, annotated sketch, sensory evaluations	rotary, oscillating, reciprocating user, purpose, function prototype, design criteria, innovative, appealing, design brief

KS2 National Curriculum
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: ▪ 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 5 Design & Technology Curriculum		
Autumn Term 1	Autumn 2	Summer Term 2
Food: Can I explore historical events through food? *Investigative and Evaluative Activities* *Design, make and evaluate a meal using WW2 rations (product) for our class (user) for a WW2 experience (purpose)* Core Knowledge 1. Pupils will know how to generate ideas through research and discussion 2. Pupils will know how to explore a range of initial ideas and make design decisions to develop a final product linked to user and purpose. 3. Pupils will know how to write a step-by-step recipe, including a list of ingredients, equipment and utensils 4. Pupils will know the importance of food and hygiene, and nutrition 5. Pupils will know how to make and present the food product appropriately for the intended user and purpose.	Structures - Frame structures *Design, Make and Evaluate Assignment* *Design, make and evaluate a frame structure rocket launch pad (product) for an astronaut (user) for a rocket launch (purpose)* Core Knowledge 1. Pupils will know how to carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. 2. Pupils will know how to develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost 3. Pupils will know how to generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. 4. Pupils will know how to formulate a clear plan, including a step-by-step list of what	Mechanical systems- Pulleys *Focused tasks* *Design, make and evaluate a controllable vehicle (ocean grabber) for an environmentalist (user) for the purpose of picking up plastic and litter from the ocean (purpose)* Core Knowledge 1. Pupils will know how to generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. 2. Pupils will know how to develop a simple design specification to guide their thinking 3. Pupils will know how to develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. 4. Pupils will know how to select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. 5. Pupils will know how to compare the final product to the original design specification

6. Pupils will know how to evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. Hinterland Knowledge • Pupils will know what food rationing was during WW2 and why it was needed • Pupils will know how people cooked meals when food was rationed • Pupils will know about the types of food that was and wasn't available during WW2 and why Skills • Pupils will develop being able to select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. • Pupils will develop being able to use utensils and equipment including heat sources to prepare and cook food. • Pupils will develop being able to evaluate using a range of relevant products and ingredients and record the evaluations using e.g. tables/graphs/charts such as star diagrams.	needs to be done and lists of resources to be used. 5. Pupils will know how to competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. 6. Pupils will know how to use finishing and decorative techniques suitable for the product they are designing and making. 7. Pupils will know how to critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. 7. Pupils will know how to strengthen, stiffen and reinforce 3-D frameworks. Hinterland Knowledge • Pupils will know how to research key events and individuals relevant to frame structures. • Pupils will know how to use technical vocabulary linking to structure. • Pupils will know the skill of improving their work rather than starting again when things go wrong. Skills	6. Pupils will know how to test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. 7. Pupils will know that gears and pulleys can be used to speed up, slow down or change the direction of movement. Hinterland Knowledge • Pupils will know how to formulate step-by-step plans and, if appropriate, allocate tasks within a team • Pupils will know how to work within the constraints of time, resources and cost. • Pupils will know how to consider the views of others to improve their work • Pupils will know how to investigate famous manufacturing and engineering companies relevant to the project. • Pupils will know that mechanical and electrical systems have an input, process and an output Skills • Pupils will develop being able to produce detailed lists of tools, equipment and materials.

Wonder
• *I wonder what this will taste like if I add... ingredients?*
• *I wonder why you can only use some ingredients at certain times of the year?*
• *I wonder what food was most important to people during WW2?*
• *I wonder how people came up with recipes during WW2?*
 	
Experiences & Provocations
• Pupils will experience the curriculum by:
  ○ Exploring ideas through tasting different products
  ○ Researching products
  ○ Trying different prototypes
 	
Vocabulary - Tier 3 Subject Specific
ingredients, rations, food groups, diet, balance, recipe, savoury, source, seasonality, utensils, design specification, innovative, research, evaluate, design brief
	• Pupils will develop being able to investigate and evaluate a range of existing frame structures
	• Pupils will develop being able to recognise the correct type of materials to suit the product.
	
	Wonder
	• *I wonder how to use the correct equipment for my design?*
	• *I wonder how other designers have created their designs?*
	• *I wonder how I can improve my product?*
	
	Experiences & Provocations
	• Pupils will experience the curriculum by:
	  ○ Creating their product.
	  ○ Practicing skills before they begin.
	  ○ Talk with an architect.
	
	Vocabulary - Tier 3 Subject Specific
	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional
		• Pupils will develop being able to critique and evaluate their product.
		• Pupils will develop being able to observe the work of other designers to help them with their product.
		
		Wonder
		• *I wonder how to create a plan and work as part of a team?*
		• *I wonder how other manufacturers make their products?*
		• *I wonder how mechanical and electrical systems work?*
		
		Experiences & Provocations
		• Pupils will experience the curriculum by:
		  ○ Creating a design.
		  ○ Researching other products.
		
		Vocabulary - Tier 3 Subject Specific
		pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor circuit, switch, circuit diagram annotated drawings, exploded diagrams mechanical system, electrical system, input, process, output design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief

KS2 National Curriculum
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: ▪ 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 6 Design & Technology Curriculum		
Autumn Term 2	Spring Term 2	Summer Term 2
Textiles- Design a charitable soft toy. Can I make a soft toy? *Design, Make and Evaluate Assignment* *Design, make and evaluate a soft toy (product) children (user) Charity (purpose)* Core Knowledge 1. Pupils will know how to collect data to generate design ideas 2. Pupils will know how to communicate and draw their design prototype that is purposeful 3. Pupils will know how to create a step-by-step plan 4. Pupils will know how to choose the appropriate materials and tools for the task 5. Pupils will know how to do basic stitching of fabrics to create patterns 6. Pupils will know how to evaluate their finished piece of work and critique it against their initial design Hinterland Knowledge	Structures- wood/card dice *Design, Make and Evaluate Assignment* *Design, make and evaluate a structure for Victorian children (user) for play with (purpose)* Core Knowledge 1. Pupils will know how to carry out research into Victorian toys using web-based resources. 2. Pupils will know how to develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost 3. Pupils will know how to generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. 4. Pupils will know how to formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. 5. Pupils will know how to competently select from and use appropriate tools to	Food- fairtrade summer fete *Investigative and Evaluative Activities* *Design, make and evaluate a savoury muffin/scone (product) for friends and family (user) for the summer fete (purpose)* Core Knowledge 1. Pupils will know the importance of food and hygiene, and nutrition 2. Pupils will know how to generate ideas through research and discussion 3. Pupils will know how to explore a range of initial ideas and make design decisions to develop a final product linked to user and purpose. 4. Pupils will know how to write a step-by-step recipe, including a list of ingredients, equipment and utensils 5. Pupils will know how to make, decorate and present the food product appropriately for the intended user and purpose. 6. Pupils will know how to evaluate the final product with reference back to the design brief and design specification,

- Pupils will know the different types of material suitable for making a soft toy
- Pupils will know why it is important to select materials that are appropriate for their intended audience (e.g. no buttons for babies).
- Pupils will know why it is important to do research before designing and planning a project.

Skills

- Pupils will develop being able to interpret data and use this to design a product
- Pupils will develop being able to explain how their product is made by using a step-by-step approach
- Pupils will develop being able to justify the materials, tools and techniques they are using
- Pupils will develop being able to evaluate their work and compare it to their initial plans, and the work of their peers

Wonder

- *I wonder how I could make?*
- *I wonder what type of material I could use to?*

accurately measure, mark out, cut, shape and join construction materials to make frameworks.

6. Pupils will know how to use finishing and decorative techniques suitable for the product they are designing and making.
7. Pupils will know how to critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.

Hinterland Knowledge

- Pupils will know how to research key events and individuals relevant to structures.
- Pupils will know how to use technical vocabulary linking to structure.
- Pupils will know the skill of improving their work rather than starting again when things go wrong.

Skills

- Pupils will develop being able to investigate and evaluate a range of existing structures
- Pupils will develop being able to recognise the correct type of materials to suit the product.

taking into account the views of others when identifying improvements.

Hinterland Knowledge

- Pupils will know the importance of food in celebrating and defining fairtrade
- Pupils will know how food is used as part of celebrations (fete)
- Pupils will learn about the history of food products and how they have been created and changed over time.

Skills

- Pupils will develop being able to select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.
- Pupils will develop being able to use utensils and equipment including heat sources to prepare and cook food.
- Pupils will develop being able to evaluate using a range of relevant products and ingredients, and record the evaluations using e.g. tables/graphs/charts such as star diagrams.

Wonder

Experiences & Provocations Pupils will experience the curriculum by: • Conducting market research • Researching soft toys and how these have changed over time Vocabulary - Tier 3 Subject Specific Seam, seam allowance, wadding, right side, wrong side, hem, template, pattern pieces, pinking shears, needle, thread, innovation, functionality, design, prototype, mock-up, fastenings, authentic, user, purpose.	Wonder • *I wonder how to use the correct equipment for my design?* • *I wonder how other designers in Victorian times created their designs?* • *I wonder how I can improve my product?* Experiences & Provocations Pupils will experience the curriculum by: • Creating their product. • Practicing skills before they begin. • Researching how toys have changed over time Vocabulary - Tier 3 Subject Specific structure, stiffen, strengthen, reinforce, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional	• *I wonder what this will taste like if I add... ingredients?* • *I wonder why you can only use some ingredients at certain times of the year?* • *I wonder how chefs come up with ideas for new dishes?* Experiences & Provocations Pupils will experience the curriculum by: • Exploring ideas through tasting different products • Researching products • Trying different prototypes Vocabulary - Tier 3 Subject Specific ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble design specification, innovative, research, evaluate, design brief