

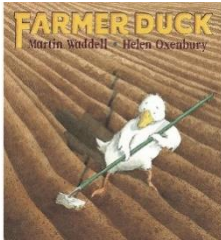



Nursery	EARLY YEARS AUTUMN	EARLY YEARS SPRING	EARLY YEARS SUMMER
	CL & PD	CL, PD & EAD	EAD
	<ul style="list-style-type: none"> Pay attention to more than one thing at a time, which can be difficult. Use a wider range of vocabulary. Understand a question or instruction that has two parts Understand 'why' questions Use longer sentences of four to six words. Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions.  Use talk to organise themselves and their play Use one-handed tools and equipment, for example, making snips in paper with scissors. Use a comfortable grip with good control when holding pens and pencils. Show a preference for a dominant hand. 	<ul style="list-style-type: none"> Pay attention to more than one thing at a time, which can be difficult. Use a wider range of vocabulary. Understand a question or instruction that has two parts Understand 'why' questions Use longer sentences of four to six words. Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions.  Use talk to organise themselves and their play Use one-handed tools and equipment, for example, making snips in paper with scissors. Use a comfortable grip with good control when holding pens and pencils. Show a preference for a dominant hand. Explore different materials freely, 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. 	<ul style="list-style-type: none"> Explore different materials freely, 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. <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;">  <div style="border: 1px solid black; background-color: #4a7ebb; color: white; padding: 5px; text-align: center;"> Looks at the job of a farmer and how they grow their crops. </div> </div> </div>

Reception	EARLY YEARS AUTUMN	EARLY YEARS SPRING	EARLY YEARS SUMMER
	CL, PD & EAD	CL, PD & EAD	
	<ul style="list-style-type: none"> Pay attention to more than one thing at a time, which can be difficult. Use a wider range of vocabulary. 	<ul style="list-style-type: none"> Understand how to listen carefully and why listening is important. Learn new vocabulary. 	ELG- Communication and Language

- Understand a question or instruction that has two parts
- Understand 'why' questions
- Use longer sentences of four to six words.
- Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions.
- Use talk to organise themselves and their play
- Use one-handed tools and equipment, for example, making snips in paper with scissors.
- Use a comfortable grip with good control when holding pens and pencils.
- Show a preference for a dominant hand.
- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.

- Use new vocabulary through the day.
- Ask questions to find out more and to check they understand what has been said to them.
- Articulate their ideas and thoughts in well-formed sentences.
- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.
- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.

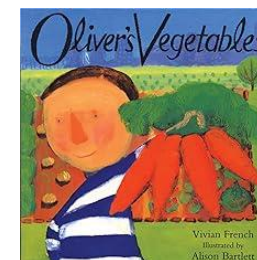
- Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.
- Make comments about what they have heard and ask questions to clarify their understanding
- Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.
- Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.
- Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher

ELG- Physical Development

- Use a range of small tools, including scissors, paintbrushes and cutlery.
- Begin to show accuracy and care when drawing.






ELG- Expressive Arts and Design

- 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.
- Make use of props and materials when role playing characters in narratives and stories.

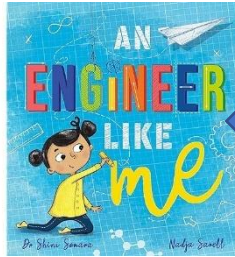


Begins the process of soup making- understanding where the soup starts.

Design	Make	Evaluate	Technical Knowledge
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 [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	Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria	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: Use the basic principles of a healthy and varied diet to prepare dishes Understand where food comes from.			

	AUTUMN <i>Structures & Mechanisms</i> <i>Wheels & Axles</i>	SPRING <i>Textiles</i> <i>Puppets</i>	SUMMER <i>Food & Nutrition</i> <i>Smoothies</i>
Year 1			
Vocabulary	axle, axle holder, chassis, diagram, dowel, equipment, mechanism, wheel	Decorate, design, fabric, glue, model, hand puppet, safety pin, staple, stencil, template	Blend, blender, chopping board, compare, cut, design, evaluate, flavour, for fruit, healthy, ingredients, juice, juicer, leaf, plant, recipe, root, seed, select, smoothie, stem, table knife, taste, tree, vegetable, vine
Key Knowledge & Skills	<p>Design</p> <ol style="list-style-type: none"> Skill: To identify what makes a toy move backwards and forwards. To recall that for a wheel to be able to move it must be attached to an axle. To draw and label a diagram of an axle wheel and axle holder. Knowledge: To understand how wheels move. Skill: To design a moving vehicle (<i>car</i>). To label my design using appropriate vocabulary (<i>Frame, Strong, Wheels, Axles, Attach</i>) Knowledge: To recall what makes a wheel and an axle work. <p>Make</p> <ol style="list-style-type: none"> Skill: To build a moving wheel. To make a wheel and axle mechanism. Knowledge: To know how to keep safe when using DT tools (<i>Tri-square, junior hacksaw, vice, G-clamp, pillar drill, cordless drill, sand paper, scroll saw, hammer, screw driver, plier</i>)   <p>Evaluate</p> <ol style="list-style-type: none"> Skill: To evaluate my design to make it even better. 	<p>Design</p> <ol style="list-style-type: none"> Skill: To join fabrics together using different methods (<i>pinning, stapling, gluing</i>). Knowledge: To explain that different techniques may be used to join fabrics for different purposes. Skill: To design a puppet using a template. To use a template to cut out my design. <p>Make</p> <ol style="list-style-type: none"> Skill: To join two fabrics together accurately. To align two pieces of fabric. To use a template. To fit my hand into my puppet. Knowledge: To know how to use tools safely (<i>glue gun, stapler, scissors, sewing needle</i>) Skill: To embellish my design using joining methods. To still put my hand into my design after it has been decorated. <p>Evaluate</p> <ol style="list-style-type: none"> Skill: To evaluate my own and others work. Knowledge: To know what went well and what needs improving with my product. 	<p>Develop Understanding</p>  <ol style="list-style-type: none"> Skill: To identify fruits and vegetables (<i>guava, passion fruit, grapefruit, dragon fruit, avocado, sweet potato, aubergine</i>) To identify seeds in these fruits. Knowledge: To sort fruits and non-fruits. Skill: To make predictions about where edible parts of plants will grow. Knowledge: To describe where fruits and vegetables grown. To name places where fruits and vegetables grow (<i>above the ground, under the ground, vines, trees, bushes, hedges</i>). To decide whether a fruit or vegetable will grow aboveground or underground. <p>Design</p> <ol style="list-style-type: none"> Skill: To practise food preparation skills. To use a fork to hold foods when cutting. To use a table knife to cut soft foods. To use a juicer to get juice from fruits. Knowledge: To know how to work safely and follow instructions. <p>Make</p>  <ol style="list-style-type: none"> Skill: To select ingredients for a recipe. To choose fruits and vegetables to taste (<i>banana, raspberries, strawberries, oranges, blueberries, lemons, pineapple</i>). To describe a food's taste. To decide on three ingredients to create a recipe. Knowledge: To suggest fruits to put together based on taste. Skill: To apply food preparation skills to a smoothie recipe. To gather the ingredients for a simple smoothie recipe. To cut and juice fruits as part of the smoothie recipe. To use my senses to compare my smoothie with my partners.

Knowledge: To know what went well and what needs improving with my product.



Encourages children to look for design and discover what this can lead to.


Evaluate

Knowledge: To know how to work safely and follow instructions.

- Skill:** To evaluate against the design brief. To choose a template to create a carton design. To choose my favourite recipe. To talk to the class about the design brief.

National Curriculum: Year Two

Design	Make	Evaluate	Technical Knowledge
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 [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	Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria	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: Use the basic principles of a healthy and varied diet to prepare dishes Understand where food comes from.			

	AUTUMN <i>Structures & Mechanisms</i> <i>Making Lifeboats</i>	SPRING <i>Textiles</i> <i>Pouches</i>	SUMMER <i>Food & Nutrition</i> <i>Balanced Diet- Wraps</i>
Year 2			
Vocabulary	shapes, triangle, square, rectangle, strong, sturdy, wobbly, steady, wood, glue, safe, tools (saw, hammer, sandpaper, ruler, pencil), cut, stick, fix, test, bend, break, float, sink, lifeboat, water	Decorate, fabric. fabric glue, knot, needle, needle threader, running stitch, sew, template, thread	Appearance, balanced, carbohydrates, chopping board, combination, cut, dairy, design, design brief, diet, evaluate, feel, fruit, grate, grater, ingredients, menu, oils, proteins, review, scissors, smell, snip, spread, spreads, table knife, taste, vegetables
Key Knowledge & Skills	Design 1. Knowledge: To recognise different types of structures found in nature (e.g., spider webs, beehives, bird nests) and everyday objects (e.g., bridges, houses, furniture). To understand concept of sketching and modelling to generate and communicate ideas. Skills: To Observe and sketch different structures (using pencils and paper).	Design  6. Skill: To sew a running stitch. To thread a needle. To sew a running stitch. To use neat and evenly spaced stitches to join fabric. 7. Skill: To sew a running stitch. To remember how to use a template. To cut fabric neatly. To pin fabric accurately. To design a pouch. Make	Develop Understanding 1. Skill: To recognise foods and their food groups. To match food with the food group they belong to. Knowledge: To name the five food groups. To explain how much of each food group I should have each day. 2. Skill: To identify the balance of food groups in a meal. To identify foods, I like. To plan a balanced meal. Knowledge: To explain the food groups in a meal. 3. Skill: To identify an appropriate piece of equipment to prepare a given food. To practise food preparation skills using a range of equipment.



Using modelling materials (*e.g., clay, cardboard*) to create simple models of lifeboats. To discuss and share ideas with classmates.

- 2. Knowledge:** To use basic geometric shapes (*e.g., triangles, squares, rectangles*) and their properties. To know how different shapes affect the stability of a structure (*e.g., wide bases are more stable*).

Skills: To build simple structures with different shapes using blocks or construction toys. To test the stability of these structures by applying gentle force. To identify the most stable shapes for lifeboat construction.

Make

- 3. Knowledge:** To know which types of wood are suitable for building (*e.g., balsa wood, samba wood*). To understand the concept of compression (*squeezing materials together to create a joint*). To know how to use wood glue safely and effectively.

Skills: To Measure and mark wood to the desired size (*using rulers and pencils*). To cut wood using a hacksaw (*with adult supervision*). To Join pieces of wood together using wood glue and G-clamps for compression. To reinforce the structure by adding additional pieces of wood.

Evaluate

- 4. Knowledge:** To understand the importance of testing a structure for strength, stiffness, and stability. To understand the definitions of *stable (firmly fixed)*, *strong (does not break easily)*, and *stiff (does not bend easily)*. To know how to identify the weakest part of a structure.

Skills: To test the lifeboat by placing small weights on it (*e.g., coins, marbles*). To observe how the lifeboat reacts to the weight (*does it bend, break, or remain stable?*). To identify any weak points in the structure that need reinforcement.

- 5. Knowledge:** To know how to manipulate materials to improve strength and stiffness (*e.g., folding, layering, adding supports*). To understand the concept of

- 8. Skill:** To join fabrics using a running stitch. To sew neat, even stitches. To tie a knot at either end of the thread. To design decorations for the product.

- 9. Skill:** To decorate a pouch using fabric glue or stitching. To join items using fabric glue or stitching. To decorate fabric using different items.



Evaluate



- 10. Skill:** To evaluate my own and others work.
Knowledge: To know what went well and what needs improving with my product.

Design

Make

Evaluate



Knowledge: To justify using a piece of equipment with a type of food (*cheese, butter, bread*)

- 4. Skill:** To select balanced combinations of ingredients. To select foods from specific food groups. To describe the taste of different foods.

Knowledge: To explain why I have chosen to put foods together.

- 5. Skill:** To design based on a criteria. To follow a design criteria. To design three different wraps.

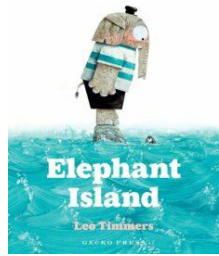
Knowledge: To justify the choice I have made.

- 6. Skill:** To select the ingredients for my recipe. To identify the equipment needed to prepare different foods.

- 7. Skill:** To decide if I like different wraps and choose my favourite.



"structure" as something made from parts.
Skills: To make modifications to the lifeboat design based on the results of the testing (using tools like sandpaper, drills, glue guns with adult supervision). To Experiment with different materials and techniques to reinforce the structure. To evaluate the final lifeboat design against the original design criteria.







An elephant whose boat capsizes and explores design to fix it.

National Curriculum: Year Three

Design	Make	Evaluate	Technical Knowledge
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	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	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	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. COVERED IN SCIENCE
Cooking and Nutrition: 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.			

	AUTUMN Structures & Mechanisms	SPRING Textiles	SUMMER Food & Nutrition
Year 3	Building a Victorian Industrial Factory	Cushion	Balanced Diet- Wraps

Vocabulary	Victorian, industrial, factory, chimney, windows, brick, 2D shapes (square, rectangle, triangle, circle), 3D shapes (cube, rectangular prism, pyramid), stability, strength, stiffness, compression, samba wood, balsa wood, facade, aesthetics, design specification, wood glue, ruler, pencil, saw, sandpaper, electrical circuit, battery, wires, bulb, switch, current.	Appliqué, cross-stitch, design, equipment, fabric, patch, running stitch, thread, seam, texture, knot	Appearance, balanced, carbohydrates, chopping board, combination, cut, dairy, design, design brief, diet, evaluate, feel, fruit, grate, grater, ingredients, menu, oils, proteins, review, scissors, smell, snip, spread, spreads, table knife, taste, vegetables
Key Knowledge & Skills	<p>Design</p> <ol style="list-style-type: none"> Knowledge: To recap Victorian industrial factories: Their purpose and key features (<i>e.g., chimneys, large windows, brick walls</i>). To design for a specific person or function. To recap basic shapes like squares, rectangles, triangles, circles. To recap Shapes with depth, like cubes, rectangular prisms, pyramids. Skills: To research different types of Victorian factories and their architectural features. To draw a 2D plan of the factory, labelling the shapes and materials needed. To create a simple floor plan, considering the layout of different rooms and machinery. To choose colours that reflect the Victorian era (<i>e.g., muted tones, earth colours</i>). <p>Make</p> <ol style="list-style-type: none"> Knowledge: To understand the importance of a wide, flat base for a stable structure. To understand how materials and construction techniques affect a structure's ability to withstand force and maintain shape. To understand how to Join materials by pressing them together. Skills: To Construct 3D shapes (cubes, rectangular prisms, etc.) using samba wood and wood glue. To use compression techniques (<i>e.g., clamps</i>) to join the shapes together, creating a strong and stiff frame. To test the stability of the frame. <p>(Facade and Electrical Circuit)</p> <ol style="list-style-type: none"> Knowledge: To name the Facade: The front or face of a building. To name Balsa wood: A very lightweight wood, often used for model making. To understand how electrical circuits work: Basic components (<i>battery, wires, bulb</i>) and how they work together to create light. Skills: To design and cut out details for the facade using balsa wood (<i>e.g., windows, doors, decorative elements</i>). To plan the placement of lights within the factory model. To build a simple electrical circuit using a battery, wires, and a small bulb. To integrate the circuit into the model, ensuring it is safely connected. <p>Evaluate</p> <ol style="list-style-type: none"> Knowledge: To name the Aesthetics: The visual appeal of a design. To understand how well the 	<p>Design</p> <ol style="list-style-type: none"> Skill: To learn how to sew cross stitch and applique. To use cross stick and to know how to use applique. To reflect on the techniques used. Skill: To design a product and its template. To design a cushion. To use a paper template. To cut fabric accurately. <p>Make</p>   <ol style="list-style-type: none"> Skill: To decorate fabric using applique and cross stitch. To follow a design criteria. To use cross stitch. To add applique. Skill: To assemble and complete a cushion. To use stitches to join fabrics. To leave space for a seam. Knowledge: To understand why some fabrics are turned inside out after sewing. <p>Evaluate</p>  <p>Skill: To evaluate my own and others work. Knowledge: To know what went well and what needs improving with my product.</p>	<p>Develop Understanding</p> <ol style="list-style-type: none"> Skill: To recognise foods and their food groups. To match food with the food group they belong to. Knowledge: To name the five food groups. To explain how much of each food group I should have each day. Skill: To identify the balance of food groups in a meal. To identify foods, I like. To plan a balanced meal. Knowledge: To explain the food groups in a meal. Skill: To identify an appropriate piece of equipment to prepare a given food. To practise food preparation skills using a range of equipment. Knowledge: To justify using a piece of equipment with a type of food (<i>cheese, butter, bread</i>) Skill: To select balanced combinations of ingredients. To select foods from specific food groups. To describe the taste of different foods. Knowledge: To explain why I have chosen to put foods together. <p>Design</p> <ol style="list-style-type: none"> Skill: To design based on a criteria. To follow a design criteria. To design three different wraps. Knowledge: To justify the choice I have made. <p>Make</p> <ol style="list-style-type: none"> Skill: To select the ingredients for my recipe. To identify the equipment needed to prepare different foods. <p>Evaluate</p>  <ol style="list-style-type: none"> Skill: To decide if I like different wraps and choose my favourite.

design works and fulfils its purpose. To use a list of criteria that a design must meet.



Skills: To Evaluate their own factory models against the design criteria. To test the functionality of the electrical circuit. To compare their models to those of their classmates, providing constructive feedback. To suggest modifications to improve the design, functionality, or aesthetics.

National Curriculum: Year Four

Design	Make	Evaluate	Technical Knowledge
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	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	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	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. COVERED IN SCIENCE

Cooking and Nutrition: 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.

	AUTUMN <i>Structures & Mechanisms</i>	SPRING <i>Textiles</i>	SUMMER <i>Food & Nutrition</i>
Year 4	<i>Transatlantic Slave Trade: Carts</i>	<i>Fastenings- iPad Case</i>	<i>Balanced Diet- Adapting a Recipe</i>
Vocabulary	transatlantic slave trade, cart, frame structure, stability, strength, wood (balsa wood, doweling), tools (saw, glue, sandpaper, ruler, pencil), motor, wheels, axles, load, historical accuracy, functionality, ethics.	Criteria, Fabric, Fastening, Fix, Mock-up, Stitch, Template	Appearance, balanced, carbohydrates, chopping board, combination, cut, dairy, design, design brief, diet, evaluate, feel, fruit, grate, grater, ingredients, menu, oils, proteins, review, scissors, smell, snip, spread, spreads, table knife, taste, vegetables
Key Knowledge & Skills	<p style="background-color: #ff0000; color: white; margin: 0;">Design</p> <p>1. Knowledge: To recap slave trade: Brief overview of the historical context, focusing on the transportation of goods and people using carts. To recognise different types of carts used during the slave trade era: Research different designs, materials, and their purposes (e.g., farm carts, transport carts). To discuss ethical implications of the slave trade and the importance of remembering its impact. To have a basic</p>	<p style="background-color: #ff00ff; color: white; margin: 0;">Develop Understanding</p> <p>1.Knowledge: To explain the advantages and disadvantages of different types of fastening type. To know what the main types of fastening are. To say what the advantages and disadvantages of each fastening are.</p> <p style="background-color: #ff0000; color: white; margin: 0;">Design</p> <p>2.Skill: To design a product to meet design criteria. To write a design criteria. To include a fastening in my design.</p> <p style="background-color: #ffff00; color: black; margin: 0;">Make</p> <p>3.Skill: To make and test a paper template. To know how to test my template.</p>	<p style="background-color: #ff00ff; color: white; margin: 0;">Develop Understanding</p> <p>1.Skill: To recognise foods and their food groups. To match food with the food group they belong to.</p> <p>Knowledge: To name the five food groups. To explain how much of each food group I should have each day.</p> <p>2. Skill: To identify the balance of food groups in a meal. To identify foods, I like. To plan a balanced meal.</p> <p>Knowledge: To explain the food groups in a meal.</p> <p>3. Skill: To identify an appropriate piece of equipment to prepare a given food. To practise food preparation skills using a range of equipment.</p> <p>Knowledge: To justify using a piece of equipment with a type of food (cheese, butter, bread)</p>



understanding of how motors and wheels work together for movement.

Skills: To Research historical information about carts used during the slave trade. To analyse the design features of these carts, considering their functionality and limitations. To discuss the ethical implications of the slave trade and its impact on history. To Brainstorm and sketch different cart designs, incorporating a motor for movement.

Lesson 2: Design (Cart for a Purpose)

- 2. Knowledge:** To name a Frame structures: The basic skeletal framework that supports a structure. To name the Aesthetics: The visual appeal and style of a design, considering the historical context. To name the Materials: Different types of materials and their properties (*e.g., wood, metal, plastic*). To understand a target audience: Understanding the needs and limitations of those who used carts during the slave trade.

Skills: To Consider the aesthetics and functionality of the cart, keeping in mind the materials and tools available during the slave trade era. To create a detailed design plan with labelled dimensions, materials, and construction methods, including motor placement and power source (*e.g., battery*).

Make

- 3. Knowledge:** To name Frame structures: Different types of frame structures (*e.g., rectangular, triangular, square*). To know how the shape and construction of a frame affect its stability and strength, considering the weight and type of load it would have carried, plus the added weight of the motor. To understand basic types of motors (*e.g., DC motors*) and how they work.
Skills: To Construct the chosen frame structure using appropriate materials, such as balsa wood and doweling. To Integrate the motor into the frame, ensuring it is securely attached and can power the wheels. To test the stability and strength of the frame with the motor attached.
- 4. Knowledge:** To understand the role of wheels and axles understanding their role in transportation and how they were constructed in the past. To

4.Skill: To assemble an iPad case. To join fabric by sewing. To stick to a design criteria. To ensure my product is fit for purpose.



Evaluate

5.Skill: To evaluate my own and others work.

Knowledge: To know what went well and what needs improving with my product.



4. Skill: To select balanced combinations of ingredients. To select foods from specific food groups. To describe the taste of different foods.

Knowledge: To explain why I have chosen to put foods together.

Design

5. Skill: To design based on a criteria. To follow a design criteria. To design three different wraps.

Knowledge: To justify the choice I have made.

Make

6. Skill: To select the ingredients for my recipe. To identify the equipment needed to prepare different foods.

Evaluate

7. Skill: To decide if I like different wraps and choose my favourite.

explore the types of materials used for cart wheels and bodies during the slave trade era.

Skills: To create simple wheels and axles using balsa wood or other suitable materials. To Attach wheels and axles to the frame, ensuring smooth rotation. To construct the cart's body, considering the type of goods or people it would have carried.

Evaluate



Knowledge: To evaluate the factors to consider when judging the success of a design (e.g., historical accuracy, functionality, stability, strength, motor performance). To understand the importance of reflecting on the historical context and the ethical implications of the slave trade.







Skills: To Evaluate their own cart designs and those of their classmates based on historical accuracy, functionality, and motor performance. To Test the cart's ability to carry a load and move with the motor, simulating real-world conditions. To reflect on the challenges and hardships faced by those who used carts during the slave trade

National Curriculum: Year Five

Design	Make	Evaluate	Technical Knowledge
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	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	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	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. COVERED IN SCIENCE
Cooking and Nutrition: 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.			

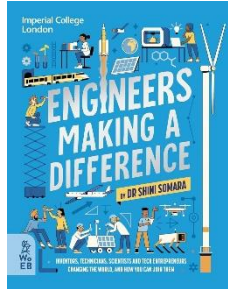
	AUTUMN <i>Structures & Mechanisms</i>	SPRING <i>Textiles</i>	SUMMER <i>Food & Nutrition</i>
Year 5	<i>Wooden Houses</i>	<i>Stuffed Toys</i>	<i>Developing a Recipe-Pizza</i>

Vocabulary	stable structure, aesthetics, frame structure, angled cut, CAD, electrical circuit, LED light, switch, battery, wires, wood properties, reinforcement, compression, gussets, braces, tool safety, saw, glue gun, bulb, battery holder, crocodile wires, circuit diagrams, electrical safety.	Accurate, annotate, appendage, blanket-stitch, design criteria, detail, evaluation, fabric, sew, shape, stuffed toy, stuffing, template	Pizza, dough, sauce, cheese, toppings, vegetarian, gluten-free, recipe adaptation, nutrition, food label, nutrition calculator, kitchen hygiene, cross contamination, knife safety, oven safety, pizza assembly, cooking time, temperature, food presentation, labelling, packaging.
Key Knowledge & Skills	<p>Design</p> <ol style="list-style-type: none"> Knowledge: To understand the principles of balance and support for a strong, sturdy structure. To explore design elements that make a house visually appealing (e.g., <i>shape, colour, texture</i>). To understand how angled cuts in wood create strong support beams. To introduce CAD (Computer-Aided Design) basic CAD software for designing structures. To have a basic understanding of circuits, including the role of bulbs, switches, batteries, and wires. Skills: To brainstorm and sketch initial house designs. To use CAD software to create 3D models of their designs. To plan the placement of the LED light and switch within the design. To consider the dimensions of the wood and incorporating them into the design criteria. <p>Make</p> <ol style="list-style-type: none"> Knowledge: To understand the functional properties of wood (e.g., <i>strength, flexibility</i>). To explore different ways to strengthen a wooden structure (e.g., <i>gussets, braces</i>). To understand how compression supports wooden beams. To understand correct handling and usage of saws, glue guns, and other relevant tools. Skills: To Measure and mark wood accurately using rulers and pencils. To cut wood safely and precisely using saws and mitre boxes. To join wood pieces, sing wood glue and ensuring proper compression. To Identify weak points in the structure and reinforcing them. Knowledge: To Identify and understanding the function of bulbs, batteries, battery holders, crocodile wires, and switches. To read and interpret simple circuit diagram. To follow safety guidelines when working with electrical components. Skills: To build a simple electrical circuit using a battery, wires, an LED light, and a switch. To test the circuit to ensure it functions correctly. To Integrate the circuit into the wooden house structure, ensuring it is secure and safe. <p>Evaluate</p>	<p>Design</p> <ol style="list-style-type: none"> Skill: To design a stuffed toy. To ensure that my toy is proportional. To make a paper template. Knowledge: To understand that it is easier to finish simpler designs to a high standard.  <p>Make</p> <ol style="list-style-type: none"> Skill: To sew a blanket stitch. To cut neatly and accurately. To thread a needle. To use a blanket stitch to join two pieces of fabric. Knowledge: To know that blanket stitch is useful to reinforce the edges of fabric material or join two pieces of fabric. Skill: To create and add decorations to fabric. To create secure and strong stitches (<i>blanket, cross stitch, running</i>). To use applique to attach pieces of fabric decoration. To use stitches to decorate fabric. Skill: To use a blanket stitch to assemble components of a stuffed toy. To stuff my toy carefully, repairing any holes or gaps. <p>Evaluate</p> <ol style="list-style-type: none"> Skill: To evaluate my own and others work. Knowledge: To know what went well and what needs improving with my product.  	<p>Design</p> <p>Lesson 1: Design (Pizza Inspiration & Nutrition)</p>  <p>Knowledge: To identify common ingredients (dough, sauce, cheese, toppings) and their nutritional value. To explore different types of pizza from various cultures (e.g., Neapolitan, Chicago deep-dish, Sicilian). To discuss how to make healthier pizza options (e.g., whole-wheat crust, lean toppings, portion control). Skills: To Research different pizza recipes and their ingredients. To create an informative poster about pizza ingredients and their nutritional value. To design their own unique pizza based on personal preferences and nutritional considerations.</p> <p>Lesson 2: Design (Pizza Adaptation & Creativity)</p>  <p>Knowledge: To understanding how to modify recipes to suit different tastes and dietary needs (e.g., vegetarian, gluten-free). To discover unusual or creative pizza toppings from around the world. Skills: To compare and contrast different pizza recipes. To research unique pizza toppings and their origins. To adapt a basic pizza recipe to incorporate their chosen ingredients. To justify their adaptations based on taste, nutrition, and creativity.</p> <p>Lesson 3: Design (Nutritional Evaluation)</p> <p>Knowledge: To understanding how to read and interpret food labels. To use online tools to calculate the nutritional value of their pizza creations. Skills: To analysing the nutritional information of different pizza ingredients. To use a nutrition calculator to determine the nutritional value of their pizza designs. To compare the nutritional values of different pizzas. To modify their recipes to create healthier pizza options.</p> <p>Make</p> <p>Lesson 4: Make (Pizza Preparation & Safety)</p> <p>Knowledge: To understand the Importance of handwashing, cleaning surfaces, and preventing cross-contamination. To know the correct techniques for cutting ingredients safely. To understand how to use an oven safely and follow temperature guidelines. Skills: To Wash hands and prepare a clean workspace. To measure and prepare ingredients according to the recipe. To cut vegetables (e.g., onions, peppers, mushrooms) safely and accurately. To grate cheese and prepare other toppings. To handle hot pizza and oven equipment safely.</p> <p>Lesson 5: Make (Pizza Assembly & Cooking)</p>

4. **Knowledge:** To assess the house based on stability, strength, aesthetics, and functionality of the light. To understand how to identify areas for improvement and make modifications.



Skills: To test the stability and strength of the wooden house. To evaluate the aesthetics of the finished product. To assess the functionality of the LED light circuit. To identify weak points and suggest improvements for their own and others' designs.



Introduces children to the role of an engineer

Knowledge: To understand the importance of correct cooking time and temperature for a perfect pizza.

Skills: To roll out or press the pizza dough. To assemble the pizza with sauce, cheese, and toppings. To bake the pizza in the oven, monitoring the cooking time and temperature.

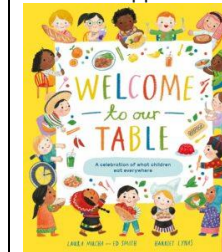
Evaluate

Lesson 6: Design & Evaluate (Pizza Presentation & Labelling)



Knowledge: To understand the importance of visual appeal in food. To Understand the information required on food labels (e.g., ingredients, nutritional values). To Explore different types of food packaging and their functions.

Skills: To cut and serve the pizza in an aesthetically pleasing way. To design and create a label for their pizza, including relevant information. To evaluate their pizza based on taste, appearance, and nutritional value.




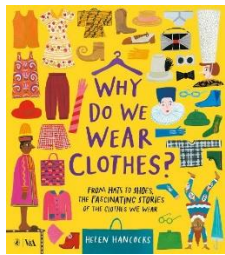
Lesson 1: Linking food types to different cultures.

National Curriculum: Year Six

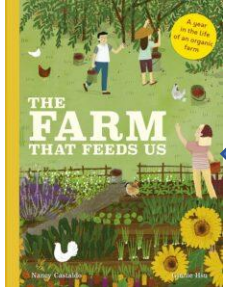
Design	Make	Evaluate	Technical Knowledge
use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	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	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	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. COVERED IN SCIENCE
Cooking and Nutrition: 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.			

	AUTUMN <i>Structures & Mechanisms</i>	SPRING <i>Textiles</i>	SUMMER <i>Food & Nutrition</i>
Year 6	<i>Making Bi-Planes</i>	<i>Waistcoats</i>	<i>Come Dine with Me</i>

Vocabulary	World War I, bi-plane, exploded diagram, cross-sectional diagram, safety features, electrical circuit, motor, switch, battery, wires, prototype, dimensions, effective design, ineffective design, user experience, materials, wood, complex joints, reinforcement, decorative elements, propeller, thrust, evaluation criteria, peer evaluation.	Annotate, decorate, design criteria, fabric, target customer, waistcoat, waterproof	Abattoir, adaptation, balanced, beef, brand, cook, cross-contamination, cut, design, enhance, equipment, evaluate, farm, grate, hygiene, ingredients, label, measure, nutrient, nutrition, nutritional value, preference, press, process, recipe, safety, theme
Key Knowledge & Skills	<p>Design</p> <ol style="list-style-type: none"> Knowledge: To understand the historical context of WW1, the role of bi-planes in warfare, and their basic design features. To understand how exploded diagrams show the components of an object disassembled for clarity. To Understand how cross-sectional diagrams reveal the internal structure of an object. To Identify potential safety hazards in toy design and how to mitigate them. To have a basic understanding of circuits, including the role of motors, switches, batteries, and wires. Skills: To research different types of WW1 bi-planes and analysing their design features. To Sketch bi-plane designs, incorporating historical accuracy and functionality. To create exploded and cross-sectional diagrams of their designs. To Identify potential safety hazards and proposing solutions. To plan the placement of the motor and switch for the propeller. Knowledge: To understand the meaning of a Prototype: A preliminary model used to test a design concept. To understand the importance of accurate measurements for a functional model. To analyse different design choices and their impact on the final product. To consider how design decisions affect the user's interaction with the toy. Skills: To Build a simple prototype of the bi-plane using readily available materials (e.g., cardboard, foam). To test the prototype for functionality and identifying areas for improvement. To refine the design based on feedback and testing. To consider the impact of design choices on the user experience. <p>Make</p> <ol style="list-style-type: none"> Knowledge: To explore different types of wood and their properties (e.g., balsa wood, basswood). To understand and practise using different types of intricate wood joints (e.g., dovetail joints, lap joints). To understand how to strengthen structures using additional materials or techniques. To Incorporate design elements to enhance the visual appeal of the bi-plane. Skills: To Measure, mark, and cut wood accurately using appropriate tools. To create complex wood 	<p>Design</p> <ol style="list-style-type: none"> Skill: To design a waistcoat. To annotate my designs. To design clothing to a set of design criteria. Knowledge: To understand that is important to design clothing with the target in mind. <p>Make</p> <ol style="list-style-type: none"> Skill: To mark and cut fabric according to a design. To explain the differences between my design and the template. To accurately mark out the outline of the panels for my waistcoat. To cut neatly and accurately. Knowledge: To know that using a template helps to accurately mark out a design on fabric. Skill: To assemble a waistcoat. To sew a strong running stitch. To ensure my stitches are small, neat and follow the edge. To tie strong knots to secure the thread in place. Knowledge: To understand the importance of consistently sized stitches. Skill: To decorate my waistcoat. To secure a fastening. To attach objects for decoration using thread. <p>Evaluate</p> <ol style="list-style-type: none"> Skill: To evaluate my work according to the design criteria. Knowledge: To know what went well and what needs improving with my product. 	<p>Design</p> <ol style="list-style-type: none"> Skill: To research and design a three course meal. To list the ingredients I need for my chosen recipe. To read the method and list the equipment I need for my chosen recipe. Knowledge: To know how to research a recipe by ingredient. To understand that not all course complement each other. <p>Make Evaluate</p> <p>2,3,4. Skill: To apply culinary skills and knowledge. To prepare ingredients and follow a recipe safely and sensibly. To contribute a recipe page to a class cookbook using imperative verbs, adjectives and illustrations.</p> <p>Knowledge: To describe the farm to fork process for a given ingredient using a storyboard (<i>salmon, pineapples</i>).</p> 



Takes children on a journey as to why we have so many different types of clothes and how and why each of these are made in a certain way.



Supports children in understanding where food comes from and the process it goes through. From farm to fork.

joints with precision and care. To assemble the bi-plane structure using glue and appropriate joining techniques. To reinforce the structure for strength and durability. To add decorative elements to the bi-plane.

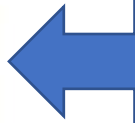
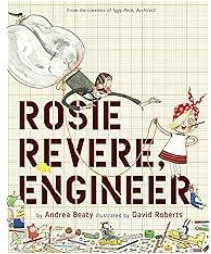
4. **Knowledge:** To Understand how motors work and how to connect them to a power source. To understand how to incorporate a switch to control the motor's operation. To understand the basic principles of how propellers generate thrust.
Skills: To assemble the motor and switch according to a wiring diagram. To attach the motor and propeller to the front of the bi-plane. To test the motor and propeller to ensure they function correctly.

Evaluate



Knowledge: To assess the bi-plane based on historical accuracy, functionality, aesthetics, safety, and user experience. To understand the benefits of receiving feedback from others and using it to improve a design.

Skills: To Test the completed bi-plane for stability, and durability. To Present their bi-planes to the class and receiving feedback from peers. To Identify areas for improvement based on peer evaluation and testing. To reflect on the design process and the challenges faced.



Shares a journey about a female engineer out to achieve her goal of flight