



CURRICULUM

Design & Technology



Intent

At Southville Primary, we aspire to be creative inventors. We aim to inspire our children to be inventive problem-solvers, effective team members and reflective evaluators. We will provide them with opportunities to develop practical skills for life and above all, develop their aspirations to become the designers, innovators, and technologists of the future. We do this by:

- Making sure that DT objectives are delivered in the context of an exciting and engaging topic within our Wider Curriculum model.
- Identifying needs and opportunities so children can respond with their own ideas and designs
- Reflecting on and evaluating present and past design and technology, its uses, and its impacts
- Considering aesthetic, social, and environmental issues and their impact on product design
- Developing their skills in working practically with a variety of tools and materials to design and make products for a wide range of users
- Creating a range of structures, mechanisms, textiles, electrical systems, and food products with a real-life purpose
- Critiquing, evaluating, and testing ideas and products created by themselves and others
- Researching engineers, designers, architects, and chefs
- Providing opportunities to communicate their ideas through discussion, diagrams, prototypes, pattern pieces and computer-aided design
- Understanding the principles of nutrition and a healthy and varied diet
- Building knowledge of where and how ingredients are grown and the journey it takes for them to get to our plates
- Preparing and cooking a variety of dishes using different cooking techniques

Implementation

Our DT curriculum is rigorous, challenging, and interconnected, designed to help children become experts in the subject. It fits within our wider curriculum model, where children fully immerse themselves in a specific topic or area of focus for a term, engaging with two 'key driver' subjects (Science, History, Geography, Art, or Design and Technology). While each unit has a central, overarching focus, DT is valued as its own discipline and is taught discreetly. When DT serves as a 'key driver' subject, it follows a separate plan anchored by a specific 'key question' that guides the unit's exploration and outcomes. Key subject-specific elements integral to most units have been identified, providing a valuable reference for teachers during planning. This ensures that both the substantive knowledge and disciplinary skills of DT are explicitly learned and progressively built upon.

The DT curriculum follows a coherent, well-sequenced plan that ensures pupils progress logically through their learning journey, with clear objectives and outcomes at each stage. Lesson sequences are structured to scaffold learning effectively, with adaptations to meet the diverse needs of all pupils. Mid-term plans align with National Curriculum objectives, ensuring that content and progression meet and go beyond statutory requirements. To deepen learning and make it more relevant, units incorporate a Local Anchor Point, visit/visitor, and key figures, connecting pupils with their local context. Diversity, equity, and inclusion are embedded throughout the curriculum, representing a wide range of perspectives so that all pupils can see themselves reflected in their learning.

Impact

To ensure our curriculum is effective and continuously improving, subject leaders assess the impact of individual units and the curriculum as a whole through a process of triangulation. This includes looking at the quality of work in books to see how children are demonstrating their learning, reviewing medium-term plans to evaluate how well sequences build on prior knowledge and focus on the most important content, and gathering pupil voice.

Through conversations with pupils, subject leaders assess what children know and remember, how well they can make connections to prior learning, and whether the intended learning from the plans has been successfully embedded. We recognise that not all disciplinary knowledge is captured in books, so pupil voice plays a vital role in assessing the broader impact. Findings are then shared with staff to support ongoing refinement of teaching and learning. This may involve adjusting the sequence of lessons, improving models and explanations, or increasing opportunities for consolidation. Where gaps, misconceptions or forgotten learning are identified, teachers plan for re-teaching or revisiting in future units to ensure knowledge is remembered and built upon over time.

Content Overview

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Driver Unit	<p>Let's Play</p> <p>Mechanisms</p> <p>How do we make a moving picture?</p> <p>On Safari!</p> <p>Textiles</p> <p>Can you design and make an African kente cloth?</p>	<p>Fire Fire!</p> <p>Structures</p> <p>How can we build a fire engine?</p>	<p>What the Romans Did for Us</p> <p>Structures</p> <p>Can my catapult hit the target?</p>	<p>Listen Up!</p> <p>Product Design</p> <p>How can we research, design, make and market our own ear protectors?</p>	<p>New York, New York</p> <p>Structures</p> <p>Can you design to a brief, evaluating as you build?</p> <p>The Vikings are coming!</p> <p>Structures</p> <p>Can we follow a design brief, and use our knowledge of water resistance, to build a Viking longboat?</p>	<p>Peace, Politics and Protest</p> <p>Textiles</p> <p><i>How did the suffragettes use textiles to create political banners?</i></p> <p>Legacy & Identity</p> <p>Electrical Systems</p> <p>How can we design and build an electric-motorised vehicle?</p>
Forest School	<p>Every year group takes part in Forest School, which enriches DT by giving pupils real opportunities to design, build, test and problem-solve outdoors. Activities such as den building and working with natural materials develop practical skills, creativity and resilience. Forest School also promotes independence, risk-taking and resourcefulness, strengthening pupils' overall design and making capabilities.</p>					
Food and Nutrition Unit	<p>My School</p> <p>Prepare and make stir fry</p> <p>On Safari!</p> <p>Prepare and make foods associated with the continent of Africa.</p>	<p>4500 Miles Away</p> <p>What is food in Jamaica like?</p> <p>From Bean to Bar</p> <p>How do you make a Mayan hot chocolate?</p>	<p>Healthy me</p> <p>What makes the perfect energy bar?</p>	<p>Splash!</p> <p>Prepare and make and eat Chinese Chow Mein</p>	<p>Life on Earth</p> <p>How does what we eat impact the health of our planet?</p>	<p>Exploring Britain's Forgotten History</p> <p>Heston Blumenthal – Weird and wonderful recipes that should not work but do! – savoury scones</p>

NC Coverage Map

NC Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mechanisms	Moving pictures (sliders, levers)	Fire Engine (wheels & axles)	Roman Catapults (gears, pulleys & levers)	CAM mechanisms	New York (levers, pulleys, gears applied in structures)	Motorised Vehicle – integrated mechanical & electrical systems
Structures	-	Fire Engine (build a fire engine)	Roman Catapults (build a Roman Catapult)	Make ear protectors (best materials to block sound)	Skyscrapers / Frame structures – load-bearing & reinforcement	Motorised Vehicle – structural design + housing systems
Textiles	Kente Cloth – weaving & joining	-	-	-	-	Political Banners – stitching, joining & reinforcement
Cooking & Nutrition	Stir Fry – balanced diet & basic cooking skills	Jamaican Food – design & prepare cultural food Mayan Hot Chocolate	Energy Bars – healthy eating & product design	Chow Mein – technical cooking skills + evaluation	Healthy recipes (balanced diet) Pizza Making Workshop	Seasonal/global foods - Maya foods Heston Blumenthal: savoury scones
Electrical Systems / ICT	-	-	-	Simple circuits (switches, bulbs, buzzers)	-	Motorised projects (vehicles with circuits)

Progression Overview

	Investigate	Design	Make	Evaluate	Apply
Reception	Explore and discuss familiar objects and products.	Express ideas for what they want to make.	Create simple models using various materials.	Talk about what they made and how it works.	Use what they made in play or role-play.
Year 1	Identify simple products and talk about their uses.	Draw simple designs with basic features.	Assemble parts with assistance to make a basic product.	Describe what they like or dislike about their product.	Demonstrate how their product can be used.
Year 2	Research basic features of products and their designers.	Plan a design with labelled drawings.	Combine materials independently to create simple products.	Suggest simple improvements for their product.	Apply their product for a specific purpose.
Year 3	Investigate a product's function and materials used.	Develop designs considering function and aesthetics.	Follow a plan to make a functional product.	Evaluate their product based on its function and design.	Show how their product meets a need or solves a simple problem.
Year 4	Research specific designers and products related to a topic.	Develop a design with specific materials and purpose in mind.	Select appropriate tools and materials to make a product.	Identify strengths and areas for improvement in their product.	Use their product in a real-world context or simulation.
Year 5	Compare and contrast different products and their design processes.	Develop a detailed design, including multiple features and functions.	Build a product with increasing accuracy and precision.	Critically assess the success of their product based on criteria.	Apply their product effectively in a relevant situation or challenge.
Year 6	Conduct detailed research into a product's development and designer's impact.	Produce a detailed, annotated design considering constraints and user needs.	Create a high-quality, refined product using more than one technique.	Provide a detailed evaluation, reflecting on the design and making process.	Present their product as a solution to a real-world problem.

Key Terms

Substantive Concepts

This is the core subject knowledge, skills and vocabulary used about the designing and making processes and the contribution of designers from a range of genres, times and cultural traditions. We explore these through the lenses of substantive concepts which are taught through explicit vocabulary instruction as well as through the direct content and context of the study. The substantive concepts that we develop through our Design and Technology curriculum are:

- **Food and Nutrition**
- **Mechanisms**
- **Structures**
- **Electrical Systems**
- **Textiles**

Disciplinary Knowledge ('Thinking like a Designer')

In addition to the core knowledge required to be successful within each of these elements, our curriculum outlines key aspects of how we intend to develop working as a designer. We organise our curriculum so that it focuses on developing different aspects of these competencies at different points. The features of working as a designer in our Design and Technology curriculum are:

- **Investigate:** this includes researching and finding about existing products and designers.
- **Design:** the art or process of deciding how something will look or work.
- **Make:** create something by combining materials or putting parts together.
- **Evaluate:** form an opinion of the value or quality of something after careful thought.
- **Apply:** use something or make something work in a particular situation.

Additionally, we teach children that a designer:

- **Problem Solves**
- **Uses tools safely & follows instructions carefully**
- **Tests, reworks, adapts and improves**
- **Evaluates and uses feedback**
- **Works as part of a team**
- **Is technically accurate**

For Food and Nutrition lessons, we teach children that a cook:

- **Understands the importance of a balanced diet** (can name different food groups and healthy ingredients)
- **Finds out about cooks and the different types of foods they make** (to help inspire them with their own cooking)
- **Follows Recipes Carefully** (reads and understands recipe instructions, including safety information)
- **Learns different cooking techniques and methods** (mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes)
- **Accurately measures and weighs & cooks at the right temperature and for the right amount of time**
- **Evaluates** (tastes food and can name flavours; gives opinions; suggests changes in the future)

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, such as the home, school, leisure, culture, enterprise, industry and the wider environment. When designing and making, pupils should be taught to:

KS1

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 such as 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, such as 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.

KS2

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, such as 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, such as gears, pulleys, cams, levers and linkages.
- understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors.
- apply their understanding of computing to programme, monitor and control their products.

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.

Medium Term Plans

EYFS	
Driver Units	
Linked ELG	<p>Physical Development and Expressive Arts and Design</p> <p>Design and Technology in the EYFS Framework falls across a number of areas of learning including Physical Development and Expressive Arts and Design. In addition, aspects within Communication and Language and Personal, Social and Emotional Development are linked as part of children being able to evaluate and improve their work. The Characteristics of Effective Teaching and Learning are threaded through all aspects of learning and are the fundamental ways in which children within EYFS learn. During the Early Years, children should be developing knowledge, skills and understanding which will prepare them for the Year 1 curriculum</p> <p>Fine Motor Skills</p> <ul style="list-style-type: none"> • Use a range of small tools, including scissors, paint brushes and cutlery • Begin to show accuracy and care when drawing <p>Creating with Materials</p> <ul style="list-style-type: none"> • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function • Make use of props and materials when role playing characters in narratives and stories. • Share their creations, explaining the process they have used <p>Speaking</p> <ul style="list-style-type: none"> • Express their ideas and feelings about their experiences using full sentences <p>Listening, Attention and Understanding</p> <ul style="list-style-type: none"> • 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 <p>Make comments about what they have heard and ask questions to clarify their understanding</p> <p>Managing Self</p> <ul style="list-style-type: none"> • Understand the importance of healthy food choices
Examples of Art in an Enabling Environment	<p>Woodwork</p> <ul style="list-style-type: none"> → Planning and designing creations for a purpose. → Selecting materials for a purpose. → Drawing designs. → Combining materials. → Using tools to combine and adapt materials, e.g. hammer, saw. → Using correct vocabulary, e.g. join, hammer, nail, wood, plank, move etc. → Exploring wheels, hinges and axles. → Measuring resources using non standard units <p>Cookery</p> <ul style="list-style-type: none"> → Measuring out ingredients using standard and non standard measures. → Washing hands, cleaning surfaces and equipment. → Talking about what it means to be healthy. → Use vocabulary around taste, smell, texture and feel. → Combining ingredients for a purpose. → Follow simple visual instructions. → Make links to previous learning and experiences, e.g. this smells like Christmas. <p>Outdoors / OPAL / Forest School</p> <ul style="list-style-type: none"> → Forest School x 10 sessions → Creating models and structures using natural materials. → Combining large scale construction materials. → Creating products which move. → Supporting in the building of resources to support wildlife, e.g. bird feeders, bug hotels, hedgehog homes. <p>Art and Craft</p> <ul style="list-style-type: none"> → Using resources for a desired purpose, e.g. a box for a basket. → Combining materials and resources, e.g. using a glue gun to combine → Using colour and materials to change the appearance of a creation. → Planning how to approach a task. → Reviewing and making adaptations to a model. → Explain what materials they are using and why. → Using scissors to change materials. <p>Construction Area</p> <ul style="list-style-type: none"> → Connecting blocks, including lego and duplo, to create models. → Explaining their models, e.g. What they are, how they work, what they do. → Exploring connectable resources, e.g. stickle bricks, clics, Knex, gears, exploring different ways to combine to achieve a goal. → Recreating real life objects into small scale creations, e.g. building an igloo or house. → Adapting and changing creations to overcome a problem. → Exploring the mechanisms of their products <p>Sand</p> <ul style="list-style-type: none"> → Using sand to create 3D structures. → Adding objects to creations to provide detail. → Giving reason for the details added to creations. → Exploring wet and dry sand and explaining which is best for their creations. → Building products to transport sand.

Year Group	Unit Title (Project)	Linked Learning	Area of D&T (Medium)	Technical Knowledge (NC)	Substantive and Disciplinary Knowledge (NC)	Key Knowledge and Skills (Small Steps / Building Blocks / Component Parts)	Key Vocabulary
1	Let's Play (term 4) <i>How do we make a moving picture?</i>	Builds on EYFS exploration of simple movements and cause-effect by introducing basic mechanisms like levers and sliders in making moving pictures.	Mechanisms Levers, sliders, wheels, axles	Explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products.	Investigate: this includes researching and finding about existing products and designers. Design: the art or process of deciding how something will look or work. Make: create something by combining materials or putting parts together. Evaluate: form an opinion of the value or quality of something after careful thought. Apply: use something or make something work in a particular situation.	How do we make a moving picture? 1. WALT: investigate pop-up books and how they work. 2. WALT: investigate lift-the-flap/hinges and springs. 3. WALT: investigate levers and sliders. 4. WALT: design a moving picture using different mechanisms. 5. WALT: make a moving picture using the mechanisms. 6. WALT: present our moving picture to an audience.	Tier 2: design, make, evaluate, product, materials, mechanism, test, model, shape, strong, tool, join, function, compare, contrast, order, resources, effect, purpose, classify, creation, innovation Tier 3: slider, lever, hinge, pivot, spring, pop-up, mechanism, construction, movement, interactive, electrical, craftsmanship, assembly
1	On Safari! (term 6) <i>Can you design and make an African kente cloth?</i>	Builds on EYFS experience with fabrics and textures by developing basic sewing and pattern-making skills to create African kente cloth designs.	Textiles basic sewing and joining fabrics	Understand how to join materials using basic sewing techniques. (Textiles are broadly covered through joining and using fabrics in KS1)	Investigate: this includes researching and finding about existing products and designers. Design: the art or process of deciding how something will look or work. Make: create something by combining materials or putting parts together. Evaluate: form an opinion of the value or quality of something after careful thought.	Can you design and make an African kente cloth? 1. WALT: understand what Kente cloth is 2. WALT: create our own symbolic designs. 3. WALT: practice weaving 4. WALT: explore repeated patterns 5. WALT: plan a design 6. WALT: make a Kente cloth 7. WALT: evaluate my design	Kente cloth Weaving Pattern repeated symbol

					Apply: use something or make something work in a particular situation.		
2	Fire Fire! (term 2) <i>How can we build a model fire engine?</i>	Science: Comparing materials' suitability and how their shapes change under forces. Builds on Year 1's mechanisms knowledge (levers, sliders, wheels, axles) and adds structural understanding of making things strong, stiff, and stable through building a model fire engine.	Structures & Mechanisms Making them strong, stiff, stable	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.	Investigate: this includes researching and finding about existing products and designers. Design: the art or process of deciding how something will look or work. Make: create something by combining materials or putting parts together. Evaluate: form an opinion of the value or quality of something after careful thought. Apply: use something or make something work in a particular situation	How can we build a fire engine? 1. WALT: Visit from the fire service 2. WALT: Introduce brief (research existing products) 3. WALT: Identify and compare the suitability of materials (Explore and compare everyday materials for fire engine parts – which are strong, light, waterproof, flexible?) 4. WALT: Research how to make the product (explore materials, parts, joining methods, and attaching wheels) 5. WALT: Find out how materials can be changed by squashing, bending, twisting, and stretching (Investigate how solid materials behave when manipulated and what this means for product design) 6. WALT: Design the product in partners (Draw and explain how the fire engine will be made, justifying material and mechanism choices) 7. WALT: Make the product (build a fire engine using designs and research) 8. WALT: Make the product (build a fire engine using designs and research) 9. WALT: Make the product (build a fire engine using designs and research) 10. WALT: Test the product (share with nursery/reception classes and gather feedback) 11. WALT: Understand how houses were built in 1666 London (explore house features, technology, and reasoning) 12. WALT: Make the houses (build houses in small groups) 13. WALT: Watch the houses burn in a reenactment of The Great Fire of London 14. WALT: Write a recount (recount the house building and burning task)	Tier 1: fire engine, build, make, design, test, share Tier 2: investigate, research, materials, product, attach, join, explain, feedback, task, features, method, questions, technology, parts Tier 3: 1666, The Great Fire of London, Tudor, reenactment, structure, vehicle, fire service, design brief, evaluation, axle

3	<p>What the Romans Did for Us</p> <p><i>Can my catapult hit the target?</i></p>	<p>Builds on Year 2's mechanisms and structures by introducing more complex mechanical systems (gears, pulleys, cams, linkages) and reinforcement techniques via Roman catapult design and making.</p>	<p>Structures & Mechanisms</p> <p>Strengthen, stiffen, reinforce</p> <p>Gears, pulleys, cams, levers, linkages</p>	<p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p>	<p>Investigate: this includes researching and finding about existing products and designers.</p> <p>Design: the art or process of deciding how something will look or work.</p> <p>Make: create something by combining materials or putting parts together.</p> <p>Evaluate: form an opinion of the value or quality of something after careful thought.</p> <p>Apply: use something or make something work in a particular situation</p>	<p>Can my catapult hit the target?</p> <ol style="list-style-type: none"> WALT: research the history of Roman Catapults and their development and design over time. <i>(Introduction to catapults; What is a catapult? How do catapults work?)</i> WALT: research the history of Roman Catapults and their development and design over time. <i>(Exploring types and their historical development; look at models)</i> WALT: design a Roman catapult. <i>(Planning catapult designs)</i> WALT: design a Roman catapult. <i>(Sketching catapult designs)</i> WALT: model and make a Roman catapult. <i>(Creating components for the catapult using DT resources)</i> WALT: model and make a Roman catapult. <i>(Assembling the catapult from the modeled parts)</i> WALT: test our catapult. <i>(Testing the catapult to measure accuracy and range)</i> WALT: evaluate catapults. <i>(Reviewing the performance of the catapult; suggesting improvements)</i> 	<p>Tier 1:catapult, target, design, make, test, model, throw, hit, measure</p> <p>Tier 2: Roman, history, explore, assemble, accuracy, evaluate, review, improve</p> <p>Tier 3: mechanism, force, tension, lever, trajectory, development, component, performance</p>
4	<p>Listen Up!</p> <p><i>How can we research, design, make and market our own ear protectors ?</i></p>	<p>Builds on prior understanding of materials and structures to focus on electrical systems (switches, bulbs, buzzers, motors) and product design, linking</p>	<p>Electrical Systems & Product Design</p> <p>switches, bulbs, buzzers, motors</p>	<p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p><i>(Note: While this project focuses on sound insulation, it falls under functional product design and use of materials.)</i></p>	<p>Investigate: this includes researching and finding about existing products and designers.</p> <p>Design: the art or process of deciding how something will look or work.</p> <p>Make: create something by combining materials or putting parts together.</p> <p>Evaluate: form an opinion of the value or quality of something after careful thought.</p>	<p>How can we research, design, make and market our own ear protectors?</p> <ol style="list-style-type: none"> WALT: use scientific knowledge to select materials fit for purpose. WALT: find out how the volume of sounds can be changed in a variety of ways. WALT: design innovative, functional and appealing products that are fit for purpose, aimed at particular groups (double lesson) WALT: select and use a range of tools and equipment; select and use materials according to their functional properties and visual appeal (double lesson) 	<p>Design: Designers, Produce, Plan, Explain, Adapt, Original, Communicate, Annotated, Prototype</p> <p>Make: Tools, Task, Material, Outcome, Product, Technique, Finishing, Audience, Market</p> <p>Evaluate: Evaluate, Suggest, Improve, Purpose, Appearance,</p>

		science of sound to functional product creation (ear protectors).			Apply: use something or make something work in a particular situation.	5. WALT: evaluate our ideas and products against design criteria; consider the views of others to improve our work. (double lesson)	Alternative, Features, Test, Construction, Alter, Amend
5	New York, New York <i>Can you design to a brief, evaluating as you build?</i>	Science: recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. Builds on Y3–4 mechanics and structures: forces, mechanisms reinforcement, and design briefs.	Structures & Mechanisms Strengthen, stiffen, reinforce	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].	Investigate: this includes researching and finding about existing products and designers. Design: the art or process of deciding how something will look or work. Make: create something by combining materials or putting parts together. Evaluate: form an opinion of the value or quality of something after careful thought. Apply: use something or make something work in a particular situation	Can you design to a brief, evaluating as you build? 1. WALT: 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 2. WALT explore structures 3. WALT investigate how to strengthen a structure from the effect of gravity. 4. WALT: To recognise that levers and pulleys allow a smaller force to have a greater effect 5. WALT: To recognise that levers and pulleys allow a smaller force to have a greater effect 6. WALT: recognise that gears allow a smaller force to have a greater effect 7. WALT: design to a brief 8. WALT: follow a design brief, whilst evaluating and adapting it, to create a strong structure 9. WALT: follow a design brief, whilst evaluating and adapting it, to create a strong structure 10. WALT: test and evaluate our structures against the design brief.	Tier 2: structure, adapt, evaluate, stable, process Tier 3: gravity, pulley, lever, gear, brief

<p>5</p>	<p>The Vikings are coming!</p> <p><i>Can we follow a design brief, and use our knowledge of water resistance, to build a Viking longboat?</i></p>	<p>Builds on Year 5's earlier mechanisms and structures work by applying knowledge of forces, water resistance, and 3D modelling to build and program Viking longboats.</p>	<p>Structures 3D modelling</p> <p>Computing in DT – Programming and controlling products</p>	<p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p> <p>Apply their computing knowledge to program, monitor and control their products.</p>	<p>Investigate: this includes researching and finding about existing products and designers.</p> <p>Design: the art or process of deciding how something will look or work.</p> <p>Make: create something by combining materials or putting parts together.</p> <p>Evaluate: form an opinion of the value or quality of something after careful thought.</p> <p>Apply: use something or make something work</p>	<p>Can we follow a design brief, and use our knowledge of water resistance, to build a Viking longboat?</p> <ol style="list-style-type: none"> WALT: explain the forces friction, air resistance and water resistance. WALT: identify shapes that are effective for moving through water. WALT: identify shapes that are effective for moving through water. WALT: design a boat to meet a brief. WALT: build a boat as a team, based upon design and brief. (<i>Part 1 – begin building boats in groups</i>) WALT: build a boat as a team, based upon design and brief. (<i>Part 2 – continue construction and refining design</i>) WALT: build a boat as a team, based upon design and brief. (<i>Part 3 – finalise construction and check against brief</i>) WALT: build a boat as a team, based upon design and brief. (<i>Part 4 – prepare boats for testing</i>) WALT: test whether our designs meet the set brief requirements. WALT: evaluate our design. 	<p>Tier 1: Design, product, edit, sink/sinking, float/floating</p> <p>Tier 2: aesthetics, evaluate, refine, adapt, reinforce, resistance, template, models, design</p> <p>Tier 3: materials, components, upthrust, buoyancy, design brief, template</p>
<p>6</p>	<p>Peace, Politics and Protest</p> <p><i>How did the suffragettes use textiles to create political banners?</i></p>	<p>Builds on Year 1 and Year 2 textile work by extending stitching, joining, and reinforcement techniques to more complex textile products (political banners) with historical context.</p>	<p>Textiles</p> <p>Stitching, joining, reinforcement techniques</p>	<p>Understand how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use a range of textile techniques such as stitching and joining.</p>	<p>Investigate: this includes researching and finding about existing products and designers.</p> <p>Design: the art or process of deciding how something will look or work.</p> <p>Make: create something by combining materials or putting parts together.</p> <p>Evaluate: form an opinion of the value or quality of something after careful thought.</p> <p>Apply: use something or make something work</p>	<p>How did the suffragettes use textiles to create political banners?</p> <ol style="list-style-type: none"> WALT: understand the history of banners as a form of public recognition WALT: evaluate model examples of various protest banners WALT: investigate and practise different stitching techniques WALT: design and plan a banner to a brief WALT: work and create from a design brief (make their banner, starting with marking out and cutting the fabric, gathering materials, and planning the layout of elements like words and images.) WALT: work and create from a design brief (continue working on their banners, cutting out shapes, sewing pieces together using a stitch of their choice, and following the design plan.) 	<p>Tier 2: fastenings, stitch, stitching, tacking, fabric, working drawing, design, layout, shape, measurement</p> <p>Tier 3: seam, seam allowance, lining, stiffeners, reinforce, right side/wrong side, slogan, image, public protest, protest banner, stitching technique, WSPU, campaign, slogan,</p>

						<p>7. WALT: work and create from a design brief (complete the final stages of making their banners, including sewing all elements together and adding finishing touches.)</p> <p>8. WALT: work and create from a design brief (finish creating their banners, ensuring all elements are sewn correctly and that the banner matches their initial design brief.)</p> <p>9. WALT: evaluate our finished product</p> <p>10. WALT: present our WSPU-style banners in the form of a public street march</p>	public recognition
6	<p>Legacy & Identity</p> <p><i>How can we design and build an electric-motorised vehicle?</i></p>	Builds on Year 4 electrical systems and Year 5 programming knowledge by designing and building electrically motorised vehicles, integrating computing to program and control products.	<p>Electrical Systems</p> <p>Computing in DT</p>	<p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>Apply their understanding of computing to program, monitor and control their products.</p>	<p>Investigate: this includes researching and finding about existing products and designers.</p> <p>Design: the art or process of deciding how something will look or work.</p> <p>Make: create something by combining materials or putting parts together.</p> <p>Evaluate: form an opinion of the value or quality of something after careful thought.</p> <p>Apply: use something or make something work</p>	<p>How can we design and build an electric-motorised vehicle?</p> <ol style="list-style-type: none"> WALT: draw a detailed plan following a design brief WALT: use tools safely and accurately. WALT: construct a vehicle from a design brief. WALT: construct a net to cover your parade float. WALT: improve on our design. WALT: evaluate my vehicle. 	<p>Tier 2: Circuit, lamp (bulb), motor, switch, buzzer, battery/cell, wire, flow, fair testing, appliance, health and safety, mains electricity, design, build, improve, evaluate</p> <p>Tier 3: voltage, amps, fuse, component, series circuit, resistance, variable resistor, circuit symbol, conductor, insulator</p>

Food and Nutrition

Year Group	Unit Title	Linked Learning	Chef / Cuisine	Practical Knowledge (Technique)	Technical Knowledge (NC)	Key Knowledge and Skills (Small Steps / Building Blocks / Component Parts)	Key Vocabulary
1	My School <i>Prepare and make stir fry</i>	<i>Using things that grow around us</i>	Stir fry	e.g. mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes	<ul style="list-style-type: none"> Understands the importance of a balanced diet Finds out about cooks and different types of foods Follows recipes carefully Learns different cooking techniques and methods Accurately measures and weighs & cooks at the right temperature and time Evaluates 	Prepare and cook a stir-fry using locally grown ingredients, followed by tasting and evaluating the dish.	<p>Tier 1: Stem, Leaf, Noodle, Raw, Cooked, Chop, Slice, Peel, Wash, Rinse, Drain, Serve</p> <p>Tier 2: Chard, Pak Choi (Bok Choy), Courgette, Soy Sauce, Dice, Measure, Combine, Stir, Toss, Seasoning, Coating</p> <p>Tier 3: Stir-fry, Wok, Spatula, High Heat, Sizzle, Chopping Board, Food Safety</p>
1	On Safari <i>Prepare and make foods associated with the continent of Africa.</i>	GEOGRAPHY term 6 <i>Where is Africa and what is it like?</i>	African	e.g. mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes	<ul style="list-style-type: none"> Understands the importance of a balanced diet Finds out about cooks and different types of foods Follows recipes carefully Learns different cooking techniques and methods Accurately measures and weighs & cooks at the right temperature and time Evaluates 	What food do they eat in Africa that we can prepare? <ol style="list-style-type: none"> WALT: Prepare and make foods associated with the continent of Africa (cooking – chapati). WALT: Prepare and make foods associated with the continent of Africa (cooking – tasting and evaluating). 	<p>Tier 1: Weigh, Combine</p> <p>Tier 2: Whisk, Knead, Weigh, Sift, Mix, Flatten</p> <p>Tier 3: Griddle, Chapati</p>

2	<p>4500 Miles Away</p> <p><i>What is food in Jamaica like?</i></p>			<p>e.g. mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes</p>	<ul style="list-style-type: none"> • Understands the importance of a balanced diet • Finds out about cooks and different types of foods • Follows recipes carefully • Learns different cooking techniques and methods • Accurately measures and weighs & cooks at the right temperature and time • Evaluates 	<p>What is food in Jamaica like?</p> <ol style="list-style-type: none"> 1. WALT: Design an appealing product to eat from a different country. 2. WALT: Use a range of skills such as cutting and measuring ingredients to make a product to eat from a different country. 3. WALT: Explore and evaluate a product. 	<p>Tier 1: chopping, peeling, cutting, mixing, veg, pastry, taste, flavours</p> <p>Tier 2: bridge-cut, claw-cut, measure, design, evaluate, appealing, crimp, egg wash, ingredients, filling, recipe, preparation</p> <p>Tier 3: Jamaican patty, jerk sauce, coconut water, ackee, product evaluation, culinary techniques,, traditional foods</p>
2	<p>From Bean to Bar</p> <p><i>How do you make a Mayan hot chocolate ?</i></p>	<p>Geography: Finding cocoa-growing regions on a map / Google earth</p> <p>Fair Trade Discussion: Ethical considerations in the chocolate industry, including workers' rights and fair pay.</p>	<p>Ancient Mayans</p>	<p>e.g. mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes</p>	<ul style="list-style-type: none"> • Understands the importance of a balanced diet • Finds out about cooks and different types of foods • Follows recipes carefully • Learns different cooking techniques and methods • Accurately measures and weighs & cooks at the right temperature and time • Evaluates 	<p>How do you make a Mayan hot chocolate?</p> <ol style="list-style-type: none"> 1. WALT: compare and describe different flavours using our senses when trying chocolate. 2. WALT: understand how to make hot chocolate in the style of Mayans. 3. WALT: design our own hot chocolate using different flavours. 4. WALT: design a label for our own hot chocolate. 5. WALT: understand the first process of making an ancient hot chocolate. 6. WALT: understand the second process of making an ancient hot chocolate. 7. WALT: evaluate our ancient-styled hot chocolates. 8. WALT: edit and improve our design 	<p>Tier 2: taste, texture, appearance, smell, flavour, compare, describe, mix, design, evaluate, improve, process, heat, stir, combine, peel, roast, label, recipe, method, ingredient, plan, test, add, edit</p> <p>Tier 3: chocolate, cocoa beans, roasting, cooling, peeling, husks, grinding, mixing, Mayan hot chocolate, cacao, marshmallows, cinnamon, chilli, sugar, blending, ancient method, modern method</p>

3	Healthy me <i>What makes the perfect energy bar?</i>	Science <i>How do our bones, muscles, and food choices help us live, move, and grow?</i> Producing a non-chronological report on healthy living	Sports energy bar	e.g. mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes	<ul style="list-style-type: none"> Understands the importance of a balanced diet Finds out about cooks and different types of foods Follows recipes carefully Learns different cooking techniques and methods Accurately measures and weighs & cooks at the right temperature and time Evaluates 	What makes the perfect energy bar? 1. WALT: Understand how a healthy diet impacts the human body. 2. WALT: Design our own energy bar. 3. WALT: Prepare and cook food safely and hygienically. 4. WALT: Evaluate my product.	Tier 2: mix, chop, slice, bake, prepare, design, plan, taste, recipe, evaluate, group, choice, freeze, clean, allergy, advertise, discuss, help, label Tier 3: ingredients, food hygiene, food safety, processed food, Eatwell Guide, balanced diet, healthy meal, energy bar, parent helper, cooking room, recipe publishing, meal plan
4	<i>How can I cook chinese chow mein?</i>	<i>Build on our skills from Year 1 making the same recipe</i>	Ken Hom – Chinese	e.g. mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes	<ul style="list-style-type: none"> Understands the importance of a balanced diet Finds out about cooks and different types of foods Follows recipes carefully Learns different cooking techniques and methods Accurately measures and weighs & cooks at the right temperature and time Evaluates 	How can I cook chinese chow mein? 1. WALT understand background about Food Hero – Ken Hom and introduction to Chinese food 2. WALT be aware of food Safety & Hygiene 3. WALT chop, cut plan the recipe 4. WALT cook and evaluate a chow mein stir fry	Tier 1: Chop Peel Slice Stir Scissors Drain Tier 2: Grate Measure Snip Weigh Teaspoon Tablespoon Millilitres Tier 3: Colander Saucepan Spatula
5	Life on Earth <i>How does what we eat impact the</i>	Science (term 6) How does life continue on Earth? Geography	Vegetarian/vegan	e.g. mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes	<ul style="list-style-type: none"> Understands the importance of a balanced diet Finds out about cooks and different types of foods 	How does what we eat impact the health of our planet 1. WALT: understand what is meant by a food eco footprint 2. WALT: design recipes with a low eco footprint 3. WALT: safely and hygienically prepare and make a vegetarian pasty	Carbon Dioxide CO2 emissions Greenhouse effect pasty

	<i>health of our planet?</i>	How is our local environment affected by human activity – and what can we do about it?			<ul style="list-style-type: none"> Follows recipes carefully Learns different cooking techniques and methods Accurately measures and weighs & cooks at the right temperature and time Evaluates 	<ol style="list-style-type: none"> WALT: present our design to appeal to customers WALT: evaluate our product, skills and development 	
6	Legacy and Identity: Exploring Britain's Forgotten History		Heston Blumenthal -Do some weird and wonderful recipes work?	mixes & blends; fries, bakes & boils; peels & chops; kneads, rolls & shapes	<ul style="list-style-type: none"> Understands the importance of a balanced diet Finds out about cooks and different types of foods Follows recipes carefully Learns different cooking techniques and methods Accurately measures and weighs & cooks at the right temperature and time Evaluates 	<i>Do some weird and wonderful recipes work?</i> <ol style="list-style-type: none"> WALT: explain who Heston Blumenthal is and what he does. WALT: recognise the importance of kitchen hygiene and safety in cooking. WALT: follow a recipe to bake savoury scones WALT: evaluate my savoury scones. 	Tier 1: Chef, Baker Germs Hygiene Health and Safety Tier 2: Bacteria Sanitise Detergent Tier 3: Gastro Cooking Multi-sensation Cooking Molecular Gastronomy