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Construction:
Electrifying Creations
Structures

Food and Nutrition:
Mix it up

Textiles: Trash to
Treasure

Y6

Food and Nutrition:
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Textiles: Moonlit
Magic

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Tale Engineering
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Textiles: Buzzing
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Y1

Expressive arts and de-
signs: Creating with
materials

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Expressive arts and de-
signs: Creating with
materials

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Subject Rationale: Design Technology

At Harpfield Primary Academy, Design and Technology is part of a broad and balanced curriculum which involves applying knowledge and skills when designing, making and evaluating products. Activities in Design and Technology in our school provide opportunities to use a range of materials and develop processes which help pupils to improve their understanding of the world around them - their cultural capital. They should develop understanding of food and nutrition and to work independently or as part of a team. We use Grammarsaurus curriculum materials to ensure that there is progression, coverage and sequencing. This is broken down into three strands - food and nutrition, textiles and construction. Within each unit of work, pupils will be taught the disciplinary concepts of: researching, designing, making, evaluating and technical knowledge. These teaching resources also enable our teachers to have strong subject knowledge and therefore are able to deliver high-quality lessons.

In EYFS, skills in construction and investigating materials are taught mainly through Expressive Arts and Design. In addition to this, there are many opportunities for skills in Design and Technology to be developed which are provided through a range of teacher led and child initiated activities.

The essential skills builder framework is also woven into the existing DT curriculum for the whole school.

Year 6	Construction	• 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 (CAD) • 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)
	Food and Nutrition	• investigate and analyse a range of existing products • understand and apply the principles of a healthy and varied diet • understand how key events and individuals in design and technology have helped shape the world • evaluate their ideas and products against their own design criteria • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams • select from and use a wider range of tools and equipment to perform practical tasks 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 • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
	Textiles	• 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 • apply their understanding of how to strengthen, stiffen and reinforce more complex structures
Year 5	Construction	• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams • 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, 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 • understand and use mechanical systems in their products (for example gears, pulleys, cams, levers and linkages)
	Textiles	• investigate and analyse a range of existing textile products and artworks. • use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose. • generate, develop, model and communicate their ideas through discussion and annotated sketches. • select from and use a wider range of tools and equipment to perform practical tasks accurately. • select from and use a wider range of materials and components, including fabrics and threads, according to their functional properties and aesthetic qualities. • 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.
	Food and Nutrition	• 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 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 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

Year 4	Textiles	• 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 textiles, 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
	Construction	• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams • 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, 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
	Food and Nutrition	• investigate and analyse a range of existing products • use research and develop design criteria to inform the design of innovative, functional, and appealing products that are fit for purpose • generate, develop, model and communicate their ideas through discussion and annotated sketches • select from and use a wider range of tools and equipment to perform practical tasks accurately • select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities • 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 • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
Year 3	Food 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 • investigate and analyse a range of existing products • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams • select from and use a range of tools and equipment to perform practical tasks • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
	Textiles	• investigate and analyse a range of existing products • use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at particular individuals or groups • generate, develop, model and communicate their ideas through discussion and annotated sketches • select from and use a wider range of tools and equipment to perform practical tasks accurately • select from and use a wider range of materials and components, including textiles, according to their functional properties and aesthetic qualities • 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
	Construction	DT • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams • 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, 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) Science • understand the use of forces and magnets in functional designs • notice that some forces need contact between two objects, but magnetic forces can act at a distance • observe how magnets attract or repel each other and attract some materials and not others • describe magnets as having two poles

Year 2	Food and Nutrition	- 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 - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from
	Construction	- explore and evaluate a range of existing products - explore and use mechanisms for example, levers, sliders, wheels and axles, in their products - build structures, exploring how they can be made stronger, stiffer and more stable - 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 - evaluate their ideas and products against design criteria
	Textiles	- explore and evaluate a range of existing products - design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking and drawing - select from and use a range of tools and equipment to perform practical tasks - select from and use a wide range of materials and components, including textiles, according to their characteristics - build structures, exploring how they can be made stronger, stiffer and more stable - evaluate their ideas and products against design criteria
Year 1	Textiles	- 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
	Food and Nutrition	- use the basic principles of a healthy and varied diet to prepare dishes - explore and evaluate a range of existing products - understand where food comes from - design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking and drawing - select from and use a range of tools and equipment to perform practical tasks - evaluate their ideas and products against design criteria
	Construction	- design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking and drawing - select from and use a range of tools and equipment to perform practical tasks - select from and use a wide range of materials and components, including construction materials, according to their characteristic - 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

Reception	Expressive arts and designs: Creating with materials	Return to and build on previous learning, refining ideas and developing their ability to represent them.
	Expressive arts and designs: Creating with materials	Create collaboratively sharing ideas, resources and skills.
	Expressive arts and designs: Creating with materials	Early learning goal: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
Nursery	Expressive arts and designs: Creating with materials	Birth to 3 years: Explore different materials, using all their senses to investigate them. Manipulate and play with different materials. Make simple models which express their ideas.
	Expressive arts and designs: Creating with materials	3-4 years: Explore different materials freely, in order to develop their ideas about how to use them and what to make.
	Expressive arts and designs: Creating with materials	3-4 years: Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures.

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		Substantive Knowledge	Working like a designer	Vocabulary
Year 6	Construction: Electrifying Creations	Grammarsaurus unit: Electrifying Creations <i>How can we combine electricity and design to create a spooky, Gothic-themed model?</i> Can I describe features of Gothic design using key vocabulary? How do electrical circuits work? Can I design a Gothic-themed model with lights, movement or sound? Can I build a stable structure and add an electrical feature? Can I evaluate the success of the model against the criteria?	Children will develop construction, mechanical and electrical skills to create Gothic-inspired models. They will research Gothic architecture, study inspirational architects and engineers, and design their models using detailed drawings and computer-aided design (CAD). Through construction techniques, they will build strong structures and integrate simple mechanisms and electrical circuits with lights, motors or sound to achieve dramatic effects. The focus will be on combining stability, function and aesthetics to produce high-quality outcomes. Finally, children will test and evaluate their models, considering both performance and appearance, and suggest improvements. By the end of the unit, they will be more confident in creating intricate, imaginative models that showcase creativity and technical skill, while consolidating their knowledge of mechanisms, joining methods and electrical systems.	Tier 2: accurate, appealing, atmosphere, circuit, component, detail, effect, functional, improve, manufacture, pattern, successful, test, texture Tier 3: aesthetic, architecture, CAD (computer-aided design), Gothic, LED (light-emitting diode), mechanism, peer, perspective
	Food and Nutrition: Mix it up	Grammarsaurus unit: Mix it up <i>How can we mix recipes to invent an exciting new food?</i> What makes a hybrid food exciting? Can I explain how flavour, texture and presentation contributes to their success? How do we explore and test flavour pairings? Can I design a hybrid dish that meets a design brief? Can I follow a recipe independently, applying accurate preparation skills and refine where needed? Can I evaluate my dish for taste, appearance and inspiration?	Children will explore how food trends develop and why hybrid dishes become popular by analysing existing products and discussing how flavour, texture and presentation influence success. They will test flavour pairings and refresh key preparation skills, such as peeling, slicing and grating, to strengthen their technical knowledge. Using a clear design brief, pupils will design their own sushi burrito for a food festival, selecting and justifying flavour pairings and ingredients to create either a savoury or sweet variation. They will then prepare and assemble their individual products safely and accurately. Finally, children will evaluate their sushi burrito against their design criteria, reflecting on flavour balance, texture variety and its potential appeal as a trend-inspired street food product.	Tier 2 - assemble, balance, blend, combine, creation, fusion, hybrid, innovation, inspire, multicultural, presentation, refine, reinvent, texture variety, trend Tier 3 - cuisine, flavour pairing, flavour profile, recipe
	Textiles: Trash to Treasure	Grammarsaurus unit: Trash to Treasure <i>How can you transform old materials into something new and useful?</i> Can I explore how textiles are recycled and upcycled and explain why this is important? Can I practise and apply stitches to join, strengthen and decorate textiles? Can I design a cushion using recycled textiles? Can I construct my cushion accurately using appropriate tools and techniques? Can I evaluate and improve my cushion by testing how well it meets design criteria and user needs?	Children will explore upcycled textile products, investigating how designers reuse materials to reduce waste and make more sustainable choices while creating functional and appealing items. They will analyse existing products, considering how they are made, who they are for and how effectively they meet their purpose. Children will design and make a cushion cover using applique and recycled fabrics to improve comfort in a reading space, such as a classroom, school library or home environment. They will develop design criteria based on user needs, focusing on comfort, durability, appearance and sustainability. They will practise and apply technical skills, including stitching, applique and reinforcing, to construct their product accurately and ensure it is strong and long-lasting. Children will select and use materials carefully, aiming to reduce waste and make environmentally responsible choices.	Tier 2 - adapt, attach, consumption, design criteria, durable, embellish, function, industry, personalise, recycle, reduce, reinforce, repurpose, reuse, seam, structure, sustainable, textiles, upcycle, user, waste Tier 3 - applique, fray, seam allowance, sustainability

		Substantive Knowledge	Working like a designer	Vocabulary
Year 5	Construction: Fairy-tale Engineering	Grammarsaurus unit: Fairy-tale Engineering How can we use pulleys and levers to solve a problem? Can I investigate how mechanisms help solve a problem in a fairy-tale? How do pulleys, levers and linkages work? Can I design and plan a model of a fairy-tale theatre set with moving parts? Can I build a model of a fairy-tale theatre with moving parts? What makes my theatre model successful?	Children will research how the mechanisms pulleys, levers and linkages work, and how they can be used to solve both real-life and fairy-tale problems. Through focused, practical tasks, they will develop construction skills such as joining techniques and experiment with mechanisms. Drawing inspiration from a fairy-tale character's problems, children will decide a design criterion and plan and build a maquette (model) of a theatre with mechanical movement using recycled and sustainable materials wherever possible. They will apply problem solving to refine their designs through a testsimproves evaluate process. By the end of the unit, children will have a secure understanding of pulleys, pivots and linkages, and will have improved confidence in combining design, thinking, sustainability and construction skills to create imaginative, functional models for end users.	Tier 2: appealing, dimensions, force, functional, improve, problem, set, successful, test, user Tier 3: exploded diagram, fulcrum, infrastructure, lever, linkage, maquette, mechanism, mood board, perspective, pivot, proscenium arch, prototype, pulley, wheel and axle
	Textiles: Moonlit Magic	Grammarsaurus unit: Moonlit Magic How can fabric and stitching create atmosphere? Can I explore the work of different textile artists? What makes a textile wall hanging atmospheric? Can I design my wall hanging and use a template to cut fabric shapes accurately? Can I use a running stitch and overstitch to attach applique shapes securely and neatly? Can I use blanket stitch to finish edges? Can I evaluate my wall hanging, explain how it creates atmosphere and suggest improvements?	Children will learn about atmosphere and storytelling in textiles, focusing on the design and creation of a spooky moonlit wall hanging. They will explore how texture, colour and stitching techniques influence mood, and use this knowledge to incorporate features like applique and layered fabrics to enhance the eerie effect. They will also explore the work of different textile artists, comparing how artists use materials and techniques to express ideas and atmosphere in fabric art. Through activities such as precision cutting, decorative stitching and assembly, they will develop practical skills while understanding the artistic and expressive significance of textiles. Children will evaluate their finished wall hangings, reflecting on how their design choices created an atmospheric effect. They will become more confident in planning, creating and refining their designs to meet a specific aesthetic purpose.	Tier 1: arrange, attach Tier 2: atmosphere, balance, composition, contrast, detail, embellish, layering, mood, proportion, refine, silhouette, symbol, theme Tier 3: applique, contemporary, wall hanging
	Food and Nutrition: Central America on a Plate	Grammarsaurus unit: Central America on a Plate How can we cook a dish that celebrates its cultural flavours? Can I explore Central American ingredients and explain how culture influences how they are used together? How can I prepare food safely and confidently? Can I design a culturally inspired dish for a healthy school menu? Can I follow a multi-step recipe accurately to make tortillas and dips? Can I evaluate the taste, appearance and authenticity of the dish?	Children will explore dishes from Central America, learning how ingredients, flavour combinations and preparation techniques reflect cultural traditions. They will investigate how these dishes can be adapted to serve a specific purpose, considering how their products could be included in a healthy school menu. Pupils will develop their understanding of key ingredients, tools and hygiene before designing their own tortilla-based dish, selecting and justifying ingredients to create a balanced and appealing outcome. They will then prepare and assemble their dish safely, applying accurate techniques. Finally, children will evaluate their product against their design criteria, reflecting on flavour, texture, presentation and its suitability within a healthy school meal.	Tier 1: mix, serve, taste Tier 2: adapt, appealing, assemble, balanced, chop, combine, culture, design criteria, diet, evaluate, flatten, flavour, fold, portion, practical, prepare, texture, traditional, user Tier 3: Central America, cuisine, recipe

		Substantive Knowledge	Working like a designer	Vocabulary
Year 4	Textiles: Bag a story	Grammarsaurus unit: Bag a story How can we create a functional and creative book bag? What makes bags and materials strong useful and appealing? Can I design a book bag for a specific user using appealing decorations and motifs linked to a story? What is the purpose of different stitches? Can I sew fabric pieces together neatly and securely? How well does the product meet the design criteria?	Children will design and create a sturdy, book-themed tote bag, exploring how material choice, structure and stitching contribute to strength and function while adding creative story-inspired elements. Through durable backstitching and secure handle attachment, they will develop practical sewing skills. They will consider the needs of the intended user when planning features, use materials sustainably by working efficiently and re-using offcuts, and carry out simple tests on fabric strength, stitch durability and handle security. Finally, children will evaluate how well their bag balances aesthetics, functionality and purpose, building confidence in planning, making and refining their designs.	Tier 1 : edge Tier 2 : appealing, durability, functional, layout, motif, product, reinforce, reusable, seam, secure, strength, sustainable, theme, user Tier 3 : backstitch,, seam allowance, sustainability
	Construction: Chariots in motion	Grammarsaurus unit: Chariots in motion How can we use electricity to power movement in a Roman chariot? How is electricity used to create movement and how is this different to Roman times? Can I strengthen a chassis by building a stable wooden box-frame with wheels and axles? Can I design a Roman chariot that moves using electricity? Can I build a working electric Roman chariot? How can I test, improve and evaluate the Roman chariot?	Children will explore how electricity creates movement and compare this with how vehicles were powered in Roman times, considering why electricity is an efficient and sustainable choice today. Through practical activities, they will develop construction skills such as accurate measuring, secure joining and building a strong chassis using a wooden box frame with wheels and axles. Inspired by Roman chariots, children will design, build and test a model chariot powered by an electric motor and circuit. They will use a testimprovesevaluate process to solve problems, with opportunities to extend learning through simple computer control. By the end of the unit, children will understand how electrical systems, structures and mechanical components work together and feel confident designing and making a functional model for a specific purpose.	Tier 1: join, problem,, switch Tier 2: adjust, align, annotate, battery, circuit, component, design criteria, functional, improve, label, material, modern, motion, motor, power, reinforce, stable, structure, successful, test, vehicle Tier 3: box frame, brace, chariot, chassis, motor, pivot, pulley, troubleshoot, wheel and axle
	Food and Nutrition: Chocolate that cares	Grammarsaurus unit: Chocolate that cares How can we craft chocolate that's fair for people and kind to the planet? Can I identify flavour combinations and textures that make chocolate delicious? What is fairtrade? Can I design a sustainable chocolate product? Can I create a chocolate treat using Fairtrade ingredients and eco-friendly practices? Can I explain how my creation reflects Fairtrade and sustainability values?	Children will learn about Fairtrade and sustainability in this unit, focusing on the journey of chocolate from bean to bar. They will explore flavours and textures by pairing Fairtrade chocolate with fruits, nuts, and spices and use this exploration to create their own chocolate product designs. They will learn about the environmental impact of cocoa farming and ethical production practices. They will develop their ability to evaluate their culinary creations and reflect on how their choices affect people and the planet. They will become more confident in making informed, creative, and ethical food preparation and design decisions.	Tier 1: appearance, cooling, Tier 2: aroma, harvest, production, recyclable, roasting, shipping, texture Tier 3: eco-friendly, sustainability, ethical

Substantive Knowledge		Working like a designer	Vocabulary
Year 3	Food and Nutrition: Root to Roll Grammarsaurus unit: Root to Roll How can we turn root vegetables into a colourful summer roll? Which root vegetables grow in summer and how do they taste? Can I plan a summer roll recipe, choosing fillings that are colourful, healthy and tasty? Can I use peeling, cutting and grating skills? Can I safely peel, slice and grate a range of vegetables and follow a simple recipe? Can I say how well my fillings worked together and suggest one improvement?	 Children will explore how root vegetables such as beetroot, carrots and radishes are grown and harvested in the summer months. Through tasting and comparing raw and cooked vegetables, they will learn how seasonality affects flavour and texture. They will build technical knowledge of flavour pairing by combining vegetables with herbs, citrus juice and dressings, before designing a refreshing summer roll recipe. Pupils will practise key food preparation skills such as peeling, slicing and grating, then follow a simple recipe to assemble and serve their summer rolls. Finally, they will evaluate their dish based on taste, presentation and the success of their chosen fillings.	 Tier 1 - fold, healthy, raw, vegetable, wash Tier 2 - assemble, balance, combine, flavour, grated, ingredients, local, prepare, seasonal, slice, texture Tier 3 - bridge hold, claw grip, nutritious, root vegetable, seasonality
	Textiles: Perfect Pouch Grammarsaurus unit: Perfect Pouch How can you make the perfect pouch for an adventurer? What makes a pouch functional and appealing? Can I design a pouch, thinking about size, shape and fastening, using a paper template? Can I practise stitching and fastening for my pouch? Can I sew fabric pieces together and add a fastening? Can I test and evaluate my finished pouch?	 Children will learn about the functionality of textile objects over time, focusing on the design and creation of a pouch. They will explore how tools and materials influenced design choices and use this knowledge to incorporate features like buttons for fastening. Through activities such as template cutting and stitching, children will develop practical skills and learn how sewing helps make pouches strong, durable and functional. Children will evaluate their finished products, reflecting on how their design choices contributed to both functionality and authenticity. They will become more confident in planning, creating and refining their designs to meet specific purposes.	 Tier 1: attach, pins, thread Tier 2: appealing, decoration, durability, fabric, fastener, functional, material, product, seam, secure, template Tier 3: Aida
	Construction: Magnetic Mysteries Grammarsaurus unit: Magnetic Mysteries How can we use magnets to make a model move mysteriously? Can I investigate how magnets work and identify everyday uses for magnets? Can I accurately join, reinforce, stiffen and strengthen materials? Can I design a model with hidden movement using magnets? Can I join materials to make a strong, functional model with magnetic effects? What made my model successful? What would I improve?	 Children will explore how magnets work and how magnetic forces can be used to make models move mysteriously. They will investigate magnetic attraction and repulsion and identify everyday uses of magnets in toys and tools. Through focused practical tasks, they will develop construction skills such as joining, reinforcing and strengthening materials using techniques like folds, tabs and flanges. Children will follow design criteria, plan and build a themed model featuring a magnetic hidden movement, using recycled and sustainable materials wherever possible. They will apply problem-solving to refine their designs through a test-improve-evaluate process. By the end of the unit, children will have a secure understanding of magnetic forces and improved confidence in combining design thinking, sustainability and construction skills to create imaginative, functional models.	 Tier 1: join Tier 2: 3D (three-dimensional), appealing, attract, feedback, force, functional, hidden, improve, interactive, material, movement, reinforce, secure, stable, strengthen, symbol, template, test, treasure Tier 3: brace, flange, magnet, magnetic, mechanism, net, repel

		Substantive Knowledge	Working like a designer	Vocabulary
Year 2	Food and Nutrition: Super Veggies	Grammarsaurus unit: Super veggies to the rescue How can we make veggies fun and delicious? What are the different types of potatoes and how can they be cooked in different ways? Can I plan a potato dish (wedges) with different flavours and seasoning? Can I use tools correctly and explain how to cook potatoes in a healthy way? How can I prepare and cook our food safely and carefully? What worked well and what could be improved?	Children will explore where potatoes and vegetables come from and how cooking changes their taste and texture, by tasting a range of prepared foods. They will design their own potato dish by selecting suitable flavours and seasonings, using smell to make thoughtful choices. Through practising good hygiene and safe food preparation skills, including careful cutting and correct tool use, they will develop confidence in the kitchen. Children will follow a simple recipe to prepare potato wedges and a vegetable dip, applying their planning and making skills. Finally, they will evaluate their food by reflecting on taste, skills and safety, celebrate the vegetables used and understand how using leftovers helps to reduce food waste, building confidence in designing, making and evaluating food products.	Tier 1 - cut, fresh, mix, raw, vegetable, wash, healthy, stir, taste Tier 2 - bake, chop, coat, cooked, dip, harvest, herbs, ingredients, mash, peeled, prepare, seasoning, slice, toss, waste Tier 3 - utensil, hygiene, recipe
	Construction: Rebuilding History	Grammarsaurus unit: Rebuilding History How can we build strong and stable houses like those from the time of the Great Fire of London? Can I find out about historical houses and say how they could be improved? Can I measure carefully and test how cross-bracing makes a structure stronger? Can I draw a plan for a 1666-style house with a simple moving part? Can I build a model of a 1666-style house using cards and sticks with a simple mechanism? Can I test if my model is stable and say how to improve it?	Children will explore houses from the time of the Great Fire of London and investigate why some buildings were strong or weak and how the fire spread so quickly. Through hands-on construction activities, they will develop accurate measuring and cutting skills and learn how adding supports and cross-bracing can make structures stronger and more stable. Children will design, build and test a model of a 1666-style house using card and sticks that includes a simple hinge mechanism to create movement. They will follow a test-improve-evaluate process to check how well their model works and suggest improvements. By the end of the unit, children will understand how thoughtful design and construction choices can make buildings safer, stronger and more fit for purpose.	Tier 1: join, strong, weak Tier 2: accurate, appealing, brick, diary, feedback, functional, horizontal, improve, narrow, secure, shutter, stable, stone, strengthen, structure, successful, test, vertical Tier 3: architect, brace, diagonal, hinge, mechanism, overhang, thatch, timber, wattle and daub
	Textiles: Buzzing Bookmarks	Grammarsaurus unit: Buzzing Bookmarks How can you make a bookmark that's both fun and useful? Can I explore different fabric products and learn how to thread a needle? Can I create a design plan for a bug-themed bookmark that is both functional and appealing? Can I practise running stitch and cross-stitch to strengthen and decorate fabric? Can I sew two pieces of fabric together and add decorative stitching? Can I test and evaluate my bookmark for durability, useability and appearance?	Children will learn about developing basic sewing skills, focusing on the design and creation of a bug-themed bookmark. They will explore how design features, such as size, shape, and decoration, make products both fun and useful, using this knowledge to create visually engaging and functional bookmarks. Through activities such as threading, running, and cross-stitching, they will develop practical skills while understanding the importance of combining function and appearance. Children will evaluate their finished bookmarks, reflecting on how their designs meet the needs of the users. They will become more confident in planning, creating, and improving their work to achieve a purposeful outcome.	Tier 1: bookmark, neat, needle, thread Tier 2: appealing, appearance, decoration, durable, fabric, functional, secure, stitch, usable Tier 3: Aida, embroidery, cross stitch, needle threader, running stitch

		Substantive Knowledge	Working like a designer	Vocabulary
Year 1	Textiles: Seaside Adventures	Grammarsaurus unit: Seaside Adventures What shapes and colours will bring my collage to life? Can I look at seaside pictures to help me to design my collage? Can I design my seaside collage by choosing shapes and colours? Can I explore how different fabrics feel and behave, cutting shapes safely and carefully? Can I arrange and join fabric shapes securely to create my seaside collage? Can I evaluate my collage and say how well it shows my ideas?	Children will explore seaside images and talk about the shapes, colours and patterns they notice. This will help them understand how designers find ideas from the world around them. They will then plan their own seaside collage by choosing shapes and colours inspired by the seaside. They are designing this to create a seaside picture for display, giving their work a clear purpose and audience. Children will explore different fabrics to learn how materials feel and behave, and practise cutting shapes safely using simple tools. Children will also begin to understand how reusing materials and looking after the seaside environment helps protect our planet. Finally, pupils will arrange and join their fabric pieces to create their seaside collage. They will evaluate their finished work by comparing it with seaside pictures and explaining how well their design shows their ideas and how effective it is for display as well as suggesting one way it could be improved.	Tier 1 - colour, cool, cut, dark, glue, join, light, neat, shapes, soft, warm Tier 2 - attach, collage, design, fabric, improve, layer, material, pattern, purpose, secure, texture Tier 3 - felt, seaside
	Food and Nutrition: Plant Power	Grammarsaurus unit: Plant Power: snack like Jack What tasty plant snacks help us grow strong like Jack? Can I explore different fruits and vegetables and talk about which ones are healthy snacks? Can I explain how to prepare food safely? Can I plan a simple snack using fruits or vegetables, choosing shapes and colours like? Can I prepare a fruit and vegetable snack safely? Can I taste my snack and say what I like about it and how I could make it better?	Children will explore where plant foods come from and learn that fruits and vegetables are healthy snacks that help our bodies grow strong, linking their learning to the traditional tale 'Jack and the Beanstalk'. Through tasting, talking about and sorting different fruits and vegetables, they will describe flavour, colour and texture using simple vocabulary. They will develop technical knowledge of food safety by learning about good hygiene, clean tools and careful cutting. Pupils will design a simple snack for Jack, choosing fruits or vegetables they like, before preparing it safely using basic food preparation skills. Finally, they will taste and evaluate their snack, explaining what they like and suggesting one way it could be improved.	Tier 1 - fresh, fruit, grow, healthy, mix, plant, safe, taste, vegetable, wash Tier 2 - assemble, chop, ingredients, mash, peel, prepare, savoury, slice, spread, sweet Tier 3 - hygiene, recipe
	Construction: Simple Mechanisms	Grammarsaurus unit: Toy Makers' Workshop How can we make a toy from recycled materials that is fun and safe to play with? Can I explore toys and talk about what makes them fun and safe? Can I draw a simple plan for my toy and choose materials to use? Can I practise cutting and joining materials safely? Can I build my toy using my plan, choosing materials and adding moving parts? Can I test my toy to see how well it works and how to make it better another time?	Children will design and construct their own moving toy from recycled materials, applying skills such as cutting, joining and decorating to combine function with appearance. They will research different types of toys and explore how simple wheel and axle mechanisms can make them move. They will develop technical knowledge of basic construction methods, investigating how strength, balance and decoration affect both safety and enjoyment. Children will test and evaluate their finished toys, reflecting on how well their designs meet user needs. Through this process, they will become more confident in planning, building and improving their creations to achieve a successful outcome.	Tier 1: build, cut, fun, join, safe, shape, strong, test Tier 2: appealing, decorate, explore, functional, improve, material, plan, product, recycled, reuse Tier 3: mechanism, prototype, wheel and axle

		EYFS area	Working like a designer
Reception		<i>PLEASE SEE EYFS map</i> Expressive arts and designs: Creating with materials, fine motor skills, being imaginative and expressive	Return to and build on previous learning, refining ideas and developing their ability to represent them. (construction and building materials/ large construction- linked to stories)
		Expressive arts and designs: Creating with materials, fine motor skills, being imaginative and expressive	Create collaboratively sharing ideas, resources and skills.
		Expressive arts and designs: Creating with materials, fine motor skills, being imaginative and expressive	Early learning goal: In EYFS, children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. They use small tools like scissors and construction materials to create purposeful models. They talk about their creations and explain the processes they used, begin to understand how things work and develop early design ideas through play.
Nursery		Expressive arts and designs: Creating with materials, fine motor skills, being imaginative and expressive	Birth to 3 years: Explore different materials, using all their senses to investigate them. Manipulate and play with different materials. Make simple models which express their ideas. (Junk modelling/ construction materials/ playdough)
		Expressive arts and designs: Creating with materials, fine motor skills, being imaginative and expressive	3-4 years: Explore different materials freely, in order to develop their ideas about how to use them and what to make. (Junk modelling-linked to stories)
		Expressive arts and designs: Creating with materials, fine motor skills, being imaginative and expressive	3-4 years: Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures. (Junk modelling- linked to stories)