Design Technology Progression Map

Achieving Excellence Together

Ladybridge Primary School

"Everything begins with an idea." Earl Nightingale

Our Curriculum Intent:

Our curriculum is designed to take into account individual starting points to ensure an equality of opportunity to a broad, balanced and **knowledge-rich** curriculum, with a particular **emphasis on VOCABULARY**. The content of our **ambitious** curriculum is carefully **sequenced** to encourage progression of **skills**, **connections** and **transference to long-term memory**, and is chosen for its **usefulness** and **relevance** to our pupils. Pupils are immersed in **rich, relevant and contextualised** first-hand experiences, which enthuse, excite and challenge them. Pupils are encouraged to investigate, explore and take risks. As a result, pupils make excellent progress in their development and application of knowledge, understanding and skills (across different contexts).

At Ladybridge, we encourage our pupils to, 'Think like Designers.'

Intent:

Our Design and Technology curriculum is ambitious, carefully sequenced and inclusive, enabling all pupils to develop their creativity, knowledge and technical skills over time. It provides a balance of substantive, disciplinary and procedural knowledge, allowing pupils to think like designers and engineers. Through hands-on projects and the study of innovative designers and real-world products**,** children are inspired to problem-solve, take creative risks, and think critically about their own and others' designs. Vocabulary is central to our approach**,** helping pupils to articulate their ideas, choices, processes and evaluations with confidence and precision. Our curriculum nurtures curiosity, resilience and practical ingenuity, empowering pupils to develop innovative solutions and take pride in their creations. It builds clear progression in the key strands of design and technology: design, make, evaluate, technical knowledge, and cooking & nutrition**.** Pupils leave with the substantive knowledge of materials and techniques, procedural skills in making and problem-solving, and disciplinary understanding of how designers work**,** enabling them to apply their learning creatively and purposefully in the wider world.

Implementation:

At Ladybridge, Design and Technology is taught weekly during half terms, rotating with Art. This structure allows children to immerse themselves fully in each subject, supporting creativity, focus, and deeper understanding. A detailed progression grid has been created, outlining the development of substantive knowledge, procedural knowledge, and disciplinary knowledge**.** Our curriculum revisits key concepts such as mechanisms, textiles, structures, electrical systems, and cooking & nutrition, ensuring that each year builds upon the skills and knowledge previously taught. Within each unit, pupils explore real-world products, systems, and designers to inspire their own creations. They work through the investigate, design, make, evaluate cycle**,** applying knowledge in practical ways and reflecting critically on their outcomes. This process is represented in our DT lenses**,** which are revisited across all year groups to help pupils make connections, refine techniques, and develop mastery over time. Learning is supported through our books and planning templates**,** which capture ideas, experimentation, and reflections. Learning is further enriched through visits, workshops, and real-world product investigations**,** helping pupils see the relevance of design and technology in everyday life. These experiences foster confidence, creativity, and a sense of pride in pupils' achievements, ensuring they leave Ladybridge with the knowledge, skills, and imagination to solve problems and design for the wider world**.**

Impact:

At Ladybridge, the impact of our Design Technology curriculum is seen in pupils who think, work, and create like designers and engineers. They are confident, curious, and inventive, and are well-prepared for the next stage of their education and for life in the wider world. Pupils leave us with strong substantive, procedural, and disciplinary knowledge, and a rich DT vocabulary that enables them to articulate their ideas, solutions, and design intentions with confidence. Children present their learning to a high standard in a range of purposeful and practical ways, showcasing creativity, skill, and problem-solving. Consistent teaching, collaborative staff moderation, and the use of our progression grid ensure high-quality outcomes and clear progression across all year groups. Our curriculum creates lasting memories through engaging lessons, real-world product investigations, visits, and workshops that bring design and technology to life. Above all, we want every child to thoroughly enjoy designing, making, and evaluating, and to be inspired to continue exploring, inventing, and creating throughout their lives.

Long Term Plan

	Autumn		Spring		Summer	
Year 1		**Diwali card**		**Chair**		**Fruit kebabs**
Year 2		**Fruit crumble**		**Valentine's Day cushion**		**Fire engine**
Year 3		**Roundhouses**		**Pizzas**		**Roman catapult**
Year 4		**Pop-up Book**		**Board game**		**Bread**
Year 5		**Bridges**		**Industrial Era Broth**		**Drawstring bags**
Year 6	 	**Moving car**		**Auto-mated animals**		**Cottage Pie**

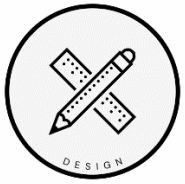
Knowledge:

Substantive Knowledge	Disciplinary Knowledge	Procedural Knowledge
Theoretical knowledge of the strands of DT – 'mechanisms', 'structures', 'cooking and nutrition.'	**Practical knowledge of skills and techniques within the DT strands** - 'mechanisms', 'structures', 'cooking and nutrition.'	**Investigate** Investigate and analyse existing products key evets and individuals from the world of DT. **Design** Design innovative, functional, appealing products. **Make** Construct using tools, equipment, materials and components. **Evaluate** Evaluate and improve designs

Themes:

Themes build knowledge sequentially with opportunities to revisit and build on children's prior learning – deepening knowledge and understanding. Links are made in learning through recurring themes throughout our curriculum.

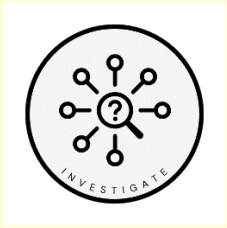
Key Lenses:	**Mechanism**	**Structure**	**Textiles**	**Cooking and Nutrition**	**Electrical Systems** From Year 4 only
					

Key Skills:	**Investigate**	**Design**	**Make**	**Evaluate**
				

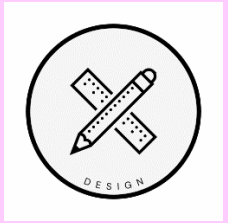
Key Lenses:	Mechanism	Structure	Textiles	Cooking and Nutrition	Electrical Systems From Year 4 only
					
Definition:	**Mechanisms** Mimic natural movements using mechanisms such as cams, followers, levers and sliders.	**Structure** Material functional and aesthetic properties, strength and stability. Stiffen and reinforce structures.	**Textiles** Fastening, sewing, decorative and functional fabric techniques including cross stitch, blanket stitch and applique.	**Cooking and Nutrition** Where food comes from, balanced diet, preparation and cooking skills. Kitchen hygiene and safety. Following recipes.	**Electrical Systems** Operational series circuits, circuit components, circuit diagrams and symbols, combined to create various electrical products.
Child Friendly Definition:	Mechanisms are parts that make things move. They help us change the direction, speed, or type of movement to make a machine or product work.	Structures are things that are built to hold their shape and support weight. They can be strong, stable, and safe, and are used in buildings, bridges, towers, furniture, and many other things.	Textiles are materials made from threads or fabrics that we can touch, shape, and join together. We use textiles to make things like clothes, bags, blankets, and soft toys.	Cooking and Nutrition is learning how to prepare, cook, and eat food that is healthy and tasty. It helps us understand where food comes from, how to make good choices, and how to follow recipes safely.	Electrical Systems are ways of using electricity to make things work or move. They can power lights, motors, buzzers, and other devices in the things we design and make.

					
Reception	Chinese New Year dragon	Junk Modelling Constriction Area		Hand puppet	Biscuits Sponge cake Salad faces
Year 1	Moving Card	Chair			Fruit kebabs
Year 2	Fire Engine			Cushion	Fruit Crumble
Year 3	Catapult	Roundhouses			Pizza
Year 4	Pop-up Book		Electrical board game		Bread
Year 5		Bridges		Drawstring Bags	Industrial Broth
Year 6	Moving Car	Automated Animals	Moving Car		Cottage Pie

Investigate

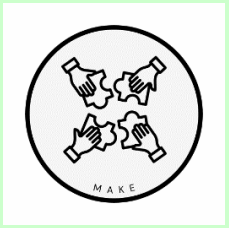


Design

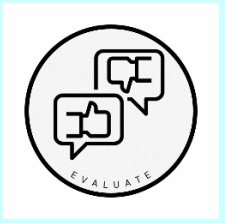


Think Like a Designer….

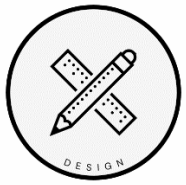
Make



Evaluate



	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Investigate: 	**Explore:** Explore how things work.	**Explore:** what products are; who products are for; what products are for; how products work.	**Explore:** what products are; where products are used; what materials products are made from; what they like and dislike about products.	**Begin to investigate and analyse:** how well products have been designed and made; why materials have been chosen; who designed and made the products; inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.	**Begin to investigate and analyse:** .how well products have been designed and made; why materials have been chosen; how well products work and achieve their purposes; how well products meet user needs and wants; who designed and made the products; whether products can be recycled or reused; inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products	**Investigate and analyse:** how well products have been designed and made; why materials have been chosen; how well products work and achieve their purposes; who designed and made the products; how innovative products are; how sustainable the materials in products are; what impact products have beyond intended purpose; inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.	**Investigate and analyse:** how well products have been designed and made; why materials have been chosen; how well products work and achieve their purposes; how well products meet user needs and wants; who designed and made the products; how much products cost to make; how innovative products are; how sustainable the materials in products are; what impact products have beyond intended purpose; inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.
ELG:	**EYFS**	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, from and function					
National Curriculum:	**Ks1**	Critique, evaluate and test their ideas and products and the work of others.					
	ks2	Critique, evaluate and test their ideas and products and the work of others.					

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design: 	**Through opportunities for exploratory play in continuous provision and planned learning experiences, EYFS children will:** Create collaboratively, sharing ideas, resources and skills. Develop their own ideas and then decide which materials to use, to express them. Choose the right resources to carry out their own plan. Use talk to help work out problems and organise thinking.	Think of some ideas of my own. Explain what I want to do. Describe my design by using pictures, model mock-ups and words. Design a purposeful product for myself and others following design criteria.	Think of ideas and plan what to do next. Choose the best tools and materials, to make my produce functional. Describe my design by using pictures, diagrams, model mock-ups, and words. Design a purposeful product for others following design criteria.	Show that my design meets a requirement. Put together a plan which shows the order and also what equipment and tools I need. Describe my design using an accurately labelled sketch.	Show that my design meets a range of requirements. Put together a step-by-step plan which shows the order and also what equipment and tools I need. Describe my design using an accurately labelled sketch and words. **Produce prototypes to show my ideas.**	Come up with a range of ideas after I have collected information. Take a user's view into account when designing. Produce a detailed step-by-step plan. Suggest some alternative plans if needed. **Use pattern pieces.** **Use simple cross sectional planning to show my design.** **Produce prototypes to show my ideas.** **Use exploded diagrams to show my designs.**	Use a range of information to inform my design. Use market research to inform plans. Work within constraints. Follow and refine my plan if necessary. Justify my plan to someone else. Consider culture and society in my designs. **Use exploded diagrams to show my designs.** **Use simple cross sectional planning to show my design.** **Create a computer aided desi**
ELG:	**EYFS**	Set and work towards a simple goal. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, from and function					
National Curriculum:	**KS1**	Design purposeful, functional, appealing products for themselves and other users based on design criteria.					
	KS2	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.					

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Make: 	Develop their small motor skills so that they can use a range of tools. Use a range of small tools, including scissors. Develop their own ideas and then decide which materials to use to express them. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, from and function.	Explain what I am making. Select tools and equipment to cut, shape, join and finish. Choose the right materials.	Explain what I am making and why my audience will like it. Join things (materials/ components) together in different ways. Choose materials and explain why they are being used depending on their characteristics.	Use equipment and tools accurately. Tell if my finished product is going to be good quality. Follow procedures for safety and hygiene.	Show I am conscience of the need to produce something that will be liked by others. Show a good level of expertise when using a range of tools and equipment. Explain how my product will appeal to the audience. Use a range of tools and equipment expertly. Follow procedures for safety and hygiene.	Explain why my finished product is going to be of good quality. Explain how my product will appeal to the audience. Use a range of tools and equipment expertly. Think about the functionality of my work. Follow procedures for safety and hygiene.	Use tools and materials precisely. Change the way I am working if needed. Think about the aesthetic qualities of my work. Think about the functionality of my work. Follow procedures for safety and hygiene and understand the process of risk assessment.
ELG:	**EYFS**	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, from and function.					
National Curriculum:	**KS1**	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.					
	KS2	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.					

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluate: 	Return to and build on their previous learning, refining ideas and developing their ability to represent them. Share their creations, explaining the process they have used.	Talk about my own work. – likes / dislikes. Talk about existing products and say what is good and not so good about them.	Describe what went well with my work. Judge my work against the design criteria.	Think of how I will check if my design is successful. Begin to explain how I can improve my original design. Evaluate what I would do differently if I did it again and why.	Begin to explain how I can improve my original design. Evaluate my product, thinking of both appearance and the way it works.	Check that my design is the best it can be and if it can be improved. Evaluate appearance and function against the original criteria. Test and evaluate my final product to see if it is fit for purpose.	Test and evaluate my final product to see if it is fit for purpose. Evaluate what would improve it. Evaluate if different resources would have improved my product.
ELG:	**EYFS**	Share their creations, explaining the process they have used					
National Curriculum:	**KS1**	Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.					
	KS2	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.					

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical Knowledge: **Structure**  	**Through a mix of exploratory play and adult led learning, children in EYFS children will:** Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to makes new ones – an arch, a bigger triangle etc. Begin to join and combine materials to make models. Use different techniques to join materials. Learn to use glue, and tape for joining materials.	Understand that cylinders are a strong type of structure. Assemble, join and combine materials to make strong and stable structures. Make a strong structure, by using a range of materials. Make a strong and stiff structure by folding paper. Create joints and structures from paper, card and tape.		Create a free-standing structure. Deconstruct and assemble the net of a range of basic 3D shapes. Join 2D frames to create 3D structures. Make rectangular frames of different sizes. Use a range of materials to make joints. Measure, shape, cut and join materials with some accuracy.		Know how simple bridges are constructed using beams, pillars or piers. Know how arches are used to spread and redirect compression forces acting on bridges. Know trusses are used in bridge design to spread out compression forces. Assemble, join & combine paper to strengthen bridges – e.g. folding and shaping, corrugating, ribbing, arching. Strengthen bridges with triangular trusses.	Select the most appropriate method to strength 3D structures and frames. Strengthen 2D frames by adding diagonal bracing struts. Make a rectangular frame from strip wood. Measure, mark out and cut wood safely using a saw Create a beam structure. Use the jinx technique to strengthen joins. Develop skills and techniques using hacksaws, G clamps and bench hooks.
ELG:	**EYFS**	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, from and function.					
National Curriculum:	**KS1**	Build structures, exploring how they can be made stronger, stiffer and more stable.					
	KS2	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.					

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical Knowledge: **Mechanisms** 	Begin to join and combine materials by using the concertina fold. Use different techniques to join materials. Learn to use glue, and tape for joining materials.	Deconstruct a simple slider and describe how it works. Construct a simple slider independently. Make a lever by joining card strips with paper fasteners.	Attach a fixed axle to a chassis and add wheels ensuring that they can move freely. Assemble, join and combine materials to make simple mechanisms. Assemble, join and combine materials/ to make simple wheels and axles and pulleys.	Construct a lever that allows a load to project over a given height/obstacle.	Create a box fold. Create a mouth fold.		Design and build a working model where the speed of movement can be controlled. Explore & understand how more advance mechanical systems used in their product enable changes in movement and force. Explain how the number of teeth of a gear affects the speed of rotation. Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement
ELG:	**EYFS**	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, from and function.					
National Curriculum:	**KS1**	Build structures, exploring how they can be made stronger, stiffer and more stable.					
	KS2	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.					

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical Knowledge: **Textiles** 	Begin to join and combine materials through weaving.		Talk about the similarities and differences between textiles based on the characteristics of an increasing range of materials. Use a simple pattern with increasing accuracy. Cut and join fabrics using running stitch. Decorate fabric by applying beads and sequins, buttons.			Make and use a paper pattern. Sew using a range of stitches including, backward stitch, running stitch and over sewing. Use a wide range of techniques to add colour, texture and pattern to fabric.	
ELG:	**EYFS**	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, from and function.					
National Curriculum:	**KS1**	select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics					
	KS2	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					

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical Knowledge: **Electrical Systems** 					Explore and describe how electrical circuits can be created and controlled. Discuss in depth the hazards and safety issues associated with electricity. Explore and program a simple control device.		Understand and use electrical systems in their products e.g. switches, bulbs and motors. Incorporate a circuit into a product base.
National Curriculum:	**KS2**	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.					

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Biscuits **Salad Faces on Wraps** **Sponge Cake**	**Fruit Kebab**	**Fruit Crumble**	**Pizzas**	**Bread**	**Broth**	**Cottage Pie**
Cooking and Nutrition	Manage their own needs: washing hands. Make healthy choices about food and drink. Know and talk about the different factors that support their overall health and wellbeing: healthy eating. Work competently and safely, with a range of tools.	Sort and classify food into food groups, e.g. vegetables, pulses, cereals, dairy etc. Understand the basic principles of a heathy and varied diet. Work safely and hygienically.	.Understand where food comes from. Understand seasonal produce.	Gain an understanding of the ways in which specific food groups apply to the principles of a healthy and varied diet. Identify what needs to be done in order to work safely and hygienically when working on a range of tasks.	Give reasons for the way in which food processing can affect the taste, appearance, texture and colour of food.	Talk about the physical and chemical changes that take place when food is cooked, e.g. heated and cooled Understand seasonality, and know where a variety of ingredients are grown.	Talk about the physical and chemical changes that take place when food is cooked, e.g. heated and cooled Talk about how the properties of certain foods can affect the final product. Know and understand the practice needed in terms of food hygiene and kitchen safety.
				Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.			
Cutting	Use a range of tools, such as knives, with support. Use a range of tools, such as cutter shapes, competently and safely.	Use a fork to secure foods Cut low resistance foods with a table knife into equal pieces/slices. E.g soft fruits.	Cut foods using the bridge grip.	Cut medium resistance foods with a table knife, using the bridge grip. E.g. raw pepper		Cut higher resistance foods with a vegetable knife using the claw grip. E.g. carrots, celery.	
Mix / Stir/ Spoon	Use one handed tools Use a range of tools, such as spoons.		Combine wet and dry ingredients. Spoon ingredients into different containers with increasing accuracy.	Spoon ingredients into different containers with increasing accuracy.	Spoon ingredients into different containers with increasing accuracy.	Use two spoons to transfer ingredients into different size shape containers.	Gauge the quantities spooned to ensure an equal amount of ingredient in each container. Fold ingredients together carefully.
Measure			Measure and weigh using cups and spoons.	Measure and weigh using standard units.	Measure and weigh specific amounts using standard units.	Measure and weigh with increasing accuracy.	Measure and weigh with increasing accuracy, using analogue and digital scales.
Follow	Follow simple instructions given by an adult.	Follow a simple recipe supported by an adult.	Follow a simple recipe supported by an adult.	Follow a simple recipe with guidance from an adult, and adapt as needed.	Follow a simple recipe with guidance from an adult, and adapt as needed.	Follow and modify a simple recipe independently.	Follow and modify a simple recipe independently.
ELG:	**EYFS**	Manage their own hygiene and personal needs, and understand the importance of healthy food choices. Uses a range of small tools, cutlery.					
National Curriculum:	**KS1**	Use the basic principles of a healthy and varied diet to prepare dishes Understand where food comes from					
	KS2	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					

EYFS

''The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.'' Educational Programme *(Early Years Statutory Framework)*

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Theme	What makes me, me?	Can we go into the woods today?	What do terrific tales teach us?	How does your garden grow?	What is in our wonderful world?	What can we see under the sea?
	Manage their own needs: washing hands. I understand the importance of washing my hands, before touching any food. Work competently and safely, with a range of tools. I can work safely with small tools. Use a range of tools, such as cutter shapes, competently and safely. I can use a cookie cutter. Use one handed tools. I can use simple tools to mix ingredients. Follow simple instructions given by an adult. I can follow a recipe to make a biscuit. Learn to use glue, and tape for joining materials. (Opportunities to practise this skill, during provision) Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Develop their small motor skills so that they can use a range of tools. I can use different tools and equipment.	Begin to join and combine materials through weaving. I can complete a simple weaving pattern to make a finger puppet. Combine shapes to makes new ones – an arch, a bigger triangle etc. I can use blocks to build structures. Develop their own ideas and then decide which materials to use, to express them. I can choose particular materials for a purpose. Use a range of small tools, including scissors. I can safely make snips in paper, using scissors, sometimes with support.	Manage their own needs: washing hands. I understand the importance of washing my hands, before touching any food. Work competently and safely, with a range of tools. I can work safely with small tools. Use one handed tools. I can use simple tools to mix ingredients. Use a range of tools, such as spoons. I can use spoons to pour out ingredients. Begin to join and combine materials by using the concertina fold. I can use the concertina fold to join two pieces of paper together (Chinese New Year dragon). Use different techniques to join materials. I can choose particular joins for a purpose. Begin to join and combine materials to make models. I can join materials and resources, to make a desired outcome (Junk modelling). Choose the right resources to carry out their own plan. I can select materials and resources for a purpose.	Manage their own needs: washing hands. I understand the importance of washing my hands, before touching any food. Work competently and safely, with a range of tools. I can work safely with small tools. Make healthy choices about food and drink. I understand the importance of healthy food choices. Know and talk about the different factors that support their overall health and wellbeing: healthy eating. I understand the importance of healthy food choices. Use a range of tools, such as knives, with support. I can use a knife to chop salad, with support. Use one handed tools. I can use simple tools to combine/chop ingredients.	Explore how things work. (Transport – windup toys, pop up books etc). I can identify how things happen (e.g pull a flap and something moves).	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design texture, from and function. I can choose the correct materials, tools and techniques for my creation.

Outcomes that are ongoing throughout the year:	• Use a range of materials, tools, and techniques in their artwork and constructions • Safely use and explore a variety of materials, tools, and techniques, experimenting with colour, design, texture, form, and function • Return to and build on previous learning, refining ideas and developing ability to represent them • Share their creations, explaining the process they have used. • Create collaboratively, sharing ideas, resources and skills. • Use talk to help work out problems and organise thinking.
ELG link: (to be achieved by the end of the year)	ELG: *Children at the expected level of development will:* **Expressive Arts & Design** **Creating with materials:** • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. • Make use of props and materials when role playing characters in narratives and stories. **Personal Social and Emotional Development** **Self-Regulation:** • Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate. **Managing self:** • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices **Physical Development** **Fine motor skills:** • Use a range of small tools, including scissors, paint brushes and cutlery

Outdoor Learning

Using the garden:

- A group of Y6 garderners will check the garden area twice a week, including weeding, watering, maintenance and ‘slug-watch’.

- Each year group have a raised bed for planting (see diagram), which is clearly labelled outside (see grid overleaf for dates to sowing and harvesting).

- Each year group will use what they grow (see grid overleaf) – some beds will have additional ‘complimentary’ plants in (alongside your main crop) as part of pest control.

- Each year, there will be some bed rotation to ensure that there is time for beds to regenerate.

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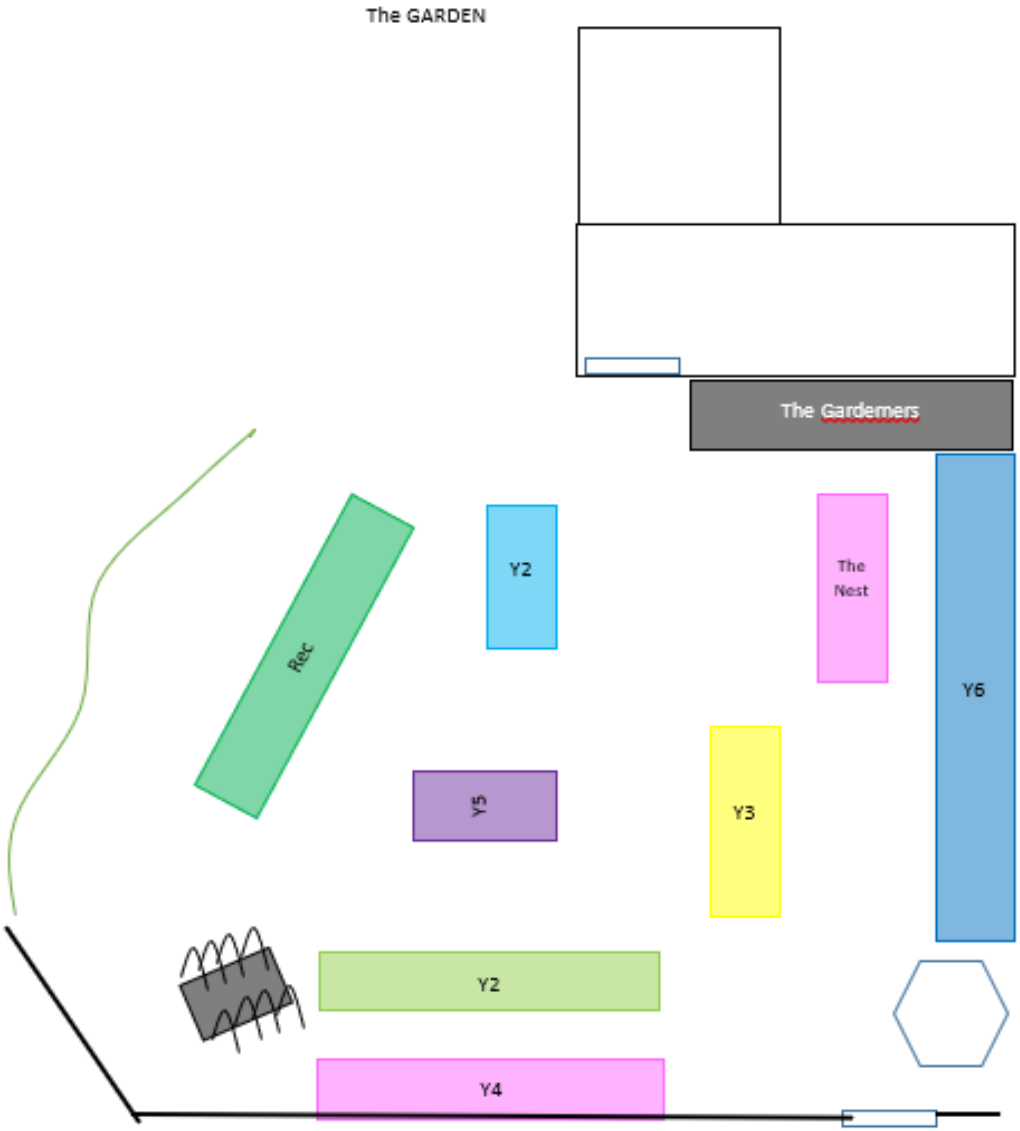


Year	Vegetable/Herb	Months of the year											Next steps	Next year
		S	O	N	D	J	F	M	A	M	J	J		
The Nest	Beetroot	Beet							Beet					Use beetroot for taste tests and healthy snack
Rec	Onions	Tomatoes		Onions							Onions		Harvest, store to dry and then wrap	In Y1, use the onions to make onion soup in the autumn term
Y1	Peas (Mangetout) (+ rosemary/spinach)							Peas			Peas		Eat in Y1 summer as part of healthy seaside snack (try swollen too)	
Y2	Garlic		Garlic								Garlic		Peel and freeze	In Y3, use the garlic to make garlic bread, alongside pizzas in spring
Y3	Leeks							Leeks						In Y4, harvest in the autumn term (borrow some Y1 onions, Y6 carrots and potatoes) to make leek, onion, carrot and potato soup.
Y4	Broad beans	Leeks		BB						Broad Beans			Eat BB in summer (healthy snack)	
Y5	Carrots (+ chives)									Carrots				In Y6, harvest in autumn and eat as healthy snack
Y6	Tomatoes (+ basil/marigolds)	Carrots					Tomatoes			Tomatoes		Tom	Eat the ripe tomatoes, but leave others for next year's reception as a gift and introduction to garden area	
ALL	Potatoes (1st earlies)							*Potatoes			Potatoes		Each class to decide how to eat.	
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.														

* Potatoes will be grown in the end of seating/benches in playgrounds and/or potato sacks

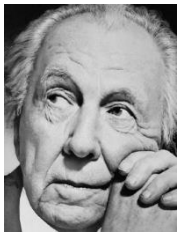
Sow inside
Move outside
Sow outside
Harvest

	The Nest	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Beetroot	**Onions**	**Peas (+ Rosemary/ Spinach)**	**Garlic**	**Leeks**	**Broad beans**	**Carrots (+ Chives)**	**Tomatoes (+ Basil/ Marigolds)**
National Curriculum			**Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.**					
Sow	I can sow seeds (beetroot)	I can sow bulbs.	I can sow seeds (peas) (spinach, rosemary)	I can sow bulbs (garlic)	I can sow seeds (leeks).	I can sow seeds (broad beans)	I can sow seeds (carrots) (chives)	I can sow seeds (tomatoes) (basil/ marigolds)
Harvest	I can harvest a crop (beetroot)	I can harvest a crop (tomatoes and onions)	I can harvest a crop (peas)	I can harvest a crop (garlic)		I can harvest a crop (leeks and broad beans)		I can harvest a crop (carrots and early tomatoes)
Prepare, cook and taste		I have tasted tomatoes that have been grown in the school garden. I can help wrap and store onions for later use. I have cooked with and tasted onions that we have grown in the school garden.	I have cooked with/tasted something grown in the school garden.	I can prepare and store garlic for future use		I have cooked with and tasted leeks and other vegetables that we have grown in the school garden (soup) I have prepared and tasted broad beans that we have grown in the school garden		I have prepared and tasted carrots that we have grown in the school garden
Using tools	I can use a watering can to water established plants with adult support.	See previous	See previous	I can use a watering can to water established plants I can, with adult support, clean gardening tools correctly	See previous I can clean gardening tools correctly I can use a trowel to make planting holes I can use a hand fork to remove annual weeds from an unplanted area.	See previous I can use a hand fork/trowel to remove weeds I can clean and store gardening tools correctly	See previous I can select/use the appropriate tool to sow different sizes seeds.	See previous I can organise and use tools from the potting shed appropriately (including cleaning).
Observe	I can observe growth in vegetables planted and comment upon what I see.							
Other	I know that a plant needs to be looked after to grow	See previous I can push an onion set into a pre marked position. I know that most plants grow outdoors in Spring and Summer.	See previous I know that some plants give off an aroma that helps prevent insect damage. I can identify a weed/ a crop with adult support.	See previous I know the requirements for germination and healthy plant growth (water, light and warmth etc). I know that seeds/bulbs have their	See previous I can give a seed/plant the correct amount of water, light and warmth to grow healthily I understand the life cycle of a plant.	See previous	See previous	See previous

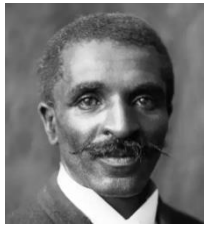
		I can identify and name some parts of a plant (flower, bud, stem, leaf).	I know that a plant needs water and light to grow I can identify some parts of a plant and basic plant structure (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).	own food store to grow and that most do not need light to grow.				
Note		Sow as sets (not seeds) Box and Brown paper to wrap and dry store	Sow peas alongside rosemary/ oregano and spinach	Plant garlic in the same bed as carrots Freezer space			Plant carrots in the same bed as carrots	Companion planting with basil, marigolds, nasturnums
Order details	RHS award of garden merit - Boltardy	RHS: Radar - white (sets) RHS Electric – red (sets)	RHS: Oregon Suga Pod	RHS: Carcassonne Wight	TBC	Masterpiece green longpod	RHS: Flyaway	RHS: Sungold

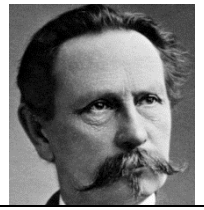
Designers:

Year group	Unit of DT	Designer	How do they link
Year 1	Slider cards	*Ruth Asawa* 	She was a sculptor and artist who made intricate, movable designs in her artwork. While she was known for wire sculptures, the idea of moving parts or interacting components can be linked to the idea of making a slider card.
Year 1	Making a chair for baby bear	*Robin Day* 	A British furniture designer known for simple, ergonomic chairs. His work on affordable and functional furniture makes him an ideal figure to study for young learners who are thinking about the design and function of a chair
Year 1	Cooking summer treats	*Jamie Oliver* 	Known for his kid-friendly approach to cooking, Jamie Oliver has done a lot to teach children about healthy eating, making food fun and accessible. He has designed simple, creative meals for children, which aligns well with their summer treats cooking project.
Year 2	Making fruit crumble	*Delia Smith* 	Delia Smith is a well-known British cook who has helped make cooking accessible to all ages. Her work focuses on simple, traditional dishes, which would be ideal for Year 2 students learning how to make a fruit crumble. Her books and TV shows make

			cooking fun and approachable, particularly for beginners.
Year 2	Valentine's day cushions	*Tricia Guild* 	Known for her work in interior design, particularly using vibrant fabrics, colours, and patterns. Tricia Guild can be a great example for students when considering how design and fabric choices can influence the look and feel of their cushion project.
Year 2	Fire Engines	*Sir Clive Sinclair* 	Known for his work in technology and transportation, particularly with compact and efficient vehicles. While he's best known for creating the Sinclair C5 (an electric vehicle), his broader approach to designing accessible and innovative products could be a fun link to the fire engine project.
Year 3	Roundhouses	*Frank Lloyd Wright* 	A famous architect known for creating houses that blended with the natural environment. His designs, including Fallingwater, used local materials and natural elements. This focus on sustainable, harmonious design can help students understand how to create structures that are functional, durable, and suited to their environment.

Year 3	Roman catapults	*Archimedes* 	A Greek inventor and mathematician who designed many mechanisms, including catapults, cranes, and pulleys. Archimedes is a great figure to study because he revolutionized mechanical design with his inventions. His work could help students understand the principles of levers, pulleys, and force, which would be crucial for building a Roman-style catapult.
Year 3	Making pizzas	*Marco Pierre White* 	A renowned British chef, known for his influence in modern cuisine. Marco's approach to food design, focusing on high-quality ingredients and precision, can be an example of how cooking is also about artistry and design.
Year 4	Electrical board games	*John Spinello* 	John Spinello came up with the idea for the game Operation in 1964, and he built a wooden prototype with all the mechanical components, including the buzzer system that gave the game its signature sound.
Year 4	Pop-up book	*Matthew Reinhart* 	A leading paper engineer who creates pop-up books, particularly with complex mechanisms and pop-up art. Reinhart's work demonstrates the combination of art and engineering, which is perfect for students making pop-up cards with a rotator mechanism.

Year 4	Making bread	*Mary Berry* 	A star of *The Great British Bake Off*, Mary Berry is known for her straightforward and creative approach to baking. She has written many books about baking, including *Mary Berry's Baking Bible*, which could be used to demonstrate how professional bakers design recipes and perfect the art of making bread.
Year 5	Bridges	*Thomas Telford* 	Often referred to as the "Colossus of Roads" due to his contributions to the construction of highways, bridges, and canals in the early 19th century, Telford is another important figure for bridge-building. His use of innovative materials and techniques in designing bridges, including The Menai Suspension Bridge, makes him a great subject for children to learn about the importance of materials in bridge construction.
Year 5	Healthy broth (Industrial Era)	*George Washington Carver* 	Though his work is more famous in agriculture than in food production, Carver's innovations in crop rotation and food production were extremely important during the Industrial Era. His contributions to the development of food-related science, such as making healthier and more nutritious products from crops like peanuts and sweet potatoes, can help students understand the importance of healthy, sustainable food sources.

Year 5	Drawstring bag	*Coco Chanel* 	A famous French fashion designer who revolutionized women's fashion in the early 20th century. Though her focus was primarily on clothing, her attention to fabric and simple, functional designs can inspire students to see how textiles are used creatively for everyday items, including accessories like bags.
Year 6	Moving cars	*Karl Benz* 	Often credited with inventing the first practical automobile, Karl Benz designed the Benz Patent-Motorwagen in 1885. His work is crucial in understanding the evolution of the automobile and how mechanical motion is harnessed for transportation.
Year 6	Auto-mated animal	*Cynthia Breazeal* 	A professor at MIT and pioneer of social robotics. She developed Kismet, a robot designed to interact with humans. Her work on emotional robots could inspire students to consider the interaction between robots and their environments when designing an automated animal.
Year 6	Gingerbread houses	*Gustav Eiffel* 	Although his famous work, the Eiffel Tower, is not food-related, Eiffel's approach to structural integrity and engineering in design can help students think about the construction of a gingerbread house. How can you make a gingerbread house stable and functional? What materials are best?

SEND Adaptations for Design Technology

"Art and Design is an essential means of creative expression that can boost self-esteem and give learners the agency needed to develop and communicate their personal ideas, observations and creations. The pedagogical approaches offered can mean that some learners can thrive in a way which is unique to them."

Cognition and Learning	Communication and Interaction Social	Emotional and Mental Health	Sensory and/or Physical
Test practical tasks before a lesson to ensure the teaching of specific skills and techniques is clear for children. Sharing any difficulties that you had may support the children's understanding/skill development. Use of word banks to support understanding and learning of vocabulary. Keep referring back to the vocabulary. Break the content down into small steps and allow time to step by step build up conceptual understanding. Maximise opportunities to model, demonstrate and imitate to encourage active participation in a scaffolded manner. Keep referring to the vocabulary throughout.	Build in plenty of discussion time to ensure that children feel safe to voice their thoughts and ideas about designers, products or their own pieces of work. Access to tools they may be using and shown how these work before the lesson. Create a calm and simple working classroom with clear routines, expectations and organised, labelled workspaces. Consider carefully where children are seated to maximise their focus and attention and minimise background noise/distraction. Plan movement breaks and classroom jobs to allow children to move within a lesson. DT does not always run according to a set routine so children can be	Ensure that the learning environment is calm and not too stimulating, that resources are clearly labelled and organised for independent use, therefore not encouraging frustration. Ensure that instructions are clear and tasks are broken down to be achievable. Children can be given a role within a group which does not involve them being highly active or speaking out to not heighten arousal. Providing a safe space for children within the lesson if needed – this can be accessed through an adult directed or child-initiated time out card. Use of positive language to encourage good choice and higher self-esteem.	Consider the practical layout of the room during DT and where the child will be to reduce feeling overwhelmed but equally be accessible to all equipment and a space which is workable for the child. Consider if any of the DT skills being used need adapting to support fine motor skill development e.g. larger needles, scissors, tools, cooking utensils. Start with a larger version of the medium and gradually reduce as the child's skills increase. Specialist equipment i.e. scissors and pencils to support fine motor skills. Think about whether visual or auditory stimuli needs to be altered for the child.

	prepared for the structure of a lesson by breaking it down for them into manageable chunks and explaining this in advance of the learning. Now and Next boards could be useful for this. Visual words/cues/phrases. Repetition and reinforcement. Scaffolding skills for DT through careful and targeted questioning.	Teaching with empathy and understanding of the child's needs. Allow movement breaks within the classroom for example giving out equipment or books etc. Allow sensory/brain breaks as a break from learning.	Consider where children with a hearing, sensory or other impairment are sitting in relation to the whiteboard or resources. Use of an iPad to support children with a visual impairment where screen sharing can occur. Some children may prefer group learning but for some children this may be too much and practising/performing individually may be easier. Adult or IT support may be needed.