

William Law DT progression map 2026/2027

Structures

Mechanisms and Mechanical Systems

Cooking and Nutrition

Textiles

Digital World

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<u>Structures.</u>							
		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
		<u>Constructing windmills</u>			<u>Pavillions</u>	<u>Bridges</u>	
<u>Procedural Skills</u>	<u>Investigate and Research</u>	• Explore and discuss existing windmills and identify their main features (tower, sails/blades, base). • Talk about what windmills are used for and why they need moving sails/blades. • Identify simple similarities and differences between different windmill designs.			• Explore and discuss the purpose of pavilions and other temporary or permanent structures. • Identify and describe key features of pavilion designs, including shape, size, stability and aesthetics. • Investigate a range of existing pavilions from different cultures, countries and historical periods. • Identify how materials have been selected for specific purposes and explain why they are suitable.	• Investigate a range of bridges from different times and places. • Identify and compare the features of different bridge types (beam, arch, truss and suspension). • Explore how bridge designers use different structures to solve engineering problems. • Investigate how forces such as tension and compression affect bridge design. • Examine how materials influence the strength, stability and suitability of a bridge. • Research how the purpose and location of a bridge influence its design.	

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	<u>Develop Technical Knowledge and Skills</u>	- Understand that structures need to be strong and stable to stand up. - Know that the shape of a structure can affect its strength and stability. - Understand that wind causes the sails/blades to rotate. - Explore simple ways of making structures stronger and more stable. - Use simple joining techniques such as folding, cutting and gluing. - Recognise that some products have moving parts and understand how these parts move.			- Understand that structures require strength, stiffness and stability to perform their function. - Explore how different shapes affect the strength and stability of a structure. - Measure, mark out and cut materials accurately and safely. - Create simple prototypes to test structural ideas. - Investigate and apply triangulation to strengthen a frame structure. - Select appropriate materials for constructing a pavilion model. - Join materials using a range of techniques appropriate to the chosen materials.	- Understand how different bridge structures (beam, arch, truss and suspension) distribute weight and withstand forces. - Apply knowledge of compression, tension and triangulation to strengthen a bridge design. - Select appropriate materials based on their properties and suitability for the intended purpose. - Measure, mark, cut and assemble materials with increasing accuracy and precision. - Use appropriate joining and reinforcement techniques to improve structural strength. - Test simple structural components to identify which designs are the strongest.	
	<u>Design</u>	- Generate ideas based on existing windmills and structures. - Label key features of a design using simple vocabulary. - Identify materials needed to make the windmill. - Explain what the windmill is for and who it is intended for. Draw and label a windmill design that meets the needs of a given user and fulfils its intended purpose.			- Generate design ideas for a pavilion based on research and identified design criteria. - Use annotated sketches to communicate design ideas clearly. - Design a pavilion that is functional, stable and visually appealing. Draw and label a design that meets the needs of a given user and fulfils its intended purpose. Include detailed annotations explaining materials, structural features and how the design criteria have been met.	- Generate design ideas that respond to a given design brief. - Use research to inform design decisions. - Produce annotated sketches that communicate the structure and key features of the bridge. - Identify the most appropriate bridge type for the intended purpose. - Explain how structural features will improve the strength and stability of the design. - Select suitable materials and joining techniques, justifying choices with reference to their properties. - Consider the intended user, purpose and design criteria when developing ideas.	

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						- Label designs using appropriate technical vocabulary. - Evaluate and refine design ideas before making. - Produce a final design that meets the agreed design specification.	
	<u>Make</u>	- Follow a simple design to create a product. - Select and use appropriate materials and components. - Use simple tools and equipment safely to cut, fold, join and shape materials. - Construct a stable structure from given materials. - Assemble parts in the correct order. - Use joining techniques such as gluing, folding and slotting. - Create moving sails/blades that can rotate.			- Measure, mark and cut materials accurately to create individual structural components. - Use appropriate tools safely and with increasing precision. - Construct a frame structure using suitable joining techniques. - Add cladding and decorative features without compromising the structure's stability.	- Measure, mark and cut materials accurately to create bridge components. - Use tools, equipment and materials safely and with precision. - Assemble the bridge by following the design plan. - Apply appropriate joining and reinforcement techniques to strengthen the structure. - Construct a bridge that is stable and able to support a specified load. - Use technical knowledge of forces and structures to inform construction decisions. - Adapt and modify the design during construction to overcome practical challenges. - Check the accuracy and quality of the build throughout the making process.	
	<u>Evaluate</u>	- Talk about what they like and dislike about their finished windmill. - Explain how their windmill meets the design criteria. - Identify strengths of their product. - Suggest simple improvements they could make. - Compare their windmill with			- Evaluate the finished pavilion against the original design criteria. Test the strength, stability and functionality of the structure. Identify the strengths of the finished product and explain why it is	- Test the strength and stability of a bridge model using weights or loads. - Evaluate how well the bridge meets the design criteria and intended purpose. - Identify strengths and weaknesses in the bridge structure. - Explain how different shapes,	

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		existing windmills and those made by others. Use simple DT vocabulary when discussing their work.			successful. Suggest realistic improvements to enhance the design, construction or appearance. Reflect on the effectiveness of the materials, tools and techniques used. Consider whether the pavilion meets the needs of the intended user or purpose. Use technical vocabulary to discuss and justify design decisions.	materials and reinforcement techniques affect the bridge's performance. - Compare their bridge with existing bridge designs and those made by peers. - Use results from testing to suggest specific improvements to increase strength, stability or efficiency. - Reflect on the effectiveness of their planning, construction and teamwork throughout the project. - Use appropriate DT vocabulary when discussing and evaluating structures (e.g. load, compression, tension, beam, arch, truss, reinforcement, stability). - Consider how materials could be used more sustainably or economically in a real bridge design. - Make modifications to their design based on evaluation findings and retest where appropriate.	
<u>Declarative Knowledge</u>	<u>Technical</u>	- A structure is something that is built for a purpose. - Structures need to be strong, stiff and stable to work effectively. - The shape of a structure can help make it stronger. - Different materials have different properties and are suitable for different purposes. - A windmill has key parts, including a tower, base and sails/blades. - Wind causes the sails/blades to rotate. - Some products have moving parts. - Joining materials securely helps a structure remain stable.			- A frame structure is a structure made from a rigid framework that supports a load. - Triangulation strengthens a frame by preventing it from changing shape. - A reinforcement is an additional piece or support added to improve strength and stability. - Different materials have different properties, making them more or less suitable for construction. - The shape and arrangement of structural components affect the strength and stability of a structure. - Accurate measuring and marking	- Know that a bridge is a structure designed to span an obstacle and support a load. - Know that different bridge types (e.g. beam, arch and truss bridges) are suited to different purposes. - Know that triangulation strengthens a structure by preventing it from changing shape. - Know that a truss is a framework of triangles that distributes forces and increases strength. - Know that an arch transfers	

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		• Designs are created to meet a particular purpose and user's needs. •			are essential for creating a stable, well-fitting structure. • Different joining techniques provide different levels of strength and durability. • Cladding can improve the appearance of a structure and may provide additional support, depending on how it is attached. • A design specification sets out the criteria a finished product should meet. • Structural stability depends on secure joints, an even base and balanced weight distribution. • Architects and designers use scale drawings and annotated plans to communicate their ideas before construction. • Testing and evaluating structures helps identify areas for improvement.	weight to its supports (abutments), making it a strong bridge design. • Know that beams carry loads across a span but may bend if unsupported. • Know that a bridge must balance strength, stability and functionality to be effective. • Know that the choice of materials affects the strength, durability and suitability of a bridge. • Know that compression pushes materials together, while tension pulls materials apart. • Know that testing a prototype provides evidence to evaluate and improve a design. • Know that design criteria are used to judge whether a product is fit for purpose.	
	<u>Additional</u>	Vocabulary • structure • windmill • tower • base • sails/blades • stable • strong • join • fold • cut • design • purpose • user • evaluate			Vocabulary • Pavilion • Structure • Frame structure • Triangulation • Reinforcement • Stability • Strength • Rigid • Component • Joint • Cladding • Design criteria • Prototype • Annotated sketch • Evaluate	• Vocabulary • Structure • Span • Load • Beam • Arch • Truss • Triangulation • Compression • Tension • Stability • Strength • Prototype • Reinforcement • Design criteria	

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<u>Mechanisms and Mechanical Systems</u>							
		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
		<u>Moving story books.</u>	<u>Fairground wheel.</u>	<u>Pneumatic toys</u>		<u>Gears and pulleys.</u>	<u>Automata toys.</u>
<u>Procedural Skills</u>	<u>Investigate and Research</u>	• Explore existing moving storybooks. • Identify simple mechanisms, including sliders and levers. • Investigate how mechanisms create movement. • Discuss what makes a moving storybook effective. • Identify the purpose and intended user of a product. • Use simple technical vocabulary to describe mechanisms.	• Explore existing products that use wheels and axles. • Investigate how wheels and axles create rotational movement. • Identify the key features of a fairground wheel. • Explore how structures support moving mechanisms. • Discuss how products are designed for a purpose and an intended user. • Use technical vocabulary to describe mechanisms and structures.	• Explore existing products that use pneumatic systems. • Investigate how air pressure can create movement. • Compare pneumatic mechanisms with other mechanisms. • Identify the main components of a pneumatic system. • Discuss what makes a pneumatic toy successful. • Use technical vocabulary to describe		• Investigate products that use gears and pulleys. • Explore how gears and pulleys transfer and change movement. • Identify the main components of gear and pulley systems. • Compare different types of mechanisms and their functions. • Investigate how mechanical systems improve the function of products. • Analyse existing products to inform design ideas. • Use technical	• Investigate existing automata toys and their mechanisms. • Identify the components of a cam mechanism. • Explore how different cams create different movements. • Analyse how mechanical systems work together. • Research existing products to inform design ideas. • Use technical vocabulary to describe mechanisms and movement.

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				mechanisms and movement.		vocabulary to describe gears and pulleys.	
	<u>Develop Technical Knowledge and Skills</u>	- Understand that mechanisms create movement. - Make simple sliders and levers. - Explore how mechanisms change movement. - Cut, fold and join paper and card accurately. - Use simple tools safely and appropriately. - Select suitable materials for the task. - Use simple technical vocabulary to describe mechanisms and movement	- Understand how a wheel and axle creates rotational movement. - Explore fixed and rotating axles. - Construct stable structures to support mechanisms. - Assemble mechanisms so they move freely. - Use tools and materials safely and accurately. - Test and improve mechanisms during construction. - Use appropriate technical vocabulary.	- Understand how a pneumatic system uses air pressure to create movement. - Identify and assemble the components of a pneumatic system. - Construct a functioning pneumatic mechanism. - Apply knowledge of stable structures to support a mechanism. - Select suitable materials and components. - Use tools safely and accurately. - Test, refine and improve the performance of a pneumatic system. - Use appropriate technical vocabulary.		- Understand how gears transfer rotary motion. - Understand how pulleys transfer force and movement. - Identify the components of gear and pulley systems. - Explore how gear size and arrangement affect movement. - Assemble and test simple gear and pulley mechanisms. - Select suitable materials and components. - Construct mechanisms accurately using appropriate tools and techniques. - Test, refine and improve the performance of mechanical systems. - Use technical vocabulary accurately.	- Understand how cam mechanisms convert rotary motion into movement. - Identify the components of a cam mechanism. - Explore how different cam shapes affect movement. - Construct and test a functioning cam mechanism. - Select suitable materials and components. - Assemble mechanisms accurately using appropriate tools and techniques. - Test, refine and improve the performance of a mechanical system. - Use technical vocabulary accurately.
	<u>Design</u>	Design a moving storybook for a given audience.	Use a design brief to identify the purpose and	.Develop design criteria from the needs		Investigate a real-world need through market	Identify a need or opportunity for an automata

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		• Draw and label a simple design. • Select an appropriate mechanism (slider or lever) for the intended movement. • Explain how bridges or guides control movement. • Use simple technical vocabulary to communicate design ideas.	• intended user. • Develop simple design criteria. • Generate ideas that meet the design criteria. • Produce labelled designs showing materials, structures and mechanisms. • Use drawings to explain how a wheel and axle mechanism will work. • Explain how a design meets the design brief.	• of the user and purpose. • Generate and refine a range of design ideas. • Consider the feasibility of different design solutions. • Produce annotated sketches and simple diagrams. • Justify the choice of materials, components and construction methods. • Explain how the pneumatic mechanism will achieve the intended movement.		• research. • Develop a design brief and detailed design criteria. • Generate, compare and justify innovative design ideas. • Produce detailed annotated sketches and technical diagrams. • Select appropriate materials, components and mechanisms, explaining their suitability. • Use prototypes and feedback to refine and improve designs.	• toy by considering the intended user and purpose. • Develop a detailed design brief and success criteria that reflect the needs of the user. • Generate a range of original and innovative design ideas, considering practicality, creativity and functionality. • Select and justify the most appropriate design solution using evidence from research and design criteria. • Produce detailed annotated sketches to communicate design ideas clearly. • Use cross-sectional, exploded and other technical drawings to illustrate how the cam mechanism will operate. • Explain how the chosen cam type will create the intended movement.
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							• Select and justify appropriate materials, components and construction methods based on function and durability. • Refine and improve design ideas through discussion, feedback and prototype testing. • Use appropriate technical vocabulary to communicate design decisions accurately.
	<u>Make</u>	• Follow a design to create a moving storybook. • Construct simple slider and lever mechanisms. • Use bridges or guides to control movement. • Cut, fold and join materials accurately. • Select and use appropriate tools safely. • Test and refine mechanisms during making.	• Follow a design to make a functioning fairground wheel. • Select suitable materials and components. • Explain material choices using their properties. • Assemble a wheel and axle mechanism accurately. • Construct a stable supporting structure. • Shape, join and finish materials with increasing accuracy. • Use tools safely	• Follow a design plan to construct a pneumatic toy. • Select appropriate tools, materials and equipment for each stage. • Explain choices of tools and materials. • Construct and assemble a functioning pneumatic mechanism. • Cut, shape and join materials		• Follow a detailed plan to construct a gear and pulley system. • Select appropriate tools, materials and joining methods. • Measure, mark out, cut and assemble components accurately. • Construct a functioning gear and pulley mechanism. • Apply safe working practices when using tools and equipment. • Test,	• Produce a list of the materials, components, tools and equipment required before making. • Select appropriate materials, components and tools based on the design brief, research and intended function of the product. • Justify the choice of materials, tools and construction

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			and appropriately. Test and refine the product during construction.	- accurately. Seal joins to improve the performance of the pneumatic system. - Use tools safely and confidently. - Test, refine and finish the product to improve function and appearance.		troubleshoot and refine the mechanism. Finish the product to a high standard.	- methods. Measure, mark out, cut, shape and assemble materials accurately to produce a high-quality finish. - Construct a working cam mechanism that produces the intended movement. - Assemble components precisely to ensure smooth, reliable and consistent operation. - Select and use appropriate joining techniques to create a strong and durable product. - Use a range of hand tools safely and confidently, including saws where appropriate, following agreed safety procedures. - Assess and manage risks associated with tools, equipment and materials. - Test the mechanism throughout construction,
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							- identifying faults and making refinements to improve performance. - Apply finishing techniques carefully to improve the appearance, durability and quality of the completed product.
	<u>Evaluate</u>	- Test a finished product to check it works as intended. - Evaluate the success of a moving mechanism. - Explain why a mechanism works or does not work. - Suggest simple improvements. - Review the product with its intended audience. - Use simple technical vocabulary when evaluating	- Evaluate existing products against design criteria. - Test a product to check it functions as intended. - Evaluate a finished product against the design brief. - Identify strengths and areas for improvement. - Suggest improvements to their own and others' products. - Use technical vocabulary to justify evaluations.	- Evaluate existing products and explain why they are successful. - Test and evaluate a pneumatic toy against design criteria. - Explain how well a product meets the design brief and user needs. - Use evidence from testing to identify strengths and improvements. - Provide and respond to constructive peer feedback. - Justify suggested improvements using technical vocabulary.		- Evaluate a design against a detailed design brief and criteria. - Justify design decisions using research and technical knowledge. - Assess functionality, aesthetics, sustainability and cost. - Suggest improvements to materials, mechanisms and construction methods. - Provide and respond to constructive peer feedback. - Explain how feedback has informed design improvements.	- Evaluate designs and finished products against a detailed set of design criteria, including functionality, aesthetics, user experience, sustainability and cost. - Explain how effectively the automata toy meets the needs of the intended user and purpose. - Use evidence from testing to justify evaluations of how well the cam mechanism performs. - Identify strengths and weaknesses in both design and final product.

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							- Analyse how design decisions impact the success of the product. - Provide constructive, specific and supportive feedback to peers, referring to design criteria. - Incorporate feedback from others to refine and improve the product or design. - Explain clearly what changes were made in response to feedback and the impact these had on the final outcome. - Suggest realistic and justified improvements that could enhance function, appearance or durability. - Use accurate technical vocabulary to justify evaluations and reflect on outcomes.
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Declarative Knowledge	Technical	- Know that a mechanism is a system of parts that creates movement. - Know that a slider moves backwards and forwards in a straight line. - Know that a lever pivots around a fixed point to create movement. - Know that a pivot is the fixed point around which a lever moves. - Know that a bridge or guide holds a slider in place and controls its movement. - Know that different mechanisms create different types of movement. - Know that mechanisms can make pictures or parts of a storybook move. - Know that products are designed for a purpose and an intended user. - Know that testing helps identify whether a mechanism works as intended and how it can be improved.	- Know that a mechanism is a system of parts that creates or controls movement. - Know that many everyday objects use mechanisms to help them work. - Know that mechanisms are designed to control or limit unwanted movement. - Know that a wheel and axle is a simple mechanism used in many everyday products. - Know that a wheel must be able to rotate freely for the mechanism to work effectively. - Know that an axle supports the wheel and allows it to turn. - Know that some axles rotate with the wheel, while others remain fixed as the wheel turns. - Know that a stable structure is needed to support a moving mechanism. - Know that the properties of materials affect how suitable they	- Know that a mechanism is a system of parts that creates or controls movement. - Know that a pneumatic system uses air pressure to create movement. - Know that pushing air into a sealed system can cause another part to move. - Know that pneumatic systems require airtight connections to work effectively. - Know that different mechanisms create different types of movement and are chosen for different purposes. - Know that stable structures are needed to support moving mechanisms. - Know that products can combine structures and mechanisms to perform a	- Know that a gear is a toothed wheel that meshes with another gear to transfer rotary motion. - Know that a pulley is a wheel with a grooved rim used with a belt or rope to transfer force and movement. - Know that gears and pulleys are mechanical systems used to transfer movement and force from one part of a product to another. - Know that changing the size of gears affects the speed, force and direction of movement. - Know that pulley systems can change the direction of a force and make moving loads easier. - Know that gears and pulleys are used in many everyday products and machines (e.g. bicycles, clocks, cranes and lifts). - Know that mechanical systems are selected because they help products function more efficiently.	- Know that an automata mechanism uses a system of cams, axles and followers to create movement. - Know that a cam is a shaped component fixed to an axle that controls the movement of a follower. - Know that a follower moves as it rests on and responds to the shape of the cam. - Know that different shaped cams produce different types of movement (e.g. smooth, sudden, repetitive or varied motion). - Know that mechanisms can work together within a system to produce a combined or more complex movement. - Know that mechanisms can change one type of movement into another (e.g. rotary to linear or oscillating movement). - Know that
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			- are for a product (e.g. strength, stiffness and flexibility). - Know that design criteria are used to judge whether a product is successful.	- specific function. - Know that pneumatic systems are used in everyday products and machines (e.g. adjustable office chairs, vehicle tailgates/boots, bus or train doors, and some dentist or hospital equipment). - Know that testing and evaluating a product helps identify improvements to its function and performance.		- Know that different materials have different properties, which affect their suitability for mechanical systems. - Know that prototypes and testing help identify improvements before a final product is made. - Know that designers consider functionality, sustainability, cost and user needs when developing products.	- movement can occur in different directions depending on how components are arranged. - Know that the design of a mechanism affects the quality, speed and type of movement produced. - Know that stable structures are needed to support moving mechanical systems so they function accurately. - Know that testing and refining mechanisms improves their reliability and performance.
	Additional	Vocabulary. - Mechanism - Movement - Slider - Lever - Pivot - Bridge - Guide - Slot - Pull - Push - Design - Audience - Product - Test	Vocabulary. - Mechanism - Wheel - Axle - Wheel and axle - Rotate - Rotation - Structure - Frame - Support - Stable - Strength - Material - Properties - Design brief	Vocabulary - Mechanism - Pneumatic - Pneumatic system - Air pressure - Syringe - Tubing - Connector - Airtight - Force - Movement - Linear movement - Structure		Vocabulary - Gear - Gear train - Pulley - Belt - Rotary motion - Rotation - Force - Movement - Drive gear - Driven gear - Mechanism - Mechanical system - Speed - Direction	Vocabulary - Automata - Cam - Axle - Follower - Mechanism - Mechanical system - Rotary motion - Linear motion - Oscillating motion - Direction of movement - Rotation

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		Evaluate	- Design criteria - User - Function - Product - Evaluate	- Frame - Stable - Design brief - Design criteria - Prototype - Evaluate - Refine		- Efficiency - Prototype - Sustainability - Design brief - Design criteria - User - Function	- Structure - Frame - Stability - Movement - Control - Prototype - Evaluate - Refine
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Cooking and Nutrition

		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
			<u>A balanced diet</u>	<u>Eating seasonally.</u>	<u>Adapting a recipe.</u>		<u>Come dine with me</u>
<u>Procedural Skills</u>	<u>Research and investigate</u>		- Explore existing wraps and identify ingredients. - Recognise basic food groups. - Investigate what makes a healthy, balanced diet. - Discuss user preferences and needs. - Evaluate ingredients through tasting and discussion. - Use simple nutritional vocabulary.	- investigate seasonal tarts and their ingredients. - Identify when different fruits and vegetables are in season. - Understand where food comes from and how it is grown or imported. - Compare seasonal and non-seasonal ingredients. - Consider user needs and preferences. - Use research to inform design ideas.	- investigate a range of different biscuits and identify their ingredients and characteristics. - Compare different biscuit recipes and identify similarities and differences. - Explore how recipes can be adapted by changing ingredients, quantities or flavours. - Investigate the function of key ingredients in biscuits (e.g. flour, sugar, fat, eggs). - Identify how ingredients affect the		- Investigate a range of three-course meals and identify typical starters, main courses and desserts. - Explore how menus are designed for different occasions, audiences and purposes. - Research how chefs combine flavours, textures and ingredients across multiple courses. - Identify how seasonality, cost and availability influence menu choices. - Explore cultural influences on food and

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					texture, taste and appearance of biscuits. • Discuss the needs and preferences of different users when designing an adapted biscuit. • Research existing biscuit products and evaluate their suitability for different audiences. • Explore simple examples of dietary requirements (e.g. reduced sugar, allergy-friendly options where appropriate). • Use research to inform ideas for adapting an existing biscuit recipe. • Use appropriate technical vocabulary to describe ingredients and their function.		how different cuisines inspire dishes. • Analyse existing dishes to understand presentation, portion size and balance across a meal. • Consider the needs, preferences and dietary requirements of the intended audience. • Investigate how ingredients work together to create complementary flavours across a menu. • Evaluate existing dishes using sensory vocabulary and more detailed criteria (taste, texture, appearance, balance). • Use research to inform ideas for planning a three-course meal.
	<u>Develop Technical Knowledge and Skills</u>		• Know that food comes from plants or animals. • Understand that a balanced diet includes different food groups. • Identify basic food groups. • Apply basic food hygiene rules. • Use simple tools safely to prepare food. • Cut, spread and assemble ingredients with support.	Understand seasonality and when fruits and vegetables grow. Develop accurate cutting, peeling and preparation skills. Use kitchen equipment safely and with increasing independence. Follow a recipe in sequence. Use basic pastry-making techniques (e.g. rubbing in,	• Understand that recipes can be adapted by changing ingredients, quantities, flavours or methods. • Know that different ingredients have specific functions in baking (e.g. flour provides structure, fat adds texture, sugar adds sweetness and colour). • Develop accurate measuring skills using weighing		• Understand how menus create balance across courses. • Develop a range of advanced cooking techniques. • Plan and sequence tasks across multiple dishes. • Use tools and equipment safely and independently. • Measure and portion ingredients accurately. • Combine ingredients to create balanced dishes. • Present food with

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			Follow simple food preparation steps in order.	rolling). Assemble and bake a simple tart. Understand basic baking processes. Apply food hygiene and safety rules.	scales and measuring equipment. - Follow a recipe with increasing independence, including multiple steps and timings. - Use a range of baking techniques such as mixing, creaming, rubbing in and shaping. - Select and prepare ingredients safely and accurately for baking a biscuit recipe. - Use appropriate kitchen tools and equipment safely and with control. - Understand the importance of oven safety and follow simple safety procedures when baking. - Monitor baking time and temperature with support to ensure products are cooked properly. - Adapt a basic biscuit recipe by changing ingredients or quantities to improve taste, texture or appearance. - Work hygienically throughout all stages of food preparation and baking. - Evaluate and adjust mixtures during preparation where necessary (e.g. consistency of		attention to appearance and portioning.
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					dough).		
	<u>Design</u>		• Design at least three wrap ideas. • Consider user needs and preferences. • Use knowledge of food groups to support design choices. • Draw and label simple design ideas. • Select and justify suitable ingredients. • Discuss and refine ideas with others.	• Generate ideas for a seasonal tart based on research into seasonal ingredients. • Consider the needs, preferences and purpose of the intended user when designing. • Develop a simple design brief for a seasonal tart. • Create basic design criteria linked to taste, appearance, seasonality and purpose. • Select ingredients that are in season to include in their tart design. • Draw and label design ideas clearly, showing ingredients and structure of the tart. • Explain why specific seasonal ingredients have been chosen. • Begin to consider how ingredients will be combined and presented in the final product. • Refine ideas based on feedback from peers or further research. • Use simple annotations to explain design choices (e.g. ingredients, appearance, purpose).	• Identify the purpose of the product (a biscuit suitable for a picnic) and the needs of the intended user. • Develop a simple design brief that includes constraints such as budget, purpose and ingredients. • Create design criteria that consider taste, appearance, cost and suitability for a picnic environment. • Generate a range of ideas for adapted biscuit recipes within a set budget. • Consider how ingredient choices affect cost, taste and suitability for transport and outdoor eating. • Select and justify ingredients based on budget, user need and design criteria. • Draw and label biscuit design ideas, showing ingredients and intended adaptations. • Explain how their design meets the requirements of a picnic setting (e.g. easy to transport, not messy, durable). • Use simple annotations to explain design choices, including		• Develop a detailed menu plan for a three-course meal (starter, main and dessert) based on research and intended audience. • Write a recipe for each course, including ingredients, quantities, method and key steps. • Ensure recipes show clear sequencing and logical preparation stages. • Include relevant facts and information gathered from research to justify menu choices. • Use annotated drawings to support and explain each dish. • Show how dishes are balanced in terms of flavour, texture, appearance and nutrition. • Consider how seasonality, cost, culture and audience influence menu design. • Select and justify ingredients and techniques for each course. • Present ideas clearly using labelled diagrams, recipe layouts and structured planning formats.

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					- cost considerations. - Refine ideas based on feedback and budget limitations.		
	<u>Make</u>		- Follow a design brief to make a wrap. - Safely chop, grate, snip and prepare ingredients. - Spread soft foods evenly. - Assemble ingredients to create a balanced wrap. - Follow basic hygiene and safety rules. - Construct a product that meets the design brief.	- Identify and select seasonal ingredients from the UK to use in their tart. - Follow a recipe accurately to produce a seasonal tart. - Choose ingredients that meet the design brief and design criteria. - Taste seasonal ingredients to support decision-making during preparation. - Peel fruits and vegetables safely using a peeler or by hand where appropriate. - Cut ingredients safely and with increasing accuracy using appropriate tools. - Prepare ingredients ready for use in a tart filling. - Assemble and combine ingredients to create a finished tart. - Work hygienically throughout the making process (e.g. handwashing, clean surfaces). - Monitor and follow cooking or baking instructions with support. - Present the finished product with attention	- Follow a baking recipe to produce a biscuit-based product. - Adapt a recipe by changing ingredients, quantities or flavours in line with the design brief. - Select ingredients within a given budget to meet design and cost constraints. - Prepare and measure ingredients accurately using appropriate equipment. - Use a range of baking techniques safely (e.g. mixing, creaming, shaping). - Understand and consistently apply food hygiene rules (e.g. handwashing, clean surfaces, safe storage). - Follow safety procedures when using kitchen equipment and ovens. - Use tools and equipment safely and appropriately with increasing independence. - Monitor the baking process and adjust timing where necessary.		- Follow recipes accurately, using the correct quantities of each ingredient for each course. - Prepare and cook a starter, main and dessert as part of a planned three-course meal. - Adapt recipes based on research, feedback or dietary and audience needs. - Measure, weigh and portion ingredients accurately to ensure consistency and success. - Work to a given timescale, ensuring all courses are ready to serve in sequence. - Organise tasks effectively to manage multiple dishes at the same time. - Apply a range of cooking techniques confidently and appropriately across dishes. - Work safely and hygienically with increasing independence throughout all stages of preparation. - Use kitchen tools and equipment safely, selecting appropriate tools for different tasks.

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				to appearance and purpose.	• Evaluate and make adjustments during making to improve outcome (e.g. texture or appearance). • Ensure the final product is suitable for a picnic setting (e.g. portable, not too crumbly or messy).		• Monitor cooking processes and make adjustments where necessary (e.g. timing, temperature, texture). • Present each course appropriately, considering portion size, plating and visual appeal. • Maintain cleanliness and organisation in the kitchen throughout the making process.
	<u>Evaluate</u>		• Taste and evaluate different food combinations. • Describe appearance, smell and taste. • Evaluate their wrap against the design brief. • Suggest simple improvements. • Identify information on food labels. • Share and discuss opinions about their product.	• Describe the texture, taste and flavour of seasonal ingredients used in their tart. • Evaluate the finished tart against the design brief and design criteria. • Identify what they like and dislike about their tart and explain why using sensory vocabulary. • Compare different seasonal ingredients and explain how they affect the final product. • Describe the benefits of eating seasonal fruits and vegetables. • Explain how using seasonal ingredients can have a positive impact on the environment. • Suggest simple improvements to their tart based on taste, appearance or design criteria. • Share and discuss	• Evaluate an adapted biscuit recipe against the design brief and design criteria. • Evaluate the success of their finished product in relation to its purpose (a picnic snack within a budget). • Compare their product with a range of existing biscuits or peer products. • Identify strengths and weaknesses in both their recipe adaptation and final product. • Use sensory language to describe taste, texture, appearance and overall quality. • Suggest modifications to improve their recipe or final product. • Explain how changes could improve cost, taste, texture or suitability for a picnic.		• Know that flavour is how a food or drink tastes, including combinations of sweet, salty, sour, bitter and umami. • Know that dishes can be combined into a three-course meal (starter, main and dessert) to create balance in a menu. • Know that many countries have national dishes, which are recipes strongly associated with that country's culture and traditions. • Know that food choices and recipes can be influenced by culture, tradition and geography. • Know that processed food means food that has been changed in multiple ways in a factory before it is eaten. • Know that processed foods may contain added ingredients such as preservatives, flavourings or colourings. • Know that it is important to wash fruit and

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				opinions about their product and listen to feedback from others. Use appropriate vocabulary to describe sensory qualities (e.g. sweet, tart, crisp, soft, juicy).	- Consider feedback from others and explain how it could improve their product. - Reflect on whether their product met the budget and design constraints. - Use appropriate vocabulary to justify their evaluations.		vegetables before eating to remove dirt, bacteria and insecticides. - Know that food safety practices help prevent contamination and reduce the risk of illness. - Know what happens to food in the farm-to-fork process, including growing, harvesting, processing, packaging, transporting and selling in supermarkets. - Know that different ingredients come from different sources and go through different processes before reaching the consumer. - Know that meals should be designed to consider taste, texture, appearance, nutrition and balance across courses. - Know that food presentation and portion size affect how appealing a dish is to the consumer.
<u>Declarative Knowledge</u>	<u>Technical</u>		- Know that diet means the food and drink that a person or animal usually eats. - Know what a balanced diet is and why it is important for good health. - Know that the five main food groups are carbohydrates, fruits and vegetables, protein, dairy, and foods high in fat and sugar.	- Know that seasonal means foods that grow and are harvested in a particular season in a specific country. - Know some examples of seasonal foods grown in the UK and the seasons in which they grow (e.g. strawberries in summer, apples in autumn, root vegetables in winter). - Know that eating seasonal food can	- Know that the amount of an ingredient used in a recipe is called the quantity. - Know that changing the quantity of ingredients can affect the taste, texture and appearance of a product. - Know that safety and hygiene are essential when preparing and cooking food.		- Know that flavour is how a food or drink tastes, including combinations of sweet, salty, sour, bitter and umami. - Know that dishes can be combined into a three-course meal (starter, main and dessert) to create balance in a menu. - Know that many countries have national dishes,

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			- Know that we should eat a range of different foods from each food group and in the right proportions to stay healthy. - Know that ingredients are the items used in a recipe or mixture. - Know that different ingredients come from different food groups and have different nutritional values. - Know how to safely cut, grate, snip and spread foods when preparing a recipe. - Know that food hygiene is important to keep food safe to eat (e.g. handwashing and clean surfaces). - Know that food products can be evaluated by looking at their appearance, smell and taste. - Know how to review and give a simple score to evaluate a finished product.	- have a positive impact on the environment by reducing food miles and supporting local farming. - Know that food can be described using sensory vocabulary, including flavour, texture, taste and appearance. - Know how to safely cut and peel a range of fruits and vegetables using appropriate tools. - Know that the appearance of food is important, as it affects how appealing a product looks to a consumer. - Know that fruits and vegetables of similar colours often contain similar nutritional benefits (e.g. orange foods often contain vitamin A). - Know that ingredients behave differently when prepared or cooked (e.g. some soften when heated, some hold shape). - Know that recipes must be followed in order to achieve a successful result. - Know that design decisions should consider seasonality, taste, appearance and user preferences.	- Know that different cooking techniques are used for different purposes, including sieving, measuring, stirring, cutting out and shaping. - Know that accurate measuring is important to ensure successful baking results. - Know that recipes can be adapted by changing ingredients, quantities or flavours. - Know that budgeting is important when planning ingredients for a recipe. - Know that ingredients have different costs and this affects product design choices. - Know that products are designed for a target audience, and this affects ingredient choice, flavour and presentation. - Know that design decisions should consider purpose, cost, user needs and practicality.	which are recipes strongly associated with that country's culture and traditions. - Know that food choices and recipes can be influenced by culture, tradition and geography. - Know that processed food means food that has been changed in multiple ways in a factory before it is eaten. - Know that processed foods may contain added ingredients such as preservatives, flavourings or colourings. - Know that it is important to wash fruit and vegetables before eating to remove dirt, bacteria and insecticides. - Know that food safety practices help prevent contamination and reduce the risk of illness. - Know what happens to food in the farm-to-fork process, including growing, harvesting, processing, packaging, transporting and selling in supermarkets. - Know that different ingredients come from different sources and go through different
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							processes before reaching the consumer. - Know that meals should be designed to consider taste, texture, appearance, nutrition and balance across courses. - Know that food presentation and portion size affect how appealing a dish is to the consumer.
	<u>Additional</u>		Vocabulary - Diet - Balanced diet - Food group - Carbohydrate - Protein - Dairy - Fruit and vegetables - Fat - Sugar - Ingredients - Healthy - Unhealthy - Cut - Grate - Snip - Spread - Evaluate - Taste - Smell - Appearance - Score - Label	Vocabulary - Seasonal - Seasonality - Food miles - Environment - Flavour - Texture - Taste - Appearance - Nutrients - Nutrition - Fruit - Vegetable - Chop - Peel - Cut - Prepare - Ingredients - Recipe - Evaluate - Design brief - Design criteria	Vocabulary. - Quantity - Measure - Weigh - Ingredient - Budget - Cost - Hygiene - Safety - Adapt - Recipe - Target audience - Stir - Sieve - Cut - Shape - Mix - Bake - Texture - Taste - Appearance		Vocabulary - Flavour - Taste - Texture - National dish - Culture - Tradition - Processed food - Ingredients - Farm to fork - Production - Hygiene - Contamination - Cross-contamination - Nutrition - Balanced meal - Starter - Main course - Dessert - Appearance - Presentation - Portion

Textiles

William Law DT progression map 2026/2027

		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>yr5</u>	<u>Yr 6</u>
		<u>Hand puppets.</u>	<u>Pouches</u>	<u>Cushions</u>	<u>Cushions with fastenings</u>		
<u>Procedural Skills</u>	<u>Investigate and research.</u>	- Explore a range of simple hand puppets and soft toys. - Look at how puppets are used for storytelling and play. - Identify different fabrics by touching and handling them (e.g. soft, smooth, rough, shiny). - Begin to recognise that different materials are used for different purposes. - Talk about favourite colours, textures and designs in existing puppets. - Identify simple features of puppets such as eyes, mouths and decorations. - Discuss who might use puppets (e.g. children, teachers, storytellers). - Explore how puppets are joined together using simple methods (e.g. glue, stitching with adult support). - Use simple vocabulary to describe materials and products.	- Investigate a range of existing fabric pouches and similar textile products (e.g. pencil cases, small bags). - Identify the purpose of different pouches and what they are used for. - Explore who might use a pouch and why (e.g. children, adults, school use, storage). - Examine how pouches are made, including seams, stitching and joining methods. - Identify different fabrics used in pouches and describe their simple properties (e.g. strong, soft, flexible). - Compare different pouch designs based on colour, shape, size and function. - Discuss what makes a pouch successful (e.g. strong joins, secure opening, attractive design). - Use simple vocabulary to describe materials and product features. - Begin to express preferences for different designs and explain why.	- Investigate a range of cushions and soft furnishings. - Identify purpose and users of cushions. - Compare designs based on materials and appearance. - Explore construction methods (seams, stuffing). - Identify suitable fabrics and their properties. - Use research to inform design ideas.	- Investigate cushions with different fastenings. - Identify the purpose of textile fastenings. - Compare advantages and disadvantages of fastening methods. - Explore how fastenings affect function and appearance. - Investigate textile construction and suitable materials. - Use research to inform design ideas.		
	<u>Develop Technical Knowledge and Skills</u>	- Understand that textiles are materials that can be used to make products like puppets and toys. - Recognise that different fabrics have different properties such as soft, rough, smooth and stretchy.	- Investigate a range of existing fabric pouches and similar textile products (e.g. pencil cases, small bags). - Identify the purpose of different pouches and what they are used for. - Explore who might use a	- Understand how cushions are constructed (fabric + stuffing). - Use templates independently. - Develop accurate cutting and sewing	- Understand the purpose of textile fastenings. - Compare different fastening methods. - Select an appropriate fastening for a		

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		- Explore simple ways of joining materials, including gluing and basic stitching with support. - Use basic tools safely with guidance, such as scissors for cutting fabric. - Begin to cut simple shapes from fabric with support. - Develop hand-eye coordination when assembling and decorating a puppet. - Use simple templates to help cut out shapes for their puppet. - Join materials using glue or simple stitching techniques with adult supervision. - Add basic decorations such as eyes, mouths and features using safe materials. - Follow simple instructions to complete a textile task in order. - Begin to understand that making requires planning and careful selection of materials.	- pouch and why (e.g. children, adults, school use, storage). - Examine how pouches are made, including seams, stitching and joining methods. - Identify different fabrics used in pouches and describe their simple properties (e.g. strong, soft, flexible). - Compare different pouch designs based on colour, shape, size and function. - Discuss what makes a pouch successful (e.g. strong joins, secure opening, attractive design). - Use simple vocabulary to describe materials and product features. - Begin to express preferences for different designs and explain why.	- skills. - Use seams to join fabric securely. - Add stuffing to create a finished product. - Select suitable fabrics for purpose. - Work safely with tools and equipment.	- product. - Sew accurate seams with an even seam allowance. - Attach a fastening securely. - Work safely and independently with textile tools. - Test the fastening for effectiveness.		
	<u>Design</u>	- Use a simple template to create a design for a hand puppet. - Choose colours, materials and decorations for their puppet design. - Draw or colour their design to show what their puppet will look like. - Add simple labels to identify key features (e.g. eyes, mouth, ears). - Make simple choices about who the puppet is for (e.g. animal, character, monster). - Explore ideas based on	- Understand that textiles can be joined using different methods, including stitching and gluing. - Know that stronger, more permanent joins are needed for products like pouches that must hold items securely. - Develop accurate cutting skills using fabric and templates. - Use templates more independently to cut out consistent fabric shapes. - Learn and practise a basic running stitch to join fabric pieces together.	- Investigate an existing cushion to identify its shape, size and construction. - Design and make a template from an existing cushion to use when creating their own product. - Develop individual design criteria based on the purpose and intended user of the cushion. - Generate design	- Write design criteria for a textile product. - Design a personalised book sleeve. - Produce labelled and annotated design drawings. - Select suitable materials and a fastening. - Justify design decisions.		

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		existing puppets seen in investigation activities. • Begin to explain their design choices using simple vocabulary (e.g. "I chose red because..."). • Use the template to help plan the size and shape of their puppet. • Share and talk about their design ideas with others.	• Use stitching techniques to create seams in a simple pouch. • Select appropriate materials based on their properties (e.g. strength, flexibility, appearance). • Use tools safely with increasing independence, including scissors and needles with support. • Begin to understand that neatness and accuracy affect the strength and appearance of a product. • Join fabric pieces together to form a simple functional pouch. • Decorate products using simple textile techniques (e.g. stitching, fabric pens, glue). • Follow a sequence of steps with increasing independence when making a textile product.	ideas that meet their design criteria. • Produce clear, labelled and annotated drawings showing the front and back of the cushion. • Select fabrics, colours and decorative features that are suitable for the intended user and purpose. • Explain and justify design choices, referring to materials, decoration and function. • Consider how the cushion will be constructed, including seams, stuffing and fastening methods. • Use ideas from research and existing products to refine their own design. • Modify and improve design ideas following discussion and feedback.	• Refine ideas using feedback.		
	<u>Make</u>	• Cut fabric neatly using scissors with support. • Use a template to help cut out fabric shapes accurately. • Follow a simple sequence of steps to construct a puppet. • Join materials using simple methods such as glue or basic stitching with support. • Use joining methods to decorate and add features to a puppet (e.g. eyes, mouth,	• Select appropriate fabrics and materials for sewing a pouch. • Use a template to neatly pin and cut fabric pieces with increasing accuracy. • Thread a needle with support. • Sew a running stitch with evenly spaced, neat and consistent stitches to join fabric pieces. • Join fabric pieces together securely to create a simple	• Select appropriate fabrics for a cushion based on their design criteria. • Select and cut fabrics accurately and confidently using fabric scissors. • Use a template to cut fabric pieces precisely. • Thread needles with	• Make and test an accurate paper template. • Measure, mark and cut fabric using a template. • Select an appropriate stitch to join fabric. • Sew neat, small and straight stitches.		

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		- nose). - Assemble puppet parts in the correct order with guidance. - Select and apply basic decorative materials to improve appearance. - Handle tools and materials safely with adult supervision. - Begin to check that pieces fit together before joining. - Complete a finished puppet that matches their simple design.	- pouch. - Use fabric glue or running stitch to decorate and personalise a pouch. - Follow a simple sequence of steps to construct a finished product. - Work safely with tools and equipment, including needles and scissors. - Ensure fabric pieces are correctly aligned before joining. - Check that stitching is strong enough to hold the pouch together. - Complete a functional pouch that matches their design.	- greater independence. - Tie knots independently to secure stitches at the beginning and end of sewing. - Sew cross stitch to join fabric securely. - Use neat, evenly spaced stitches to produce a strong seam. - Decorate fabric using appliqué to enhance the appearance of the cushion. - Assemble the cushion by joining fabric pieces in the correct sequence. - Add stuffing evenly to create shape, comfort and structure. - Complete the cushion by sewing the opening closed neatly and securely. - Work safely and independently when using needles, scissors and pins. - Check the quality of stitching and make adjustments where necessary during construction.	- Incorporate and test a fastening. - Assemble a functional book sleeve. - Work safely and accurately with textile tools.		
	<u>Evaluate</u>	- Reflect on their finished puppet and say what they like and dislike. - Talk about whether their puppet matches their original design.	- Evaluate the finished pouch against the design brief and success criteria. - Discuss as a class the success of their stitching in relation to quality and neatness. - Evaluate the quality of stitching	- Evaluate the finished cushion against the design criteria and intended purpose. - Reflect on the quality of the finished product, considering	- Test and evaluate the finished book sleeve against the original design criteria. - Decide how many of the design		

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		- Describe simple features of their puppet (e.g. colour, shape, decoration). - Share opinions about their own work and listen to others' ideas. - Begin to suggest simple improvements (e.g. "I could add more eyes"). - Talk about what went well during making. - Describe how their puppet looks and feels using simple vocabulary. - Compare their puppet to examples shown during research.	- in their own and others' work. - Identify what went well and what could be improved in their pouch. - Respond to teacher-led troubleshooting scenarios (e.g. loose stitches, fabric not aligned, weak joins). - Suggest simple improvements to strengthen or improve appearance of their product. - Identify aspects of peers' work that they like and explain why. - Compare different pouches and discuss which are most successful and why. - Use simple vocabulary to describe the quality of construction (e.g. neat, strong, messy, loose).	- the accuracy of cutting, stitching and decoration. - Assess whether the cushion is fit for purpose and suitable for the intended user. - Explain what worked well during the making process and justify their opinions. - Identify areas for improvement and suggest realistic changes to improve the product. - Evaluate the effectiveness of the appliqué decoration and stitched seams. - Compare their finished cushion with existing products and explain similarities and differences. - Consider other ways in which a similar textile product could be designed or constructed. - Listen to and respond to feedback from peers, using it to identify possible improvements. - Use appropriate technical vocabulary when discussing the success of their product.	- criteria have been met and explain whether the product is successful. - Evaluate the effectiveness of the fastening, considering how securely and easily it opens and closes. - Assess the quality of construction, including the accuracy of measuring, cutting and stitching. - Reflect on the appearance, durability and functionality of the finished product. - Suggest realistic modifications that would improve the design or construction of the book sleeve. - Articulate the advantages and disadvantages of different fastening types (e.g. button, Velcro, popper, zip) and explain which would be most suitable for the product. - Compare their finished product with existing textile products and explain similarities and differences. - Give constructive feedback to peers and use feedback		
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					- received to identify improvements. - Use technical vocabulary to justify evaluations and suggested improvements.		
<u>Declarative Knowledge</u>	<u>Technical</u>	- Know that a joining technique means connecting two pieces of material together. - Know that there are different temporary methods of joining fabric, such as staples, glue and pins. - Understand that different joining techniques are used for different purposes depending on the material and the strength needed. - Understand that a template (or fabric pattern) is used to cut out the same shape multiple times accurately. - Know that using a template helps ensure pieces are the same size and fit together properly. - Know that drawing a design idea is useful for showing how a product will look before it is made. - Know that materials can be joined and decorated to improve the appearance of a product. - Know that tools such as scissors and glue must be used safely with adult support.	- Know that sewing is a method of joining fabric together. - Know that different stitches can be used when sewing, depending on the purpose and strength needed. - Know that a running stitch is a basic stitch used to join fabric pieces together. - Understand the importance of tying a knot after the final stitch to secure the sewing and stop it coming undone. - Know that a thimble can be used to protect fingers when sewing with a needle. - Know that accurate stitching helps make a product stronger and more durable. - Understand that tools such as needles and scissors must be used safely and carefully. - Know that templates help ensure fabric pieces are cut accurately and fit together correctly.	Know that appliqué is a way of mending or decorating a textile by attaching smaller pieces of fabric to a larger piece. Know that when two edges of fabric are joined together, it is called a seam. Know that it is important to leave a seam allowance when cutting fabric so there is enough material to sew pieces together securely. Understand that some textile products are turned inside out after sewing so the stitching is hidden, creating a neat finish. Know that cross stitch can be used to join or decorate fabric. Know that stuffing gives a cushion its shape, comfort and structure. Know that choosing suitable fabrics affects the appearance, durability and function of a cushion. Know that neat, evenly spaced stitches produce a stronger and more attractive finished product. Understand that following a sequence of construction steps helps to produce an accurate, well-made textile product.	- Know that a fastening is something which holds two pieces of material together, such as a zip, toggle, button, press stud or Velcro. - Know that different fastening types are suitable for different purposes depending on the product, user and how it will be used. - Know that a fastening should be chosen because it is functional, secure and easy for the intended user to operate. - Know that creating a mock-up (prototype) allows designers to test ideas, check proportions and identify improvements before making the final product. - Know that paper templates and prototypes help		

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					- reduce mistakes and material waste. - Know that accurate measuring, marking and cutting are essential for textile pieces to fit together correctly. - Know that different stitch styles have different purposes and some provide stronger joins than others. - Know that small, even stitches create stronger, neater seams. - Know that design criteria are used to judge whether a finished product is successful. - Know that products can be modified and improved after testing and evaluation.		
	<u>Additional</u>	Vocabulary - Joining technique - Fabric - Template - Pattern - Design - Glue - Staple - Pin - Cut - Assemble - Decorate - Safety	Vocabulary - Sewing - Stitch - Running stitch - Needle - Thread - Knot - Thimble - Fabric - Template - Join - Secure - Safety	Vocabulary - Appliqué - Seam - Seam allowance - Cross stitch - Running stitch - Stitch - Fabric - Stuffing - Template - Pattern - Join - Construct - Decorate	Vocabulary - Fastening - Zip (zipper) - Button - Velcro - Press stud - Toggle - Prototype - Mock-up - Design criteria - Stitch - Seam - Seam allowance - Measure		

William Law DT progression map 2026/2027

				• Inside out • Finish • Durable	• Mark • Template • Function • Durable		
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Digital World

		<u>EY</u> <u>SF</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
							<u>Monitoring Devices</u>	<u>Navigating the World</u>
<u>Procedural Skills</u>	<u>Investigate and research</u>						• Investigate a range of digital navigation products and identify their purpose and intended users. • Explore how programmable technology is used to solve real-world navigation problems. • Research how digital devices use inputs, outputs and programming to communicate information. • Compare existing navigation products, identifying strengths, limitations and key features. • Consider how user needs influence the design of digital navigation products. • Use research to identify criteria for a successful programmable navigation device. • Gather ideas from existing products to inform their own design.	• Analyse a client's design request. • Investigate multifunctional and compact products. • Research how CAD is used in industry. • Explore industries that use 3D CAD modelling. • Compare products based on functionality and user needs. • Identify design constraints. • Use research to develop a detailed design brief.
	<u>Develop Technical Knowledge and Skills</u>						• Understand that digital products use inputs, processes and outputs to perform specific functions. • Explore how a micro:bit can be programmed to create a digital solution.	Understand how a client brief informs design. Develop and refine programs for specific functions. Identify and debug

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							- Recognise how sensors and user inputs can control the behaviour of a programmable device. - Develop algorithms to control the sequence of actions within a digital product. - Create, test and debug simple programs to ensure a digital product works as intended. - Understand that programming instructions must be clear, logical and sequenced accurately. - Use decomposition to break a complex design problem into smaller, manageable tasks. - Investigate how digital technology can be used to solve real-world navigation problems. - Develop an understanding of how digital systems collect, process and communicate information. - Test and refine programming solutions to improve the functionality and reliability of a digital product.	programming errors. Create and refine complex 3D CAD models. Combine multiple objects in Tinkercad. Understand professional uses of CAD. Test and improve digital solutions.
	<u>Design</u>						- Research user needs using books and the internet. - Develop design criteria from research. - Generate and prototype multiple design ideas. - Understand the purpose of virtual models and CAD. - Create, manipulate and combine 3D objects using CAD. - Refine digital designs through modification and testing.	- Write a design brief from client information. - Develop design criteria to meet client needs. - Suggest additional functions for a navigation tool. - Produce annotated sketches of design ideas. - Use CAD to create and refine 3D models. - Manipulate and combine 3D objects in CAD. - Refine designs using feedback and criteria.
	<u>Make</u>						- Understand the functional and aesthetic properties of plastics. - Select materials appropriate for a product's purpose. - Program a temperature sensor to	- Consider sustainable and recyclable materials (e.g. cork, bamboo). - Select and justify material choices for a product.

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							- monitor environmental conditions. - Create an audible or visual alert using code. - Test, debug and refine programs. - Understand how sensors, inputs and outputs work together in a digital system.	- Program a cardinal compass (N, E, S, W). - Test, debug and refine programming. - Produce a functional digital prototype. - Ensure the product meets the client brief
	<u>Evaluate</u>						- Evaluate the product against design criteria. - Explain how programmed features meet user needs. - Justify how the product supports an animal carer. - Explain key functions within the program. - Reflect on the environmental impact of plastics and suggest sustainable alternatives. - Identify strengths and improvements using technical vocabulary.	- Explain how the program meets design criteria. - Evaluate how the product meets a client brief. - Explain key functions and additional features. - Present and demonstrate a functional program. - Develop awareness of sustainable design choices. - Identify industries that use CAD and explain why. - Communicate design ideas through a product pitch. - Reflect on feedback and suggest improvements.
<u>Declarative Knowledge</u>	<u>Technical</u>						- Know that a monitoring device is designed to collect information and respond to changes in its environment. - Know that sensors collect data from the environment, such as temperature, light or movement. - Know that a temperature sensor can be programmed to detect when a temperature rises above or falls below a set range. - Know that a program can trigger an audible alert (sound) or a visual alert (light or image) when certain conditions are met. - Understand that an algorithm is a sequence of instructions that tells a programmable device what to do. - Know that selection (if/then	- Know that an accelerometer is a sensor that can detect movement, direction and changes in orientation. - Know that accelerometers can be used in digital devices to support navigation systems by detecting changes in position. - Understand that sensors allow products to collect data from the environment and respond accordingly. - Understand that sensors enable products to function without constant human input, making them more efficient and responsive. - Know that a cardinal compass

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							statements) allows a program to make decisions based on data collected by a sensor. • Know that Computer-Aided Design (CAD) software allows designers to create, edit and refine virtual 3D models before making a product. • Understand that a prototype or virtual model is used to test ideas before manufacturing a final product. • Know that plastics have different functional properties, such as strength, flexibility, durability and water resistance, making them suitable for different products. • Know that the aesthetic properties of materials, such as colour, texture and finish, influence the appearance of a product. • Understand that the widespread use of plastics has had an impact on the environment and that designers can make more sustainable choices by reducing, reusing or selecting alternative materials. • Know that digital products should be designed to meet the needs of a specific user and solve a particular problem.	system uses directions (North, East, South, West) to communicate location or movement. • Understand that programming can be used to display information based on sensor input. • Know that algorithms are step-by-step instructions used to control the behaviour of a digital device. • Know that debugging is the process of finding and correcting errors in a program. • Understand that selection, sequencing and variables are key components of effective programming. • Know that CAD (Computer-Aided Design) is used to create and refine digital 3D models before production. • Know that CAD is used in industries such as engineering, architecture and product design to develop and communicate ideas. • Understand that sustainable design involves selecting materials and processes that reduce environmental impact. • Know that a client brief sets out requirements that must be met in a product design.
	<u>Additional</u>						Vocabulary • Monitoring device • Sensor • Temperature sensor • Input • Output • Algorithm • Selection • Variable • Program	Vocabulary • Accelerometer • Sensor • Input / Output • Algorithm • Programming • Debugging • Selection • Sequence • Variable

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							• Audible alert • Visual alert • CAD (Computer-Aided Design) • Prototype • Virtual model • Plastic • Functional properties • Aesthetic properties • Sustainable • User • Design criteria	• Cardinal compass • CAD • Prototype • Client brief • Sustainable design • Orientation • Movement
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