



DT Medium Term Plan

Year A	Term:	Summer 1 + 2	Unit:	Textiles
Big Question:	"How can we design and make something that helps an explorer survive in the Amazon?"			
Prior Substantive Knowledge	✔ Materials and Their Properties - Understand that different materials have different properties (e.g. hard, soft, waterproof, flexible). - Know that materials are chosen for specific purposes (e.g. wool for warmth, plastic for waterproofing). - Begin to recognise common fabrics like cotton, felt, and synthetic materials. ✔ Basic Textile Techniques - Experience using simple joining methods such as glue, staples, or simple sewing (e.g. running stitch). - Know how to cut fabric using templates or patterns. - Have made simple textile products such as puppets, bookmarks, or bags using basic construction. ✔ Designing with a Purpose - Understand that design begins with an idea and is created for someone or something. - Know how to draw and label a basic design idea. - Begin to think about the user and purpose of their product (e.g. "I'm making this for a friend/my toy"). ✔ Simple Evaluation - Know how to reflect on their product by saying what they liked and what they would change next time. - Use simple criteria to judge whether a product "works" or looks how it was planned. ✔ Use of Tools and Equipment - Have experience safely using scissors and glue for cutting and joining. - May have used needles with close supervision to do basic		Cross-curricular	● Geography Topic Link: The Amazon Rainforest - Children explore the physical environment of the Amazon and the challenges it presents (e.g. rainfall, heat, dense vegetation). - Understand why explorers need specific equipment based on the region's climate, terrain, and biodiversity. - Use of maps or virtual tools (e.g. Google Earth) to locate the Amazon and discuss the human and physical geography. Science Materials and Their Properties - Children apply knowledge of materials (e.g. waterproof, insulating, absorbent) when selecting textiles for their pouch. - Links to Year 5 science unit: Properties and Changes of Materials – understanding durability, flexibility, and why certain materials are suited to specific purposes. - Introduction to reversible and irreversible changes when discussing sewing vs gluing. ◆ Maths Measurement: - Measuring fabric accurately using cm/mm. - Understanding perimeter when cutting out shapes. - Scaling up/down from a template or design. Geometry: - Identifying and drawing 2D shapes (used for templates). - Understanding symmetry in decorative design. PSHE/Citizenship Empathy and User Needs: - Designing with others in mind — thinking about an explorer's real-life needs. Resilience and Problem Solving:



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	- sewing. - Understand simple safety rules when working with tools or textiles.		- Learning from mistakes in construction or sewing and trying again. Safety: - Handling tools responsibly and working collaboratively in a safe space.
		Key Vocab	seam, stitch, template, prototype, fastening, felt
		Essential vocab	
Substantive Knowledge:			Disciplinary Knowledge (Think like)
Declarative Knowledge (Know what)		Procedural Knowledge (Know how)	
Children will learn: - That different fabrics have different properties (e.g. waterproof, breathable, durable). - That textile products are designed with a specific user and purpose in mind. - That different types of fastenings (Velcro, buttons, zips) serve different functions. - The names and purposes of basic stitches (running stitch and backstitch). - The stages of the design process: research, design, make, evaluate. - That tools such as needles and scissors must be used safely and appropriately.		Children will learn how to: - Investigate and analyse existing textile products for features and suitability. - Sketch and annotate a functional product for a specific user. - Select suitable materials based on their properties. - Use a template to measure, mark, and cut fabric accurately. - Use basic stitches (running stitch, backstitch) to join fabric securely. - Assemble fabric pieces to make a complete product, including pockets or flaps. - Attach fastenings such as Velcro or buttons. - Evaluate their finished product against original design criteria.	
		Children will learn to: - Think like a designer by considering user needs and environmental factors (e.g. the Amazon rainforest conditions). - Justify their design and material choices based on functionality and suitability. - Solve practical problems during the making process by adapting techniques or designs. - Reflect critically on how successful their product is in meeting the original purpose. - Begin to think about sustainable or ethical material choices and their importance in modern design (extension for higher ability or enrichment).	
Teacher Knowledge	To deliver this Year 5 textiles unit confidently and effectively, teachers require a strong foundation in both subject-specific content and the pedagogical approaches that support design and technology learning. This includes an understanding of textiles as a material area, as well as the ability to guide pupils through the full design process—from researching and generating ideas to making and evaluating a functional product. Teachers need secure knowledge of basic textile construction techniques, particularly the running stitch and backstitch, which are the key methods	Fruits	Faith This unit encourages students to believe in their abilities as they design and make a product from scratch. They will learn that through persistence and trial and error, they can successfully create something meaningful. Relationships Students will work collaboratively by sharing ideas, giving feedback, and supporting each other. They'll learn the



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introduced in this unit. They should be able to demonstrate these stitches clearly and accurately, using visual aids or enlarged models where necessary. Understanding how to use templates for pattern-making and the correct techniques for cutting, pinning, and assembling fabric pieces is also essential. Teachers must also be familiar with different types of fastenings—such as Velcro, buttons, and zips—and how they can be securely attached to fabric. Additionally, they should have a good grasp of textile material properties (e.g. waterproof, lightweight, durable) and be able to help pupils make informed material choices based on the product's purpose and the environmental conditions of the Amazon rainforest. Knowledge of the Design and Technology curriculum is also vital. Teachers should be confident in structuring the unit around the national curriculum strands: <i>Design, Make, Evaluate</i>, with technical knowledge embedded throughout. They should understand how this unit builds on prior learning, particularly from earlier key stages, and how it supports progression in both practical skills and design thinking. It's important for teachers to model iterative design—showing that design is a process of testing, adapting, and improving. They must also be confident in setting clear and purposeful design criteria, helping pupils make decisions based on the needs of the user and the context of the Amazon. Cross-curricular knowledge significantly enhances this unit. Teachers should have basic geographical knowledge of the Amazon rainforest, including its climate, terrain, and how these factors affect human activity. This allows for meaningful discussion about the challenges an explorer might face and why specific textile features (e.g. water-resistant materials, secure fastenings) are essential. In science, teachers should understand material properties and be able to help pupils consider why some materials are more suitable than others. Additionally, they should model the use of subject-specific vocabulary and support children in developing written reflections and evaluations, linking to literacy and speaking & listening outcomes. Pedagogically, teachers must know how to differentiate effectively to meet the needs of all learners. This includes providing scaffolded templates for design work, supporting children with fine motor difficulties through pre-threaded needles or alternative joining methods (like fabric glue or Velcro), and pacing demonstrations appropriately. They should also know how to manage tool safety in the classroom, ensuring all pupils can participate safely in practical tasks. Strong assessment for learning strategies are also needed, including questioning, peer review, and self-evaluation, to help pupils reflect on their progress and make improvements.		importance of empathy by considering the needs of the explorer and how their designs can help someone in a challenging environment. Uniqueness Each student's design will reflect their personal creativity, allowing them to come up with original ideas. This unit values individuality, as students will make a unique product that showcases their own solution to the problem. Intellect The unit challenges students to think critically as they choose materials, solve design problems, and evaluate their work. It encourages both creative and analytical thinking by combining practical skills with scientific knowledge. Treat Others with Respect Students will practice respect by caring for their tools, listening to others' ideas, and offering constructive feedback. They'll also show respect for the environment by considering how to design a functional product for an explorer in the Amazon. Salvation The unit teaches resilience by encouraging students to keep going when they face challenges in their designs. They will learn that making mistakes is part of the process and that perseverance leads to successful outcomes.
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	Finally, an awareness of sustainability in design—such as using recycled or eco-friendly fabrics—can enrich this unit by encouraging responsible design thinking. Teachers who are confident in these areas will be well placed to deliver a meaningful, creative, and purposeful unit that engages pupils and helps them develop as young designers.				
Key concept	Learning objective	Key components	Main input	Activity	Adaptive strategies
Understanding user needs in design	To identify and evaluate the needs of an Amazon explorer and examine existing textile products	- Understanding the Amazon environment - Researching existing products - Recognising product features for specific environments	Begin by immersing the class in the Amazon environment through a short video, images, or a brief teacher explanation of the rainforest's climate and terrain. Lead a class discussion on the challenges an explorer might face—such as heavy rainfall, humidity, insects, and the need to carry survival tools. Ask pupils, “What kinds of items would an explorer need with them in the Amazon?” and record ideas on the board. Introduce a variety of textile items (e.g., small bags, pouches, belts), either real or photographic examples, and model how to analyse them. Guide students in identifying key features such as size, materials used, how the item fastens, and its purpose. Discuss what makes a product suitable for outdoor use, focusing on fabric properties like water resistance, durability, and comfort.	In pairs or small groups, children will examine examples of textile products using a guided worksheet to note down their observations. They will identify the product's key features and consider how well-suited it would be for use in the Amazon. Each group presents their findings briefly to the class. Then, individually, pupils will create a “Needs of an Amazon Explorer” poster, summarising the items an explorer would carry and the conditions their equipment must withstand. This will support the development of empathy and purpose-led design thinking.	- Provide visual aids and real objects for EAL and SEN pupils - Use sentence starters for less confident writers - Group support for product analysis
Designing for a specific purpose	To generate and communicate design	- Generating ideas - Drawing and labelling designs	Start by recapping the findings from Lesson 1 and	Children will begin by sketching two different	- Use drawing templates or partially labelled designs for



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	ideas through annotated drawings	- Choosing materials with purpose in mind	reviewing the challenges of designing for the Amazon environment. Ask students to think about what kind of pouch or bag would help an explorer carry their essential items. Show an example of a basic pouch design and model how to sketch it clearly, label each part, and include notes about materials and purpose (e.g., "Velcro flap to keep insects out"). Encourage children to consider features such as fastenings, compartments, and strap types. Provide a selection of fabric samples to pass around, allowing students to feel and compare textures while discussing their suitability for rain, heat, and movement. Emphasise the importance of measuring accurately and planning before making.	design ideas for a pouch that meets the needs of an Amazon explorer. Each sketch should include features such as fastening methods, pocket placement, and material choices. Pupils will then share their ideas with a partner, give each other feedback, and choose one design to develop further. The final design will be redrawn with full annotations, colour, and labelled materials. Pupils will write a short explanation of why their design is suitable for the Amazon. The annotated design will guide their construction in the following lesson.	support - Pre-cut material samples to help visualise choices - Allow oral explanations for some learners
Developing practical textile skills	To use simple stitching techniques to construct a textile pouch	- Cutting materials - Using running/back stitch - Joining materials and adding features	Start the lesson by revisiting each pupil's final design and briefly discussing what they are about to make. Model the first steps of the making process: placing a template on fabric, carefully pinning and cutting around it, and checking measurements. Next, demonstrate simple stitches (running stitch and backstitch) on a large piece of fabric, using thick thread	Pupils will begin by tracing and cutting out the fabric pieces for their pouch using their design template. They will practice their chosen stitching technique on a scrap piece of fabric before beginning to sew their actual pouch. They will stitch around the edges to join the front and back pieces, attach any flap or pocket elements, and sew or stick on their fastening	- Use pre-cut templates for pupils who need motor support - One-to-one or adult support for threading needles - Use fabric glue or Velcro where stitching is too challenging



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			and a visualiser if available. Show how to tie knots securely and remind pupils of safety when using sharp tools like needles and scissors. Display a step-by-step stitching guide on the board or at tables for reference. Also model how to attach features such as pockets, flaps, or Velcro strips. Explain that it's okay to adapt the design slightly during construction based on how the materials behave.	method. Those who finish early can add decorative features or test the strength of their stitching. Adult support should be available throughout for threading needles, retying knots, or helping pupils adjust their approach if they find parts of the task too difficult.	
Evaluating against design criteria	To evaluate the success of the pouch based on design criteria and purpose	- Evaluating finished product - Peer feedback - Reflecting on improvements	Begin by revisiting the original design criteria: functionality, durability, comfort, and appearance. Display an example of a finished pouch (either teacher-made or student example) and model how to evaluate it using sentence stems such as, "One thing I like about this design is..." and "Next time, I would improve..." Discuss with the class how to give constructive feedback to peers and what kind of questions to ask when evaluating a product. Emphasise that evaluation is a chance to reflect, not just on what went wrong, but on what worked well and why. Explain that part of being a good designer is being able	Pupils will begin by completing a self-evaluation sheet that prompts them to reflect on their pouch's strengths and areas for improvement. They will assess whether it meets the needs of an Amazon explorer, how durable and secure it is, and whether it matches their original design. Then, pupils will partner up to complete a peer review, using a simple checklist and sentence starters to give feedback. Finally, pupils will present their pouch in a mini-presentation or gallery walk, explaining their design choices and how it would support an explorer in the Amazon. Work can be displayed alongside their	- Offer oral evaluation options - Use sentence stems or scaffolded sheets - Encourage partner evaluation for extra support



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			to improve your product based on feedback.	design sheets and evaluations as a class showcase.	
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