



Knowledge and Skills Mind Map (DT)

Year 6—Term Autumn

Knowledge - 
Skill - 



1. Can I investigate, analyse and evaluate a range of existing textile products?

- **Prior Knowledge (Year 2—Spring):** Know that basic stitching techniques can be used to join textiles and make simple products.
- **Vocabulary:** seam, seam allowance, reinforce, right side, wrong side, hem, template, pattern pieces, pins, needles, thread, fastenings, functionality, user, purpose, evaluate
- Know that textile products are designed for a specific user and purpose (e.g. a reusable shopping bag for carrying items or a small bag for personal belongings)
- Know that textile products are made from a combination of fabric shapes and pattern pieces (e.g. different sections joined together to form a 3-D product)
- Know that seams are used to join fabric pieces together and may need reinforcing to increase strength (e.g. double stitching on handles or edges under strain)
- Know that different fabrics and components affect functionality (e.g. thicker fabric increases durability, fastenings improve usability)
- Know that existing products can be investigated, analysed and evaluated to understand how they are constructed and how they meet a user's needs
- Know relevant health and safety: safe use of equipment when handling textiles, including using needles carefully, storing pins safely, cutting fabric with appropriate scissors, and working in an organised workspace to reduce risk.

Task: Explore a range of textile products that have been made by combining different fabric shapes (e.g. shopping bags, pencil cases, small carriers), guiding discussion on who the product is for (e.g. shoppers, children, families) and its purpose (e.g. carrying, storing or protecting items). Examine how the product is constructed, including seams, pattern pieces, fabric choices and fastenings. **In books,** children draw an annotated sketch of one product, labelling: the different fabric pieces (pattern pieces), seams and joins (e.g. seam, reinforced seam), and features that improve functionality (e.g. strong handles, fastenings). Include explanations such as "this seam is reinforced to make it stronger" or "these fabric pieces are joined to create a 3-D shape."

Evaluating: Investigate and analyse textile products linked to their final product

Technical Knowledge:

- A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics
- Fabrics can be strengthened, stiffened and reinforced where appropriate

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Textiles:

Combining different fabric shapes.

'Can I design, make and evaluate a bag?'

2. Can I develop and apply a range of stitches to join and shape textiles?

- **Prior Knowledge (last lesson):** Know that textile products are made using pattern pieces, seams and different types of fabric.
- **Vocabulary:** seam, seam allowance, hem, reinforce, right side, wrong side, pins, needles, thread, pattern pieces
- Know that different stitches can be used to join fabrics together (e.g. running stitch, back stitch, over stitch)
- Know that seams are created by sewing fabric pieces together, often with a seam allowance to allow joining
- Know that fabrics are joined with right sides together to create neat seams on the outside

- Know that stitching can be used to shape fabric, including joining straight and curved edges
- Know that fabrics can be reinforced, stiffened or strengthened (e.g. adding extra stitching or layers for durability)
- Know relevant health and safety: Be explicit about safe use of equipment when working with textiles, including handling needles carefully, storing pins safely, using scissors correctly and maintaining a clear workspace to avoid injury.

Task: Practise threading needles and applying a range of stitches to join fabric pieces, guiding discussion on how different stitches affect strength and appearance. Support children in joining fabric pieces using right sides together and creating simple seams, including practising shaping curves where appropriate.

In books, children produce a labelled sample of stitching techniques, including at least two types of stitch, a joined seam and an example of reinforced stitching. Labels should identify the type of stitch used and explain its purpose, such as "back stitch is stronger for seams" or "this seam is reinforced to make it more durable."

Making: Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.

Technical Knowledge: Fabrics can be strengthened, stiffened and reinforced where appropriate



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3. Can I design a functional bag for a specific user and purpose?

- **Prior Knowledge (last lesson):** Know that different stitches and seams can be used to join and shape textiles.
- **Vocabulary:** design criteria, annotate, design decisions, functionality, innovation, user, purpose, template, pattern pieces
- Know that a design brief explains what product is being made and who it is for (e.g. a reusable bag for a shopper or a small bag for a child to carry belongings)
- Know that design criteria describe what the product must do to be successful (e.g. strong, durable, fit for purpose, visually appealing)
- Know that products must be functional and suitable for a specific user and purpose (e.g. strong handles for carrying weight, appropriate size for use)
- Know that ideas can be developed and communicated through annotated sketches, templates, mock-ups or prototypes (e.g. labelled drawings showing pattern pieces and seams)
- Know that design decisions are influenced by materials, construction methods and user needs (e.g. choosing strong fabric or reinforced seams for durability)
- Know that working safely is essential when preparing to design and make textile products (e.g. organising tools safely, handling pins and needles carefully, and preparing materials correctly)

Task: Discuss the design brief of creating a reusable bag, identifying the user (e.g. shopper, student, family member) and purpose (e.g. carrying items safely and securely). Guide children to develop simple design criteria such as strength, size, durability and appearance. **In books,** children write a clear design specification (e.g. must be strong enough to carry items, must use appropriate fabric, must include handles, must be suitable for the user), then produce an annotated design from different perspectives. Designs should label key features such as pattern pieces, seams, fastenings and reinforcement, with explanations such as “these handles are reinforced to make them stronger” or “this fabric is chosen for durability.”

Designing:

- Generate innovative ideas by carrying out research including surveys, interviews and questionnaires
- Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design
- Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification

Technical Knowledge: A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics

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Textiles:

Combining different fabric shapes.
‘Can I design, make and evaluate a bag?’

4. Can I plan and make a high-quality textile product?

- **Prior Knowledge (last lesson):** Know that a design specification and annotated design help guide the making of a functional product.
- **Vocabulary:** seam allowance, template, pattern pieces, pins, needles, thread, fastenings, reinforce, hem, right side, wrong side
- Know that a step-by-step plan helps organise the making process (e.g. cutting fabric, joining seams, adding handles)
- Know that pattern pieces and templates are used to cut fabric accurately (e.g. ensuring consistent shapes and correct size)
- Know that seams are used to join fabric pieces and must include a seam allowance (e.g. leaving extra fabric to sew pieces together securely)
- Know that fabric pieces are often joined with right sides together to create a neat finish
- Know that fabrics can be strengthened, stiffened and reinforced where appropriate (e.g. reinforcing handles or seams to increase durability)
- Know that selecting and using appropriate tools and equipment helps achieve accurate assembly and a well-finished product (e.g. using pins to hold fabric in place before sewing)
- Know that working safely is essential during making (e.g. using needles and pins carefully, cutting fabric safely with scissors, keeping workspace organised)

Task: Recap designs and design specifications. Support children in producing a clear step-by-step plan, including a list of tools, equipment and fabrics needed (e.g. fabric, thread, pins, needles, scissors). Children then use templates or pattern pieces to cut fabric accurately, join pieces using appropriate stitches and seams, and assemble their textile product. Encourage careful finishing (e.g. neat seams, reinforced areas, tidy edges). **In books,** children record their step-by-step plan and create a labelled diagram or written explanation of how their product was assembled, including details about pattern pieces, seams, reinforcement and finishing techniques.

Making:

- Produce detailed lists of equipment and fabrics relevant to their tasks
- Formulate step-by-step plans and, if appropriate, allocate tasks within a team
- Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.

Technical Knowledge:

- A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics
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5. Can I evaluate my product against a design specification?

- **Prior Knowledge (last lesson):** Know that a textile product can be made by following a plan using appropriate tools, materials and techniques.
- **Vocabulary:** evaluate, functionality, design criteria, user, purpose, reinforce, seam, fastenings
- Know that evaluation involves comparing a product to its original design specification (e.g. checking if it is strong, functional and suitable for its purpose)
- Know that a textile product should be fit for purpose and meet the needs of the intended user (e.g. strong enough to carry items, appropriate size and design)
- Know that products can be tested to check their functionality and durability (e.g. testing seams, handles and overall strength)
- Know that evaluating the quality of manufacture includes checking accuracy, finishing and construction (e.g. neat seams, secure fastenings)
- Know that the views of others can help improve a product (e.g. feedback on appearance, usability or strength)
- Know that improvements can be suggested to develop the product further (e.g. reinforcing seams, adjusting size or improving design features)
- Know that working safely remains important when handling and testing finished products (e.g. checking for sharp pins/needles, safe handling of materials)

Task: Test the completed textile products by checking their strength, durability and functionality (e.g. placing items inside to test seams and handles, checking fastenings). Guide discussion on how well each product meets its intended user and purpose. **In books,** children write a detailed evaluation of their product, explaining how well it meets the design specification, including functionality, quality of manufacture and fitness for purpose. Children should identify strengths (e.g. "the seams are strong and well reinforced") and areas for improvement (e.g. "I would improve the fastening to make it more secure" or "I would use thicker fabric for durability"), referring to feedback from others where appropriate.

Evaluating:

- Compare the final product to the original design specification
- Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose
- Consider the views of others to improve their work

Technical Knowledge:

- Fabrics can be strengthened, stiffened and reinforced where appropriate