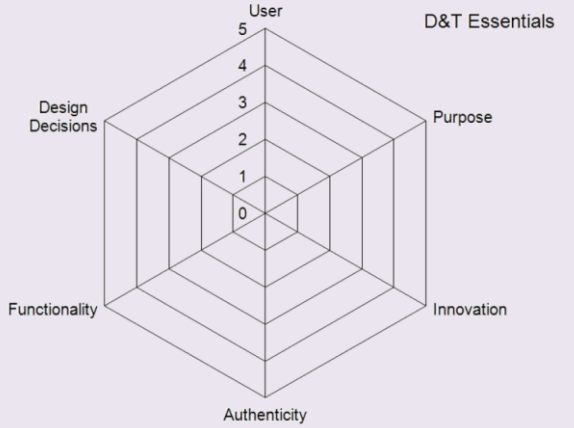


<div>1. Year Groups</div> <div>Years 5/6</div>	<div>2. Aspect of D&T Textiles</div> <div>Focus</div> <div>Combining different fabric shapes</div>	<div>4. What could children design, make and evaluate?</div> <div>tablet case mobile phone carrier shopping bag insulating bag hat/cap garden tool belt slippers sandals fabric advent calendar fabric door stop other – specify</div> <div>7. Links to topics and themes</div> <div>Clothing Hot and Cold Communication Festivals Celebrations Weather Sustainability Our School Environment other – specify</div>	<div>5. Intended users</div> <div>themselves younger children older children teenagers parents school grandparents teachers gardeners other – specify</div> <div>8. Possible contexts</div> <div>home school leisure culture enterprise environment local community other – specify</div>	<div>6. Purpose of products</div> <div>celebration educational interests hobbies environmental lifestyle religious protection other – specify</div> <div>9. Project title</div> <div>Design, make and evaluate a _____ (product) for _____ (user) for _____ (purpose). To be completed by the teacher. Use the project title to set the scene for children’s learning prior to activities in 10, 12 and 14.</div>	<div>16. Possible resources</div> <div>existing textile products for investigation and deconstruction linked to their product</div> <div>wide selection of textiles including reclaimed and reusable fabrics, dipryl</div> <div>pins, needles, thread, measuring tape, left/right handed fabric scissors, pinking shears iron, iron transfer paper, sewing machine</div> <div>range of fastenings, materials for insulating or strengthening e.g. bubble wrap, wadding, interfacing</div> <div>finishing materials e.g. sequins, buttons, fabric paints</div>	<div>17. Key vocabulary</div> <div>seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces</div> <div>name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, iron transfer paper</div> <div>design criteria, annotate, design decisions, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype</div>
<div>3. Key learning in design and technology</div> <div>Prior learning</div> <div><ul style="list-style-type: none">• Experience of basic stitching, joining textiles and finishing techniques.• Experience of making and using simple pattern pieces.</div> <div>Designing</div> <div><ul style="list-style-type: none">• 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.</div> <div>Making</div> <div><ul style="list-style-type: none">• 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.</div> <div>Evaluating</div> <div><ul style="list-style-type: none">• Investigate and analyse textile products linked to their final product.• 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.</div> <div>Technical knowledge and understanding</div> <div><ul style="list-style-type: none">• 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.</div>		<div>10. Investigative and Evaluative Activities (IEAs)</div> <div><ul style="list-style-type: none">• Children investigate, analyse and evaluate a range of existing products which have been produced by combining fabric shapes. Investigate work by designers and their impact on fabrics and products. Use questions to develop children’s understanding e.g. <i>Is the product functional or decorative? Who would use this product? What is its purpose? What design decisions have been made? Do the textiles used match the intended purpose? What components have been used to enhance the appearance? To what extent is the design innovative?</i>• Children investigate and analyse how existing products have been constructed. Children disassemble a product and evaluate what the fabric shapes look like, how the parts have been joined, how the product has been strengthen and stiffened, what fastenings have been used and why.• Children investigate properties of textiles through investigation e.g. exploring insulating properties, water resistance, wear and strength of textiles.</div>	<div>11. Related learning in other subjects</div> <div><ul style="list-style-type: none">• Spoken language – ask questions, formulate, articulate and justify answers, arguments and opinions. Consider and evaluate different viewpoints.• Science – work scientifically investigating properties of fabrics. Children plan different types of scientific enquiries to answer questions.• History – significant person/people in their locality linked to textiles and products e.g. William Morris, Amanda Wakeley.</div>	<div>13. Related learning in other subjects</div> <div><ul style="list-style-type: none">• Mathematics – apply knowledge of how 2-D nets can be formed into 3-D shapes; apply skills of accurate measuring using standard units i.e. cm/mm.• Art and design – investigate methods of adding colour, pattern and texture on to textiles and how to make their own textiles through weaving or felt making.• Computing – children express themselves and develop ideas using a range of information and communication technology resources.</div>	<div>18. Key competencies</div> <div>problem-solving teamwork negotiation consumer awareness organisation motivation persuasion leadership perseverance other – specify</div>	<div>19. Health and safety</div> <div>Pupils should be taught to work safely, using tools, equipment, materials, components and techniques appropriate to the task. Risk assessments should be carried out prior to undertaking this project.</div>
		<div>12. Focused Tasks (FTs)</div> <div><ul style="list-style-type: none">• Develop skills of threading needles and joining textiles using a range of stitches. This activity must build upon children’s earlier experiences of stitches e.g. improving appearance and consistency of stitches and introducing new stitches. If available, demonstrate and allow children to use sewing machines to join fabric with close adult supervision.• Develop skills of sewing textiles by joining right side together and making seams. Children should investigate how to sew and shape curved edges by snipping seams, how to tack or attach wadding or stiffening and learn how to start and finish off a row of stitches.• Develop skills of 2-D paper pattern making using grid or tracing paper to create a 3-D dipryl mock-up of a chosen product. Remind/teach how to pin a pattern on to fabric ensuring limited wastage, how to leave a seam allowance and different cutting techniques.• Develop skills of computer-aided design (CAD) by using on-line pattern making software to generate pattern pieces. Investigate using art packages on the computer to design prints that can be applied to textiles using iron transfer paper.</div>	<div>15. Related learning in other subjects</div> <div><ul style="list-style-type: none">• Art and design – use and apply drawing skills.• Writing and computing – write and record a radio advert, making use of persuasive writing features, sound effects and music to promote the final product or event it is advertising.• Computing – children express themselves and develop ideas using a range of information and communication technology resources.• Spoken language – consider and evaluate others’ viewpoints. Give a well-structured oral evaluation to include relevant technical vocabulary.</div>	<div>20. Overall potential of project</div> <div></div>		

Instant CPD



Tips for teachers

- ✓ Choose fabrics carefully. Shiny, heavyweight or fabrics that fray easily are often difficult to work with and can be frustrating. Have fabric cut into manageable sizes.
- ✓ Investigate using materials other than fabrics e.g. for handles. Plastic bags can be cut into strips and plaited.
- ✓ To make the activity more manageable limit the choice of decorating techniques.
- ✓ Keep scissors for fabric only.
- ✓ Make sure that you have plenty of pins and needles for children to use.
- ✓ Arrange zones in the class where children will find materials and resources.
- ✓ Ensure children have a basic understanding of stitching techniques, threading needles, starting and finishing off.
- ✓ Make mock-ups, then alter and refine and go back to initial design ideas to amend as necessary e.g. change measurements. Ensure the children keep all their modifications as part of the ongoing evaluation and for their final evaluation.
- ✓ Enlist the help of a local textile designer if available.
- ✓ Children can make their own demonstration videos to show e.g. how to join in different ways or how to complete a range of stitches. Different groups could show how to do different tasks and then share them.
- ✓ If using sewing machines, either hand or electric, make sure that their use is very closely supervised, using, for example, trained adult volunteers. If this cannot be achieved, children can tack the fabric together and an adult can use the machine.

Useful resources at www.data.org.uk

- [Designing with textiles](#)
- [Designer bags](#)
- [A to Z of D&T](#)
- [Working with Materials](#)
- [Butterflies in My Tummy](#)

Teaching aids – fasteners

Children may want to use a fastener which should be appropriate for the purpose for the product.



Zip



Velcro



Clasp



Toggles



Ties

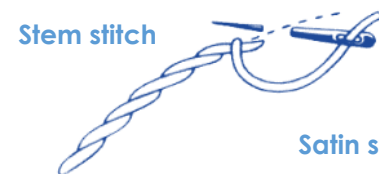


Buttons



Press studs

Stitches



Stem stitch



Satin stitch



Chain stitch



Lazy daisy stitch

Using stitches as a finish for the product.

The children could design their finish for their product using a variety of appropriate stitches. They could draw enlarged examples of e.g. insects, flowers, animals and then decide which stitch would be best for each part. Use square paper for a grid to ensure the stitches are in the right place and are the right size.



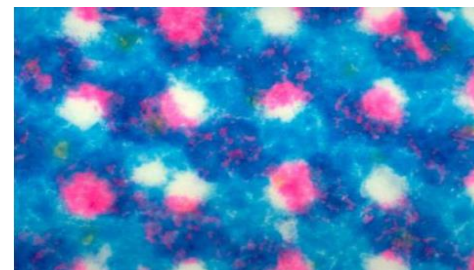
Appliqué



Embroidery

Tie Dye

Children could decorate their fabric before they make up their product by tie dyeing.



The key to success is to tie the fabric very tightly with e.g. rubber bands or string so that the dye is prevented from reaching that part of the fabric.

Designing, making and evaluating a belt for garden tools

An iterative process is the relationship between a pupil's ideas and how they are communicated and clarified through activity. This is an example of how the iterative design and make process *might* be experienced by an individual pupil during this project:

THOUGHT

- What are the features of a successful product?
- What features do I need to include in a functional, innovative and authentic product?
- What knowledge and skills do I need to be able to design and make a good quality product?
- How do I make a paper pattern for the product I want to produce?
- What design decisions do I need to make?
- How can I communicate my ideas for my product in an effective way?
- How will I show innovation?
- Who will be the user of my product and what are their needs, wants and values?
- What will be the purpose of my product?
- More thoughts... appraising, reflecting, refining.
- Does my product meet the needs and wants of the user?
- Is it appealing and does it fulfill a purpose? Is it innovative?

ACTION

- Researching, investigating, disassembling and evaluating existing products and consulting 'real life' designers.
- Investigating and practising using a range of methods to join fabrics together and making judgments about the strength and appropriateness of each technique.
- Practising finishing techniques and, if possible, learning to use a sewing machine.
- Creating a 2-D paper pattern with a seam allowance.
- Developing ideas through research, working drawings, computer-aided design, discussion, paper mock-ups and modelling.
- Thinking about the user and purpose and developing specifications for products.
- Formulating a clear plan of work and allocating tasks if appropriate.
- Constantly self-evaluating and making changes if the product is not fulfilling the specification.
- Testing final products with the intended user and making an evaluation of how successful they are.

Glossary

- **Mock up** – quick 3-D modelling using easy to work and cheaper materials and temporary joints. Useful for checking proportions and scale.
- **Pattern or template** – a shape drawn to exact shape and size, used to assist in cutting out.
- **Seam allowance** – extra fabric allowed for joining together - 15mm for domestic patterns.
- **Specification** – describes what a product has to do.
- **Tacking** – large running stitches to hold pieces of fabric together temporarily.
- **Working drawing** – detailed drawing contains all information needed to make a product but is updated as changes are made.