

Lyppard Grange

DT Knowledge organiser

Year 6

Textiles – combining different fabric shapes

Design, make and evaluate a _____ (product) for _____ (user) for _____ (purpose) – (to be completed by year group)

Examples of possible design and make tasks- tablet case, shopping bag, garden tool belt, slippers, sandals, door stop, fabric toy, make do and mend project etc.



Year 6 objective- Textiles- combining different fabrics

Key knowledge

- A 3d product can be made from a combination of pattern pieces, fabric shapes and different fabrics.
- Fabrics can be strengthened, stiffened and reinforced where appropriate.
- To know how to use a variety of stitches for functionality and aesthetics
- To know how to use a sewing machine to join fabric (with adult supervision)

- Develop an appealing and functional product
- Generate ideas by carrying out research e.g. surveys, interviews, questionnaires
- Develop ideas using drawings, mock-ups, templates, prototypes and computer aided design.
- Incorporate CAM (computer aided manufacture) if appropriate e.g. printing on fabric using iron transfer paper
- Produce detailed lists of equipment and fabrics
- Formulate step by step plans
- Select from and use a range of tools and equipment to make products that are accurately assembled and well finished.
- Investigate and analyse textile products linked to their final product
- Compare the final product to the design specification
- Test final products, critically evaluating the quality, manufacture, functionality and fitness for purpose

IEAs-

- 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. 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?
- 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 strengthened and stiffened, what fastenings have been used and why.
- Children investigate properties of textiles through investigation

Focused Tasks (FTs)

- Develop skills of threading needles and joining textiles using a range of stitches. This activity must build upon children's earlier experiences of stitches (y4- running stitches, blanket stitch, back stitch) 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.

Design, Make and Evaluate Assignment (DMEA)

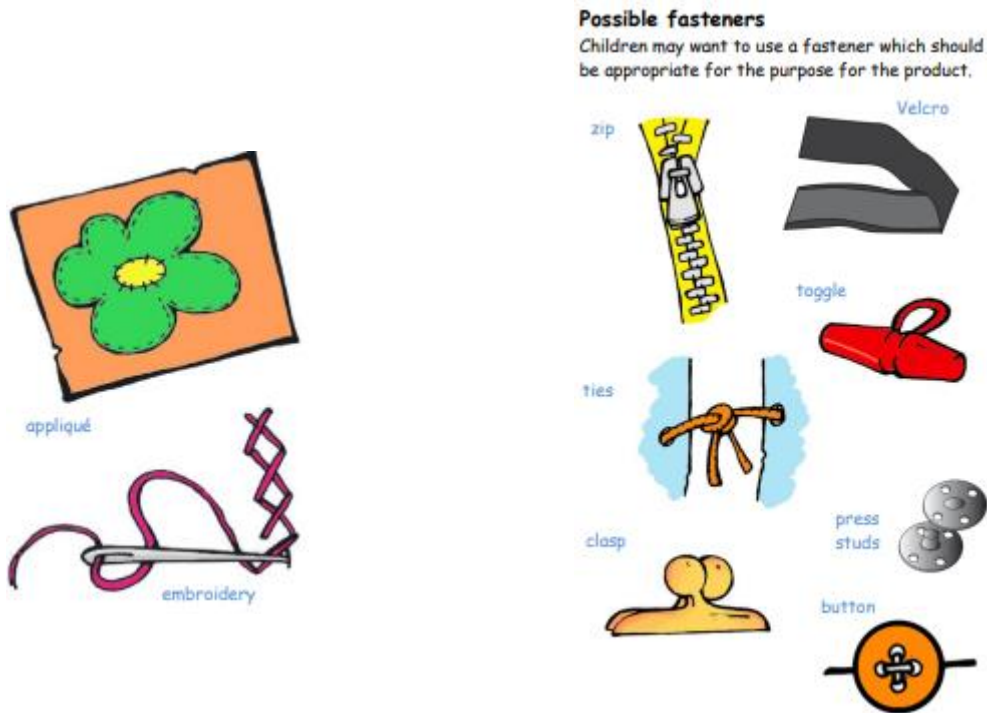
- Set an authentic and meaningful design brief. Children generate ideas by carrying out research using e.g. surveys, interviews, questionnaires and the web. Children develop a simple design specification for their product.
- Communicate ideas through detailed, annotated drawings from different perspectives and/or computer aided design. Drawings should indicate design decisions made, the methods of strengthening, the type of fabrics to be used and the types of stitching that will be incorporated.
- Produce step-by-step plans, lists of tools equipment, fabrics and components needed.
- Make high quality products applying knowledge, understanding and skills from IEAs and FTs. Incorporate simple computer-aided manufacture (CAM) if appropriate e.g. printing on fabric. Children use a range of decorating techniques to ensure a well-finished final product that matches the intended user and purpose.
- Evaluate both as the children proceed with their work and the final product in use, comparing the final product to the original design specification. Critically evaluate the quality of the design, the manufacture, functionality, innovation shown and fitness for intended user and purpose, considering others' opinions. Communicate the evaluation in various forms e.g. writing for a particular purpose, giving a well-structured oral evaluation, speaking clearly and fluently.

Vocabulary

Seam, seam allowance, wadding, reinforce, hem, template, tacking, working drawing, pattern pieces, pins, needles, thread, mock-up, prototype, applique, embroidery

Computer-aided design (CAD)

Computer-aided manufacture (CAM)



Health and safety-

Pupils should be taught to work safely, using tools, equipment, materials, components and techniques appropriate to the task.

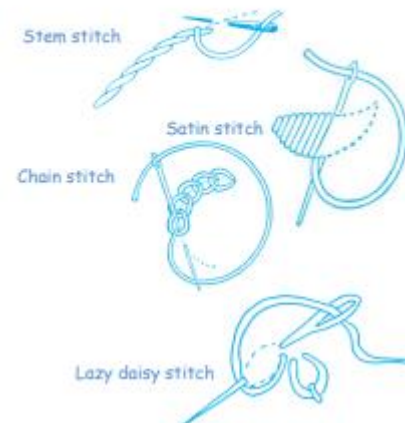
See risk assessments saved in staff shared.

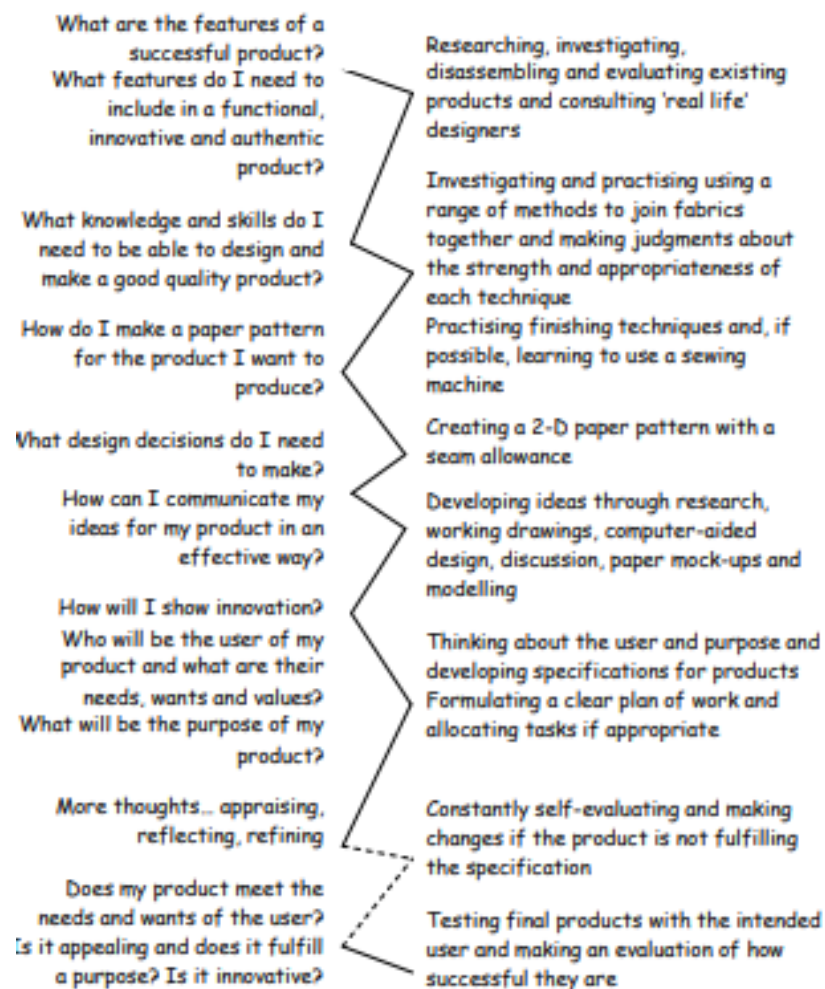
Top Tips-

- 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.
- 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.
- 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.

Stitches

Children can use different stitches to decorate their products.





This follows on from- Year 4- Textiles- 2Dshape to 3d product

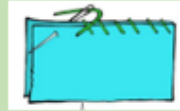
Key knowledge

- To know different types of stitches and understand their functionality and aesthetics
- To know how to evaluate their product against the product criteria, as a way to improve their work

Templates, seam, seam allowance, fastening, annotated sketch, prototype, back stitch, running stitch, tacking, pattern pieces



back stitch



over sew stitch



running stitch



backward running stitch



blanket stitch

- To design a functional bag/ wallet with a fastening through annotated sketches
- To select fabrics and fastenings according to their functional e.g. strength and aesthetic qualities e.g. pattern or colour
- Research and investigate the features of bags/ wallets to inform design criteria
- Investigate the effect of different stitches (how effective they are and their durability)
- Plan the stages of making
- Use a range of tools to stitch, cut and sew
- Understand the need for seams and seam allowances
- Evaluate and test final products against the design criteria

