Year 5 Design and Technology: Textiles using CAD

How can CAD be used to create a Fairtrade-inspired bag?

Prior Learning

- Experience of stitching, joining and finishing techniques in textiles.
- Experience of making and using textiles pattern pieces.
- Experience of simple computer-aided design to create packaging.

Sticky Knowledge

- I can investigate and analyse textile products linked to my final product.
- I can generate innovative ideas through research including surveys, interviews and questionnaires.
- I can develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes including using computer-aided design.
- I can design purposeful, functional, appealing products for the intended user that are fit for purpose.
- I can formulate step-by-step plans and, if appropriate, allocate tasks within a team.
- I can select from and use a range of tools and equipment, including CAD, to make products that are accurately assembled and well finished.
- I know that a 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics.
- I know that fabrics can be strengthened, stiffened and reinforced where appropriate.
- I can compare the final product to the original design criteria.
- I consider the views of others to improve my work.

Vocabulary

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User*	The person or people who will use the product.
Purpose*	What the product will be used for.
Function*	What the product should be able to do to work properly.
Design*	A plan or idea of what the product will be like and how it will function.
Mock up*	Quick 3D modelling using easy to work with materials. Useful for checking size and dimensions.
Pattern/ Template *	A shape drawn to exact size and measurements and used to draw around onto fabric.
Seam allowance	Extra fabric used for joining, usually 15mm.
Tacking	Large running stitches to hold fabric together temporarily.
CAD*	Computer-Aided Design. Computer software used to create, change and modify designs.
CAM	Computer-Aided Manufacture. Once the designs are finished in the CAD process, CAM software uses them to create instructions that drive operated machinery, in order to mass-produce a product.

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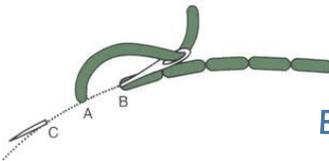## How can CAD be used to create a Fairtrade-inspired bag?

Griffe Field Primary School

What different joining techniques can I use for fabric?
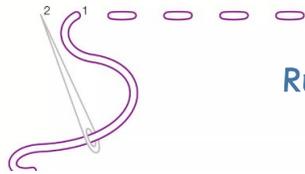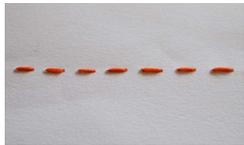
Running stitch
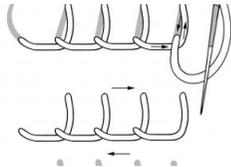
Blanket Stitch

Back Stitch

Tacking

Cut edge
Seam allowance
Seam
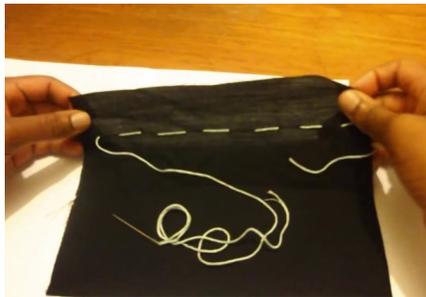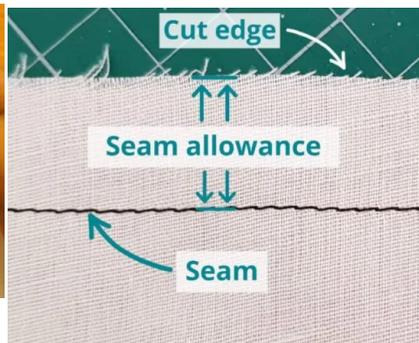
How can I use pattern pieces to create my design accurately?

Thin card — Use clear sticky tape to position pattern on fabric. Cut around the pattern.

Thin card — Use soft chalk pastel or soft white crayon to draw around the pattern prior to cutting out.
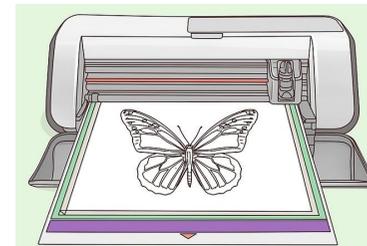
Paper — Use pins to secure the pattern on the fabric. Cut around the pattern.

Transfer Paper

Transfer paper is a **thin piece of paper coated with wax and pigment**. Often, an ink-jet is used to print the image on the transfer paper. A heat press can transfer the image onto clothing, canvas or other surface.

Design logo using CAD

Print onto transfer paper.

Iron design onto fabric