

Textiles: Shaping & Forming

Textiles can be cut, sewn, pleated, quilted and piped.

Cutting and Shearing

There are a range of tools available for cutting and shearing fabrics.

Fabric Shears



Also known as dressmaking scissors, these have long, sharp blades to cut fabric quickly and neatly.

Pinking Shears



These have serrated blades that are used to cut a zigzag edge into certain fabrics to stop them from fraying.

Embroidery Scissors



These have short, sharp blades that are suited to delicate work such as cutting threads. The blades are slightly curved to prevent them from piercing the fabric.

Seam Rippers



These have a small, forked blade that is used to unpick seams. The prongs help to grip tight threads so that the blade can cut them.

Craft Knives



These are used for intricate work that requires a great deal of accuracy – for example, cutting out stencils.

Rotary Cutters



These have a circular blade that is rolled across the fabric to cut through several layers at once. They are often used to accurately cut curves.

Electric Rotary Cutters



These cut in the same way as handheld rotary cutters but at a much greater speed. They are commonly used when cutting on a commercial scale.

CAM Cutting Machines



These cut designs from CAD software. They can cut through multiple layers of fabric very quickly and with great accuracy using sharp blades or lasers.

Sewing

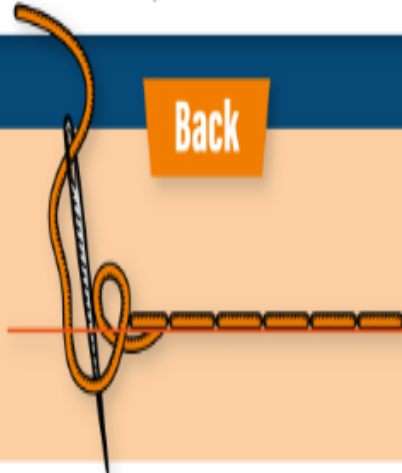
Sewing uses stitches made with a needle and thread to permanently join fabrics and to attach objects. It can be performed by hand or with a sewing machine. There are various types of stitches, and each is suited for different purposes.

Running



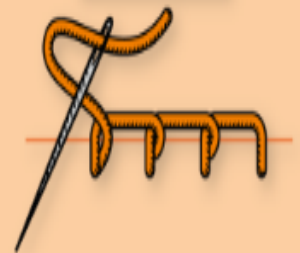
This is a small even stitch that runs back and forth through the cloth without overlapping. It is used to sew basic seams.

Back



Individual stitches are made backward to the general direction of sewing. It is more durable than a running stitch.

Blanket



This stitch reinforces the edges of fabrics to prevent them from fraying. It is also used to provide a decorative finish.

Zigzag



Cross



Chain



French Knot

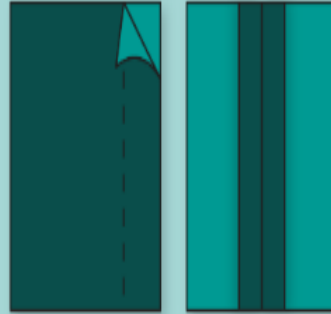


Seams

A seam is the join where two or more pieces of fabric meet. An unfinished seam leaves the edges open to fraying. As a result, seams are usually finished in different ways.

Plain Seam

This seam gives a neat finish with no visible stitching from the outside. The fabrics are placed together, with the outward-facing sides facing each other. Then a straight stitch is sewn slightly in from the edge of the fabrics (creating a seam allowance) to join the fabrics. The edges are then usually finished with pinking shears or a stitch.



Overlocking Seam

Overlocking seams are commonly used with stretchy and knitted fabrics. They are completed with an **overlocker**. This machine cuts off any excess seam allowance before enclosing the edges of the fabric in several threads. The end result is a neat, enclosed seam.



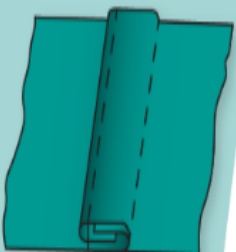
French Seam

French seams are ideal for fabrics that are prone to fraying. The raw edges are neatly enclosed in a strong, finished seam. French seams are used for undergarments and baby clothes to prevent the seam from rubbing against the skin.



Flat-Felled Seam

Flat-felled seams, which are commonly used for jeans and hard-wearing fabrics, involve two lines of stitching. First, stitch a plain seam to join the fabrics together. Then, trim one side of the seam allowance and wrap the untrimmed seam allowance around this. Iron the fabrics flat and add a second stitch along fold. This gives a strong and durable finish, but it can appear too bulky on finer fabrics.



Pleating

To create pleats, fabric is folded by doubling cloth upon itself and stitching it in place. Pleating can also be done through **heat setting**. Thermoplastic fabrics (e.g. polyester and nylon) are put into a special mould and heated to create permanent pleats.



Knife pleat



Box pleat



Inverted pleat

Pleats are used for **aesthetic purposes** (e.g. to give clothes a 'tailored' look) or for **functional purposes** (e.g. to add strength to the material or to create more space for the wearer's comfort).

Gathering

Gathering is a technique used to add fullness to a fabric by pulling it together evenly. It is commonly used in skirts and curtains.

1



Sew two straight parallel lines from one end of the fabric to the other. Do not backstitch on either end.

2



The ends of each row of stitching are left loose so that they can be pulled tight from both ends to gather the fabric to the desired size.

3



Once the size is right, the loose threads can then be knotted to keep the gathering in place. The gathered fabric can also be sewn onto another piece of fabric.

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Quilting

Commonly used in bedding, quilting involves sewing **wadding** (soft material) between two layers of fabric. It traps warm air between the layers to provide insulation.

Quilting can be performed with a sewing machine or by hand. Decorative patterns are often stitched into the top layer.



Piping

Piping is a decorative trim used to finish the edges of products such as cushions or upholstery. It consists of a strip of material wrapped and sewn around a cord or folded fabric.



The strip of material is usually cut along the **bias** (i.e. diagonally through the threads of the fabric) to add flexibility. The fabric is sewn face down over the piping so that the seam is hidden when it is attached to the product.

Piping can be used to add strength and rigidity to a product as well as for aesthetic purposes.