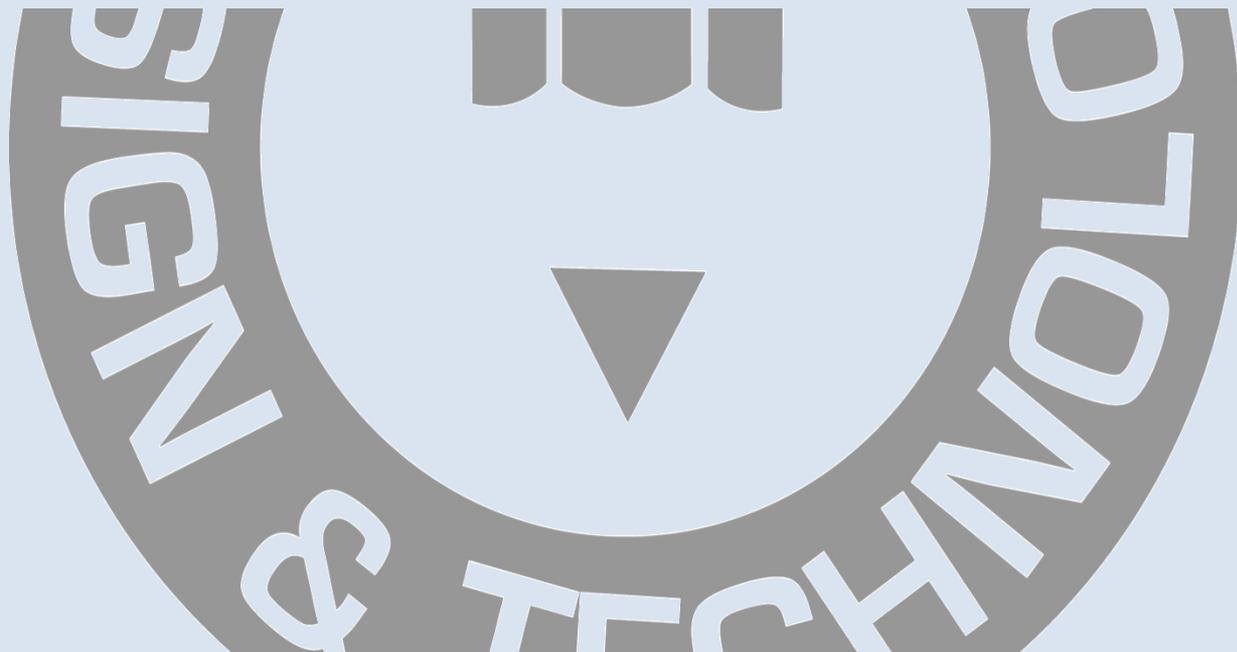


Textiles Technology: Tools and Equipment



Textiles: Tools and Equipment



Look through the following slides to familiarize yourself with the basic tools and equipment we use in Textiles.

This will help when you do practical work.

Textiles: Tools and Equipment



Tools and equipment are used to make the product with.

Fabrics and components are what the product is made from.

We have lots of different pieces of equipment and tools in the Textiles room.

It is important to consider:

- * Correct name and function (what each piece is used for)
- * How best to use each piece correctly and accurately (top tips)
- * Safe use of equipment
- * Safe storage.

It is important to select and use the most appropriate tool for the task in order to achieve a high-quality finish.



Textiles: Tools and Equipment (Pinning)



Pins

- * Different types and sizes available.
- * Pins have a 'head' at one end and a sharp point at the other.
- * Made of stainless steel or nickle.
- * We use dressmakers' pins, they are fine and approximately 26mm long.



Function

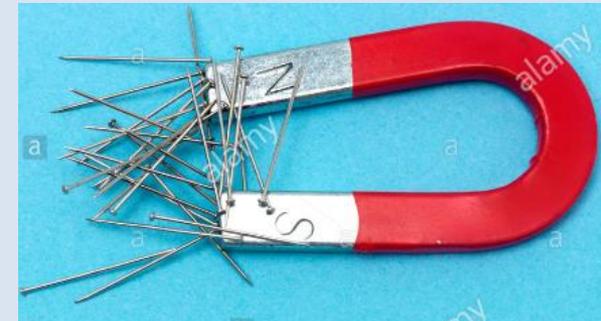
- * To pin paper pattern pieces onto fabric to hold them still whilst cutting out.
- * To hold fabrics together temporarily prior to hand or machine sewing.

Safety

- * Store in a pin cushion, cardboard or plastic container with a lid to keep them clean, sharp and safe. A metal container would cause them to become 'dull' and leave marks in fabric.
- * Be careful not to drop them or leave them lying around on the tables and work units.
- * If dropped, pick them up immediately, if necessary using a magnet.

Storage

- * Plastic container with a lid.
- * Green tray on print table.



Textiles: Tools and Equipment (Pinning)



Pin Cushions



Textiles: Tools and Equipment (Pinning)



Safety Pins

- * Different types and sizes available.
- * Safety pins have a pin in the form of a clasp with a guard covering its point when fastened.
- * Made of stainless steel or nickle.

Function

- * To pin materials together temporarily. Originally designed to fasten babies' nappies.



Safety

- * Store in a pin cushion, cardboard or plastic container with a lid to keep them clean, sharp and safe. A metal container would cause them to become 'dull' and leave marks in fabric.
- * Be careful not to drop them or leave them lying around on the tables or work units.
- * If dropped, pick them up immediately, if necessary using a magnet.

Storage

- * Plastic container with a lid.



Textiles: Tools and Equipment (Sewing)



Needles

- * There are lots of different types of needles available.
- * At school we mostly use an Embroidery needle, size 7.
- * This is approx. 4cm long, has a sharp point and a long, oval eye, making it easy to thread.

Function

- * General hand sewing and embroidery.

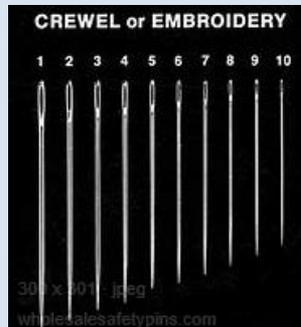
Safety

- * Be careful not to drop them or leave them lying around on the tables or work units.
- * If dropped, pick them up immediately, if necessary using a magnet.

Storage

- * Store in a pin cushion, cardboard or plastic container with a lid to keep them clean, sharp and safe. A metal container would cause them to become 'dull' and leave marks in fabric.
- * At school, each student is given their own 'needle container' to store their needle safely. Their name and Technology class is written on the label.

What would be the issue with having a larger eye in a needle ?

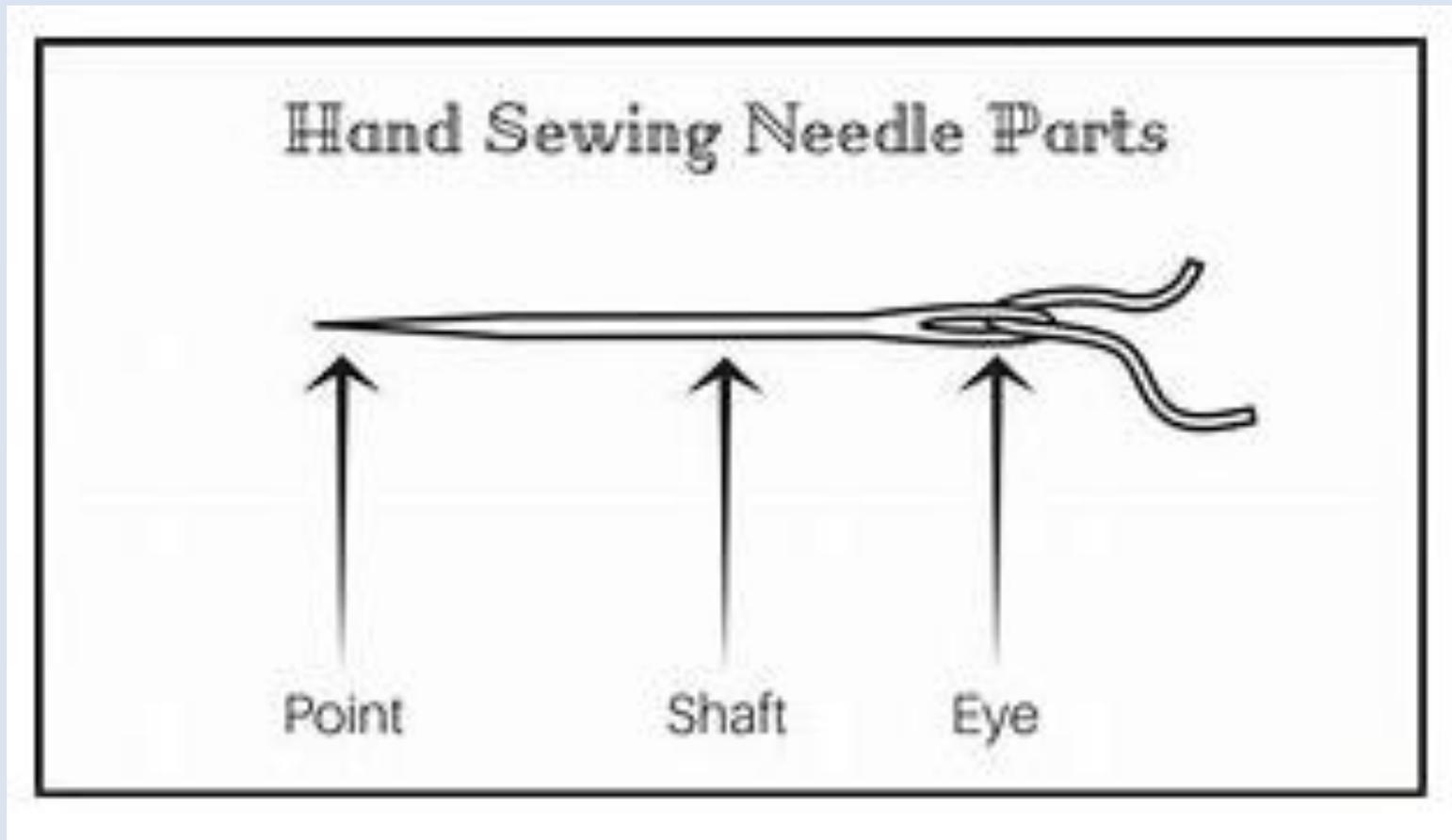


Textiles: Tools and Equipment (Sewing)



Needles

- * There are lots of different types of needles available.
- * At school we mostly use an Embroidery needle, size 7.
- * This is approximately 4cm long, has a sharp point and a long, oval eye, making it easy to thread.



Textiles: Tools and Equipment (Sewing)



Needle Threader

- * A needle threader is a little tool used to make it easier to put thread through the eye of a needle.
- * It combines a short length of fine wire bent into a diamond shape, with one corner held by a piece of tinplate or plastic.
- * They are delicate so need to be used with care.



Function

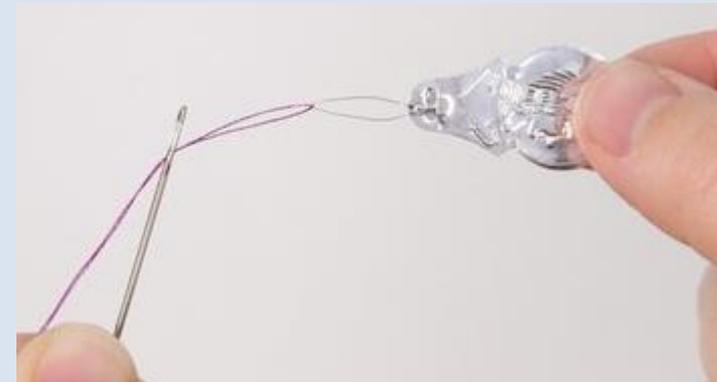
- * To aid threading a needle, particularly those with very tiny eyes such as 'sharps' and 'beading needles'.

Safety

- * Never put in or near mouth or eyes.

Storage

- * Small plastic container with lid.
- * Ask teacher for permission to borrow one.



Fact:

Did you know, 25th July is National Thread the Needle Day?

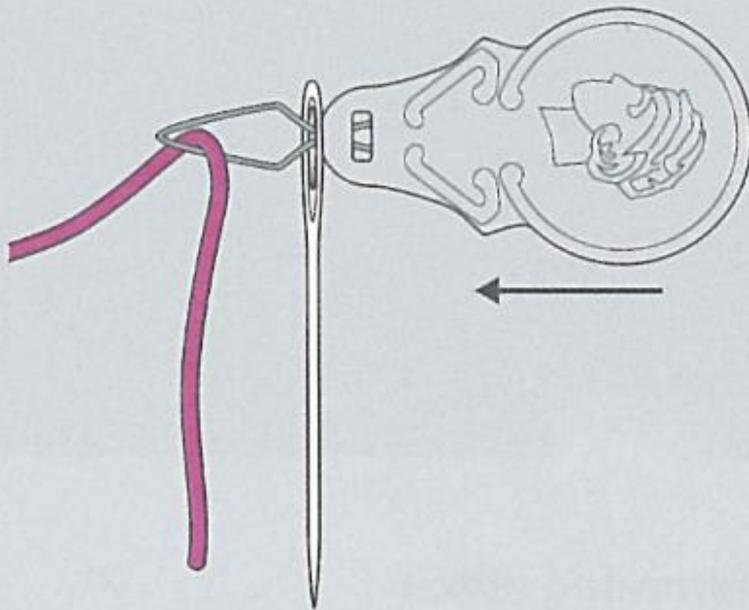


Textiles: Tools and Equipment (Sewing)

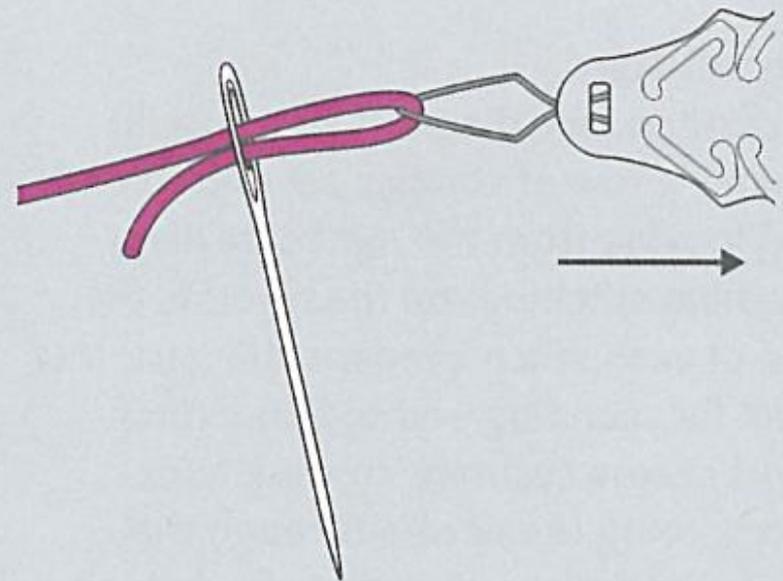


How To Use A Needle Threader

USING A NEEDLE THREADER



Push the wire through the eye of the needle; then insert the thread through the wire.



Pull the wire back out of the needle, drawing the thread through the eye.

Textiles: Tools and Equipment (Needles)



Knitting Needles

* There are two main types:

- 1 A straight rod with a soft point at one or both ends, used in pairs.
- 2 A single curved, flexible rod with two pointed ends.

* Knitting needles come in lots of different sizes and are usually made of steel, wood, bamboo or plastic.

* They are usually sold and used in pairs.

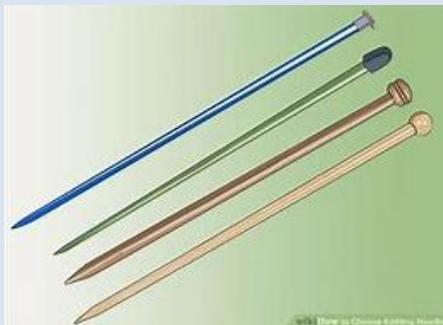
Function

* Used for knitting by hand.

* At school we often use a single, large bamboo knitting needle to help push stuffing or wadding into a textile product. The advantage being the knitting needle can get to small, awkward, hard to reach areas.

Safety: Never poke or prod people with pointed ends.

Storage: Store in pairs in plastic stacker box at back of room.



Textiles: Tools and Equipment



Extreme Knitting!

Knitting can become addictive, be careful not to get too carried away.....



Textiles: Tools and Equipment



Extreme Knitting!

Knitting can become addictive, be careful not to get too carried away.....



Textiles: Tools and Equipment



Extreme Knitting!

Knitting can become addictive, be careful not to get too carried away.....



Textiles: Tools and Equipment



Extreme Knitting!

Knitting can become addictive, be careful not to get too carried away.....



Textiles: Tools and Equipment



Extreme Knitting!

Knitting 'Nightingale Hospital' created during the Coronavirus 'Lockdown' in April 2020.



Textiles: Tools and Equipment



Extreme Knitting!

Knitting 'Nightingale Hospital' created during the Coronavirus 'Lockdown' in April 2020.



Textiles: Tools and Equipment (Cutting)



Quick Unpick (Seam Ripper / Stitch Ripper)

Function

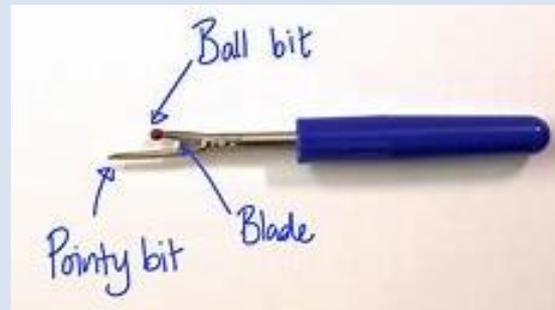
- * A **seam ripper** is a small tool used for cutting and removing stitches, for example tacking stitches, seams or mistakes made when hand- or machine sewing.
- * It can also be used to make the 'slit' in a buttonhole.
- * The sharp point of the tool is inserted into the stitching underneath the thread to be cut. The thread is allowed to slip down and the tool is then lifted upwards, allowing the blade to rip through the thread. Once the thread has cut, the loose ends can be removed and, if necessary the stitches re sewn.

Safety

- * Always keep the top and bottom parts of the quick unpick together, using the top to extend the handle when in use, and replacing it to protect the sharp blade end once finished.
- * Take great care when using so as not to rip a hole in the fabric by mistake.

Storage

- * Store in designated block of wood on bookcase when not in use.



Textiles: Tools and Equipment (Cutting)



Paper Scissors

- * Small, lightweight scissors with plastic handles and blades with rounded ends.
- * Designed to be small enough, comfortable and safe to use by young children.

Function

- * Used to cut paper and thin card.

Safety

- * Always keep blades closed when not in use.
- * Hold scissors correctly when walking around the room.

Storage

- * Store, blade ends down, in designated block of wood on bookcase.



Left Handed Scissors



Textiles: Tools and Equipment (Cutting)



Safety with Scissors

Sorry guys, but at the risk of treating you like little children.....



Textiles: Tools and Equipment (Cutting)



Embroidery Scissors

* These are the smallest scissors. There are lots of different styles, some of them very decorative but they all have small handles and short blades with very sharp pointed ends.

Function

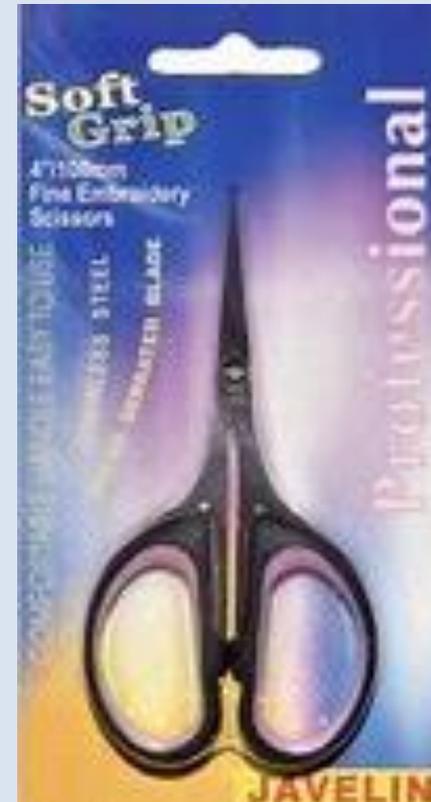
- * Used for cutting threads.
- * Can be used to cut the 'hole' in a button hole.
- * Do not use to cut fabric as it will blunt the blades.

Safety

- * Always keep blades closed when not in use.
- * Hold scissors correctly when walking around the room.

Storage

- * Store, blade ends down, in designated block of wood on bookcase.



Textiles: Tools and Equipment (Cutting)



Trimmers (Trimming Scissors)

- * Larger than embroidery scissors but smaller than cutting out shears.
- * Soft grip plastic handles and long, pointed blades.

Function

- * Good, all purpose scissors.
- * Can be used to cut thread, trim fabric and cut out smaller pieces of fabric.
- * Can be used either way (suitable for right- and left-hand use.).

Safety

- * Always keep blades closed when not in use.
- * Hold scissors correctly when walking around the room.

Storage

- * Store, blade ends down, in designated block of wood on bookcase.



Textiles: Tools and Equipment (Cutting)



Cutting Out Shears (Dressmaking Scissors)

- * Large scissors, soft grip handle, long blades.

Function

- * Can be used to cut thread and small pieces of fabric but really designed to cut larger pieces of fabric.
- * Designed for right-hand use but left-hand versions are available (they do require some practice to use).

Safety

- * Take great care when using these scissors as the blades are long and sharp.
- * Always keep blades closed when not in use.
- * Hold scissors correctly when walking around the room

Storage

- * Store, blade ends down, in designated block of wood on bookcase.





Safety at all times



Textiles: Tools and Equipment (Cutting)



Pinking Shears (please don't call them crocodile scissors!)

- * Similar to cutting out shears - large scissors, long blades – but with serrated (zagged) edges.

Function

- * The serrated blades cut a zigzag edge to prevent fabric from fraying.
- * They should not be used for cutting out as they do not give an accurate edge.
- * Designed for right-hand.
- * They do require some practice to use so test on a spare piece of fabric before the real thing.

Safety

- * Take great care when using these scissors as the blades are long and sharp.
- * Always keep blades closed when not in use.
- * Hold scissors correctly when walking around the room.

Storage

- * Store, blade ends down, in designated block of wood on bookcase.



Textiles: Tools and Equipment (Marking)



- * Sometimes it is necessary to make marks on fabric to indicate the position of embroidery pattern, quilting lines, hemline, buttons, buttonholes, pockets, darts etc.
- * Marks made with a 'normal' pen or pencil would be difficult to remove and would result in the fabric being spoiled.
- * For this reason, there are a number of different pieces of equipment that can be used to make temporary markings on fabric. The markings can then be gently brushed, dabbed with cold water or washed to remove.

Water Erasable Pen (Turquoise)



- * A felt tip type pen. Used to make temporary (turquoise) marks on fabric. Marks are then removed by gently dabbing fabric with cold water. Sometimes it can take a few attempts to remove the marks. Very easy to use.
- * Very precise marks can be made.

Tailors' Chalk Pencil (Blue or White)



- * Tailors' chalk in the form of a short pencil with a plastic flexible plastic 'brush' at the end which can be used to gently brush out the chalk marks.
- * The advantage of the pencil is that it can be sharpened to a point with a pencil sharpener. Marks are not as precise as with the water erasable pen.

Tailors' Chalk Block



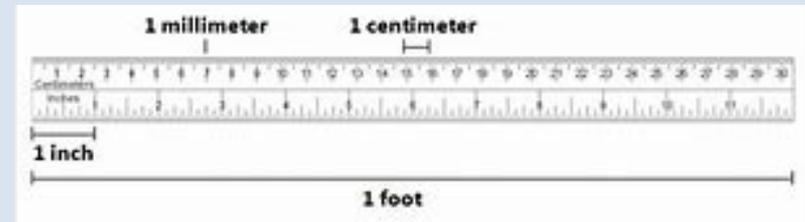
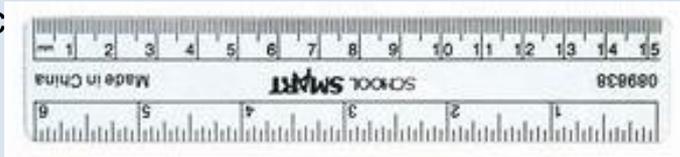
- * The chalk comes in the form of a triangular block, the advantage being the sides can be used to make temporary lines on fabric and the corners temporary dots. Long lasting but not easy to make really accurate marks.

Textiles: Tools and Equipment (Measuring)



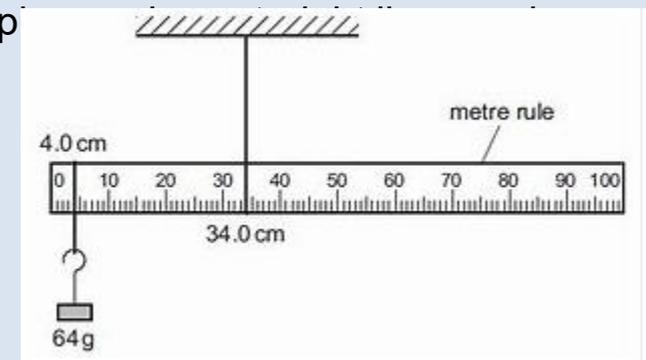
Ruler

- * A straight strip of plastic, wood, metal, or other rigid material.
- * Usually 15cm and 30cm in length.
- * Marked at regular intervals. The markings are often metric: millimetres (mm) and centimetres (cm) on one side and imperial: (inches) on the other.
- * Used to draft paper pattern pieces, draw straight lines and measure distances e.g.. seam allowance



Metre Rule (Metre Stick)

- * A straight strip of plastic or wood.
- * **Exactly** 1 metre length.
- * Typically marked at regular intervals in metric millimetres (mm) and centimetres (cm) on one side and centimeter (cm) on the other.
- * Used to measure a person's height, draft larger paper pattern pieces, or measure the distance from the bottom of the hem to the ground.

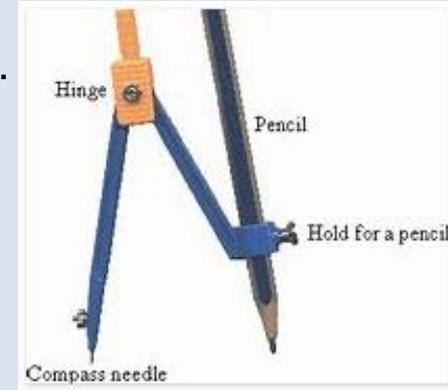


Textiles: Tools and Equipment (Measuring)



Compass

* Used to draw circles and arcs and measuring distances between points.

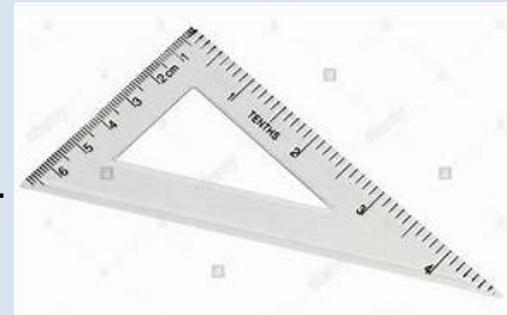


Rule Tool

* Used to draw larger circles than would be possible with a compass.

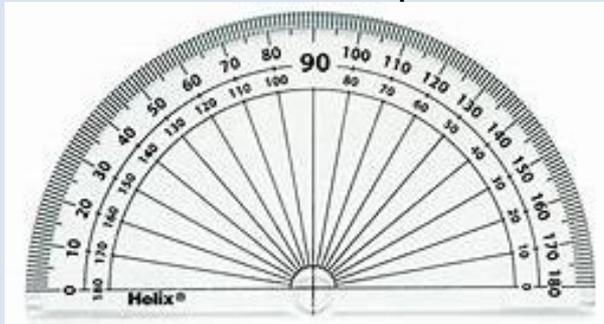
Set Square

* Used to draw corners and measuring angles.



Protractor

* Used to draw full or part circles and for measuring angles.



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Textiles: Tools and Equipment (Measuring)



Tape measure (Measuring Tape)

- * A flexible tape used to measure size or distance.
- * It consists of a ribbon of cloth or plastic measurement markings.
- * The markings are often metric: millimetres (mm) and centimetres (cm) on one side and imperial: (inches) on the other.

Function

- * Used for measuring around curves or corners.
- * Ideal for taking body measurements (chest, waist, hips).



Safety

- * Never wrap around neck (risk of choking).

Storage

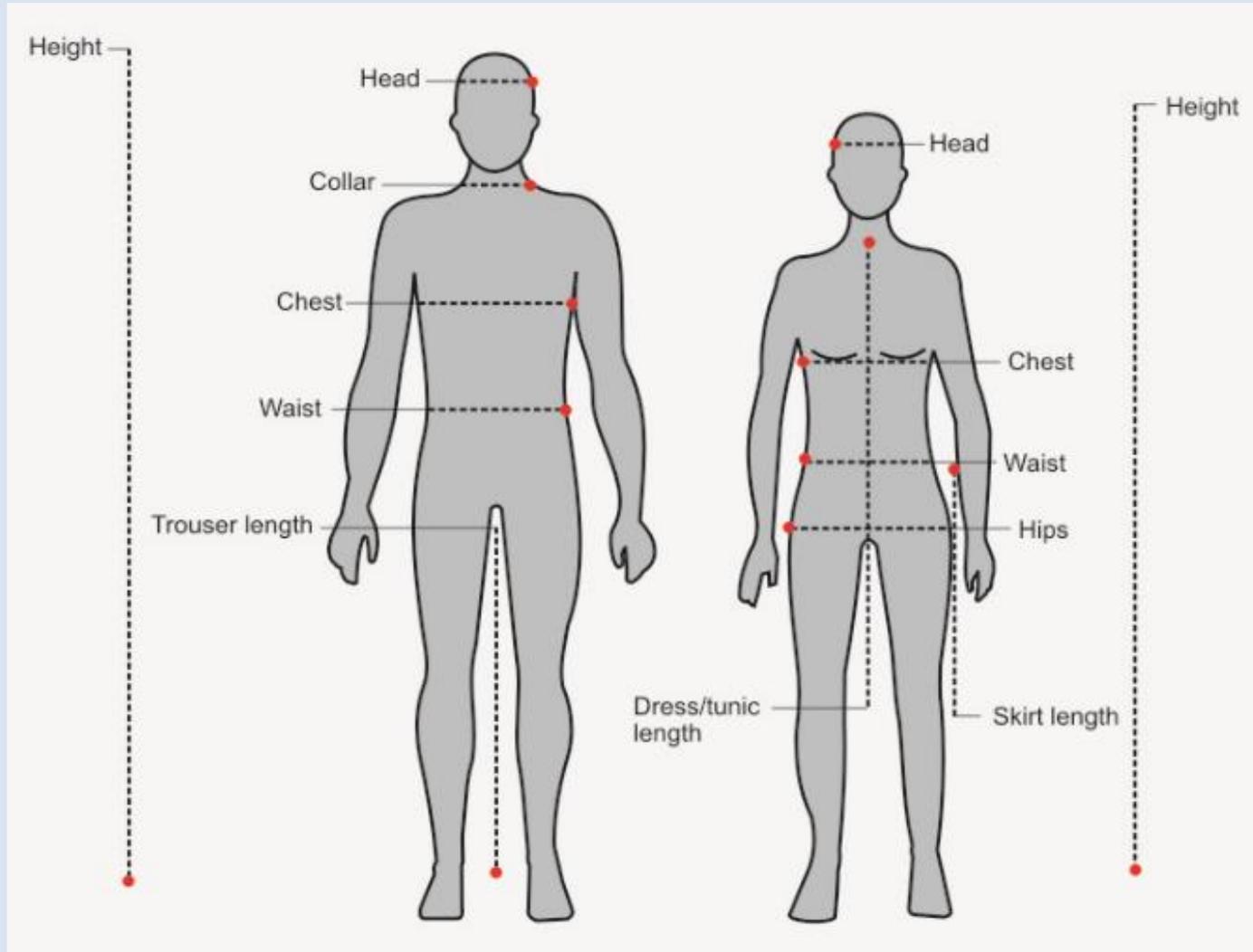
- * Store cupboard. Ask teacher if you need to use one.



Textiles: Tools and Equipment (Measuring)



Where To Take Body Measurements



Textiles: Tools and Equipment (Pressing)



There are two main types of iron:

Dry Iron: electrical iron with a solid, flat base. It uses heat and pressure to press creases out of fabric and set in folds / pleats.



Steam Iron: electrical iron with a reservoir of water which is heated to spray jets of water and to make steam. The steam is released through 'vents' (holes) in the sole plate. A steam iron still uses heat and pressure but is more effective at removing creases.



Function:

- * Removing creases from fabric
- * Pressing edges of pleats and folds in fabric
- * Pressing seams flat
- * Fusing interfacing and Bondaweb to fabric
- * Heat setting (fixing) specialist dyes and fabric pens, paints and crayons to fabric
- * Heat setting computer transfer paper images to fabric
- * Heat setting specialist vinyl to fabric
- * Removing wax from Batik
- * Pressing clothes



Textiles: Tools and Equipment (Pressing)



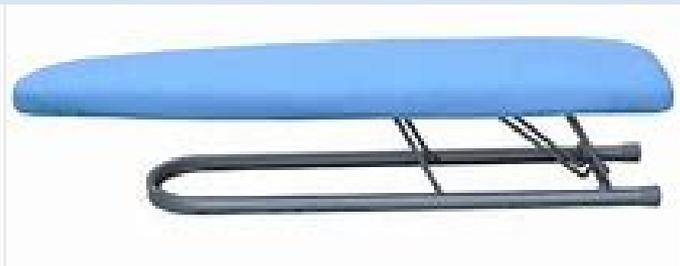
Ironing Board

- * Used to provide a safe and stable surface on which to use the iron.
- * The board is covered with padding and a layer of fabric, usually cotton as this is not damaged by heat.
- * The board is height adjustable.
- * The iron should always be left on the metal stand at one end of the ironing board when not in use.



Sleeve Board

- * A smaller version of an ironing board but not adjustable.
- * Used for pressing sleeves and cylindrical products to avoid creating unnecessary creases.
- * Use in conjunction with an ironing board.



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Textiles: Tools and Equipment (Pressing)



Iron Safety

- * Always use an iron with an ironing board.
- * Check both before use
- * Report any faults to the teacher and do not use until repaired or replaced.
- * Only one person at a time is to use an iron.
- * Focus fully on work at all times.
- * Never touch sole plate of iron, even if it is switched off.
- * When finished, place iron face down on metal stand.
- * Switch off if no-one else is waiting too use it.
- * Always be aware of those around you.

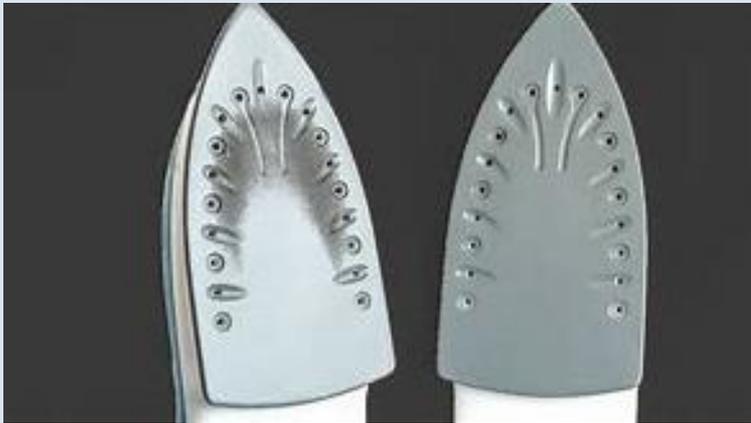


Textiles: Tools and Equipment (Pressing)



Iron Cleaner

- * Over time, a build up of debris can build upon the sole plate of an iron.
- * The best way to remove this is by using a specialist iron cleaner.
- * This softens the debris which can then be wiped off with a clean, white, cotton cloth.



Textiles: Tools and Equipment (Pressing)



Extreme Ironing

Don't try this at home!



Textiles: Tools and Equipment (Pressing)



Extreme Ironing

Don't try this yourself!



Textiles: Tools and Equipment (Sewing)



Sewing Machine

- * This enables the stitching to be done much more quickly than by hand and can give a more professional finish.
- * It is very important to pay attention to safety and it can take practice to use accurately.



Foot Control

- * This is connected to the socket on the right hand side of the sewing machine. The foot control 'pedal' sits on the floor and is operated by foot.
- * The foot control acts as an 'accelerator'. The further the control is depressed, the faster the machine sews.



Electrical Lead

- * This plugs into the socket on the right hand side of the sewing machine and is then connected to the electric socket to power the machine.



Bobbin

- * Sewing machines have two sets of threads, one at the top (spool / reel of thread) and one at the bottom (bobbin).
- * A bobbin is a small, transparent, plastic cylinder on which thread is wound. The bobbin is inserted in the bobbin holder near the needle on the sewing machine.

Textiles: Tools and Equipment (Sewing)



Janome DC3050 Computerized Sewing Machine



Textiles: Tools and Equipment (Sewing)



Rules For using The Sewing Machine Safely.

- * Before you use a machine, ensure you have scissors, reel of thread, matching colour thread on bobbin and fabric.
- * Listen carefully to and follow instructions from teacher at all times.
- * Focus fully on your work at all times – no chatting, no looking around.
- * Only one person is to operate a sewing machine at a time.
- * Long hair should be tied up. Dangly jewellery should not be worn. No drinks.
- * Report any faults to teacher. Never use if you see or sense any faults.
- * Do not switch machine on until you are ready to start sewing.
- * Sewing machine should be switched off when threading it up, unthreading it, sorting out problems or when you have finished using it.
- * Keep fingers away from the needle except when threading / unthreading it.
- * Sew at a speed where you are in full control; never go beyond half way on the speed slider control.
- * Try to remove pins just before you get to them, or ensure pins are in a horizontal position with the sharp end pointing to the right.



Textiles: Tools and Equipment (Sewing)



Overlocker

- * An overlocker is a specialist electrical machine with a sharp blade and 3 or 4 cones of thread but no bobbin.
- * It has a sharp blade to trim the fabric edge before it is enclosed.
- * An overlocker trims, sews and neatens at the same time to prevent the edges of fabric from fraying.
- * It gives a very professional finish.
- * It encloses the edge of the fabric or fabrics in a thread casing.
- * It is particularly good for use with stretchy fabrics.
- * Use for making side seams on swimwear, T shirts, hoodies, underwear, jumpers, leisure and sportswear.
- * It can also be used to finish a single edge of fabric for example table cloth, dishcloth.



Safety

- * As for sewing machine.
- * You will be given training in its use.



Textiles: Tools and Equipment



Technological Developments in Sewing Machines



Textiles: Tools and Equipment



Pompom Makers

- * Pompoms can be made in lots of different ways and are ideal for using up scraps of wool.
- * Traditionally pompoms were made using wool and two discs of cardboard with a hole in the centre (like a polo mint!). These were cheap and easy to make but it took quite a while to make a decent pompom.
- * Nowadays there are lots of different commercially pompom makers that make the process much quicker, easier and using less wool.
- * The pompom makers usually made of plastic are available in different sizes to cater for different size pompoms.

Function

- * Wool is wound around each of the two sides of the plastic pompom maker before being cut and secured with a knot

Storage

- * Ask teacher if you need to borrow one.

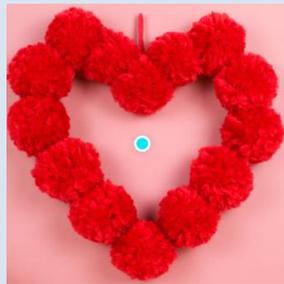


Textiles: Tools and Equipment



Pompoms

Traditionally pompoms are spherical but they can be cut and trimmed into imaginative shapes.



Textiles: Tools and Equipment (Drawing / Painting)



Stencils

- * A thin sheet of card, plastic, or metal with a shape, pattern or letters cut out of it.
- * Huge variety of commercially made stencils available (some for paper / card, some for fabric).
- * A stencil can easily be made from paper, thin card or acetate sheet.
- * The stencil is placed on top of paper, card or fabric and pen, ensuring the cut design is correctly positioned.
- * Pencil, pen, fabric paint or ink is then applied through the 'holes' in the stencil.
- * The stencil is then removed to reveal the shape, pattern or letter.
- * Easy to use but care should be taken not to apply too much ink or paint. A thin layer is best.

