

Summary

When we think about the clothes we wear, we often think about their colour or if they are suitable for the weather or climate. We don't tend to think about how they are made.

Some fabrics are made from weaving threads together and this is usually done on a loom. Looms come in many different shapes are sizes. Threads that come down through the loom are called the 'warp' and threads that run from side to side across the loom are called the 'weft'. These weft threads travel under and over each warp thread, right across the cloth. Fabrics are mainly woven from:

- Animal hair, (like wool, alpaca or cashmere. Obtained by shearing or cutting the animals fleece).
- Plants, (such as cotton, linen and hemp).
- Silk from the cocoon of the silk moth.
- Synthetics (made from crude oils).

These fibres are then spun to make the thread or yarn. Weaving these threads together has been around for over 5000 years.

Before the 19th Century, cloth in Britain was woven by hand loom weavers working in small cottages in the countryside or small villages. Weavers and their families may have grown flax, spun it by hand and then woven it into linen cloth. Alternatively they may have had sheep or access to fleeces and spun and woven woollen cloth. Wool made warm, durable fabrics that were often made up into jackets, suiting and coats.

This was a rural craft skill that enabled weavers to earn an income and support their families. During the 19th Century, the introduction of the power loom (driven by water and then steam) meant that fabrics could be

woven much faster and in larger quantities. Large mills were built in the cities (such as in Manchester), and many rural hand loom weavers lost their income. Some had to move away from the countryside to the cities to find work.

Today there are still some woven textile designers living and working in the British countryside. I weave on a floor loom and create artistic patterns and designs using hand skills that cannot be replicated by machine in the manufacturing process. This makes each of my products unique.

It is also recognised today that we have a responsibility to protect the countryside and our environment and I feel that it is important to weave with sustainable fibres like wool and alpaca. A sheep grows a new fleece each year, which makes wool a renewable fibre source. It is also biodegradable, taking far less time to decompose than synthetic fibres.

Today's fabric and clothes designers are thinking creatively to produce fabrics made from recycled materials, such as re-using old clothes and cutting them into very fine strips that can be re-woven. It is important to protect our countryside from the development of more land fill sites. Other advances have led to clothes being made from real milk. Some people are now turning sour milk into environmentally friendly yarn. The liquid from the milk is separated from the more solid proteins and these are then ground into yarns.

The skill of the weaver, isn't just about design any more, it's about rising to the challenge of the 21st Century and making environmentally friendly fabrics and clothes from sustainable resources.

Case Study

My name is Julia Complin and I am a weaver living in East Fife, Scotland.

Born and brought up in England, my mother taught me to sew and make my own clothes. A very useful skill when the shops didn't stock the dress designs that were floating around in my head. As I grew older the fabrics themselves began to interest me more. I became intrigued by the different textures and woven structures. I used to ask myself 'how did they get that pattern into a woven cloth?

My first table loom was bought second hand and it rattled all the way home in the back of the car. After some TLC the loom was soon working and I wanted to learn more. I would have loved to have gone to university to study woven textile design, but I already had a geology degree with no hope of being able to afford going back into full time education again. Instead I enrolled and completed the Bradford and Ilkley Community College Diploma in Handloom Weaving. This course was home based, attending weekend and summer schools at the college and fitted in around a full time job.

I wove many different fabrics and joined the local Guild of Weavers, Spinners and Dyers. After a while it dawned on me that designing woven fabrics was what I really wanted to do. To get more experience of the industry I volunteered to work for a textile design studio in New York for 3 months. With that wealth of knowledge I went on to design woven fabrics for the fashion, home furnishing and car markets, exhibiting at trade fairs in Europe and the USA. Every design was still created by hand on my floor loom.

After the arrival of my son, I took time out

from weaving and became fascinated by child development. I and my family moved to Scotland in 2003, where we now live in a small village. Watching my young son explore and discover the world around him, I was inspired to complete a course in early year's education. I have now developed a range of weaving activities that link into the Scottish Curriculum for Excellence and regularly go into primary schools and run workshops in the community. I feel passionately about passing on my skills and love to engage with new audiences.

I am still weaving and now concentrate on producing a complete product rather than selling designs to mills and manufactures. I create one off scarves and wraps using wool and alpaca sourced only within the UK. These are also hand finished and some incorporate hand spun yarn or handmade felt. These are hand crafted in a world of largely mass produced clothing. Each scarf or wrap is completely unique. I am also beginning to explore weaving with linen again and hope to develop a range of textiles for the home.

You can view my work at: www.juliacomplin.com



Activity Idea

This activity uses mostly recycled resources.

Links to the National Curriculum.

This weaving activity:

- is a fun and expressive experience of art allowing children to engage with different materials and techniques.
- gives children an understanding of the craft of the weaver and its historical context within the UK.
- expands on children's knowledge on how fabrics are made for clothes and what they are made of. Gives children an understanding of different fibres and where they come from.
- also uses recycled materials with links to being a responsible citizen.
- helps to develop children's co-ordination and problem solving skills.

YOU WILL NEED

Cardboard from old boxes, (from local supermarkets or children could bring them into school).

Cotton thread or yarn. (Could be string).

Old rags, clothes, household fabrics to be cut into strips. (All could be supplied by the children).

Scissors

Sellotape or parcel tape

Pencil and ruler.

TIME TO MAKE

Make the cardboard loom first.

Warping the loom and weaving takes 1 to 2 hours depending on child's age.

SUGGESTED SUPPLIERS

www.georgeweil.com – for cotton warp thread (undyed) NM 12/6

Or local hard-wear store for string.

USEFUL WEBSITES

www.wikipedia.org gives a good history of weaving.

www.nationalgeographic.com – clothes made from recycled items.

www.reuters.com - clothes made from milk.

Pre-Class Preparation Preparing the cardboard loom and strips of cut fabric rags

This takes additional time and needs to be done in advance of the activity.

STEP 1

Decide which piece of clothing you wish to weave and draw a simple outline on the piece of strong cardboard and then cut it out. The skirt measures approximately 15cm tall by 20cm at its widest point, the trousers measure 18cm tall by 14cm wide and the 'T' shirt is approximately 18cm tall by 21cm wide from outer sleeve to outer sleeve. The looms can be made to any size but generally the larger the loom, the longer it takes to weave.



Pre-Class Preparation Preparing the cardboard loom and strips of cut fabric rags

STEP 2

With a ruler and pencil, measure out and mark small notches along the top and bottom on the loom. For younger children I would mark these 2cm apart, for older children 1cm apart. Make sure the notches line up straight from the bottom to the top of the loom. Cut along the straight lines, 3/4 to 1cm deep to form the notches

To prepare the cut fabric rag strips, choose lighter weight fabrics that are easier to cut or tear and cut these into 3 - 4 cm wide strips. These will become the weft which weaves across the loom from left to right and back again. These strips can be prepared before the class activity or by older children during the lesson.







STEP 1

Now you are ready to put the warp thread onto your loom. With the back of the loom facing you, stick (with strong tape) the end of your cotton thread to the bottom right hand corner and then pass the thread through the first notch and pull it through to the front of the loom.

Pulling the thread fairly tight take the warp thread up through the top notch and then around the back and bring it through the second notch before coming down the front of the loom again. (Do not go down the full length of the back. This saves money by using less thread!),



















STEP 2

Repeat this process at the bottom of the loom and carry on until all the notches are filled. Make sure the warp threads are fairly tight and evenly tensioned. Cut and stick the end of the thread down at the back of the loom.

















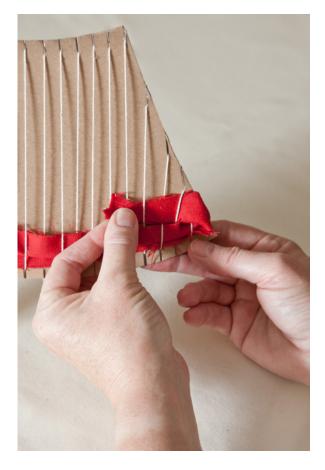


STEP 3

Now your loom is ready to weave on. With your first strip, weave the weft rag through the warp threads going under and over each warp.

Fold the tail end of the weft rag over the top of the first row, passing over 2 or 3 warp threads



















STEP 4

The weight of the rows above will keep this tail in place. Continue weaving until you run out of weft rag or want to change colour. Make sure your weft rag finishes in the middle of the loom and then lay the second weft rag overlapping the first colour by 2 or 3 warp threads before carrying on weaving in the same direction.













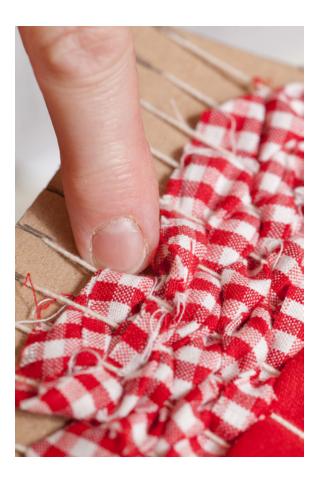






STEP 5

After weaving for a few rows, push the weaving downwards to make it tighter and more compact. Continue weaving to the top of the loom. If it is not woven tightly enough your work will fall apart. Weave the last tail of weft rag across the top to the middle of the loom and tuck it down behind the weaving, (or if you feel your weaving is not tight enough, tie it in a knot around a warp thread).











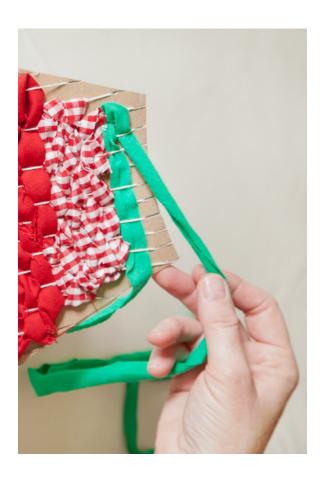






STEP 6

To add a bow for a belt, just weave another weft rag of another colour for two rows and then tie a bow at the side. For the pocket on the trousers, cut up narrow strips of shiny paper and just thread them through 4 or 5 warp threads and over the top of your weaving.



















STEP 7

Now you have finished weaving your piece of clothing. Do not cut it off the loom, just hang it on the wall and admire it!

















