



Fantastic Fibres and Wonderful Wool

Science

Years 5 & 6, SMNS, Term 2, 2019.





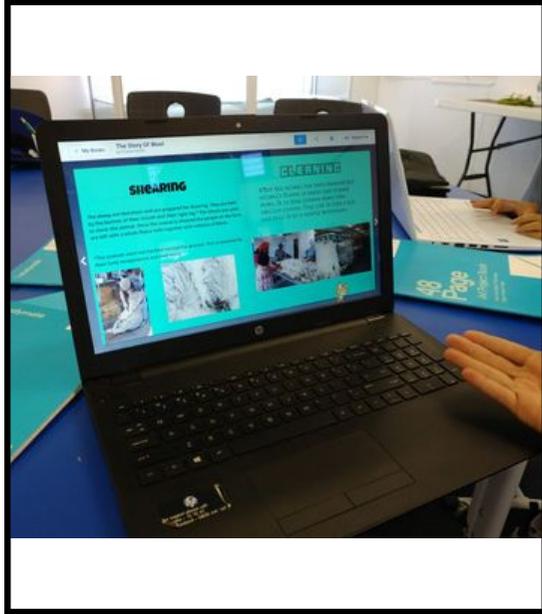
In the Science Lab over 6 weeks of Term 2, the children in Years 5 and 6 at St Mary's have been studying: the properties of fibres; how wool is processed; how sustainability issues arise for farmers, textile manufacturers and consumers. This was part of their learning about the Living World, the syllabus strand for Semester 1, 2019.

Along the way, important questions emerge: how do we look after the land and still run productive farms? How can factories be run profitably and workers be paid fairly for their labour? How can consumer choices take into account more than just price and quality but also environmental considerations? These are not just difficult questions for children to understand; they are ongoing problems we all must face.

We are grateful to Marist College for the use of its laboratories, and to Dace and Jo of the Hand Weavers and Spinners Guild for showing us how to spin wool.

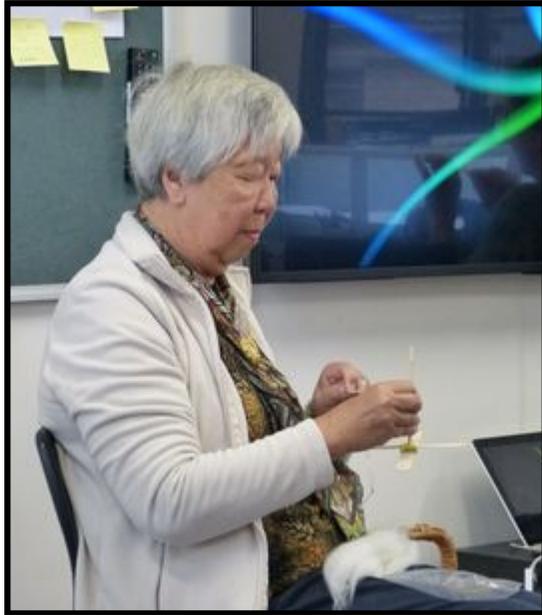
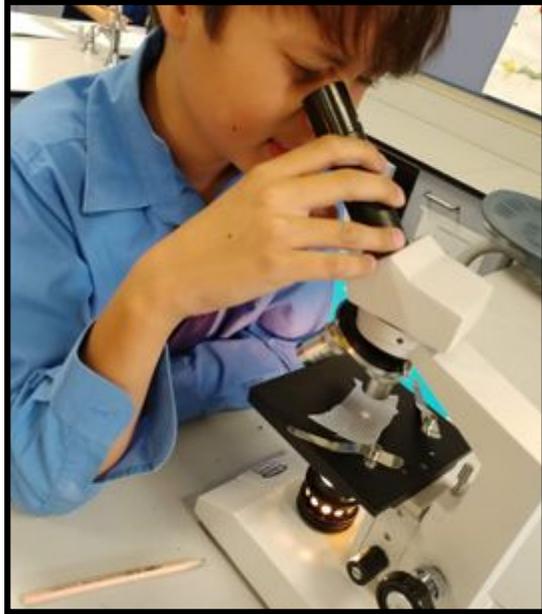
Over a few sessions, the children experimented with Book Creator, individually or in pairs, to present the Story of Wool. Around 70 books and hundreds of pages were created by the 90 students which have been edited down to this almost manageable length (apologies if not every student's work appears). Photos of the students engaged in related activities are also included. It's a record of sorts -- knotted and raw as the fleece. I hope you enjoy it!

Markus Powling
www.handsupnow.com
June, 2019.



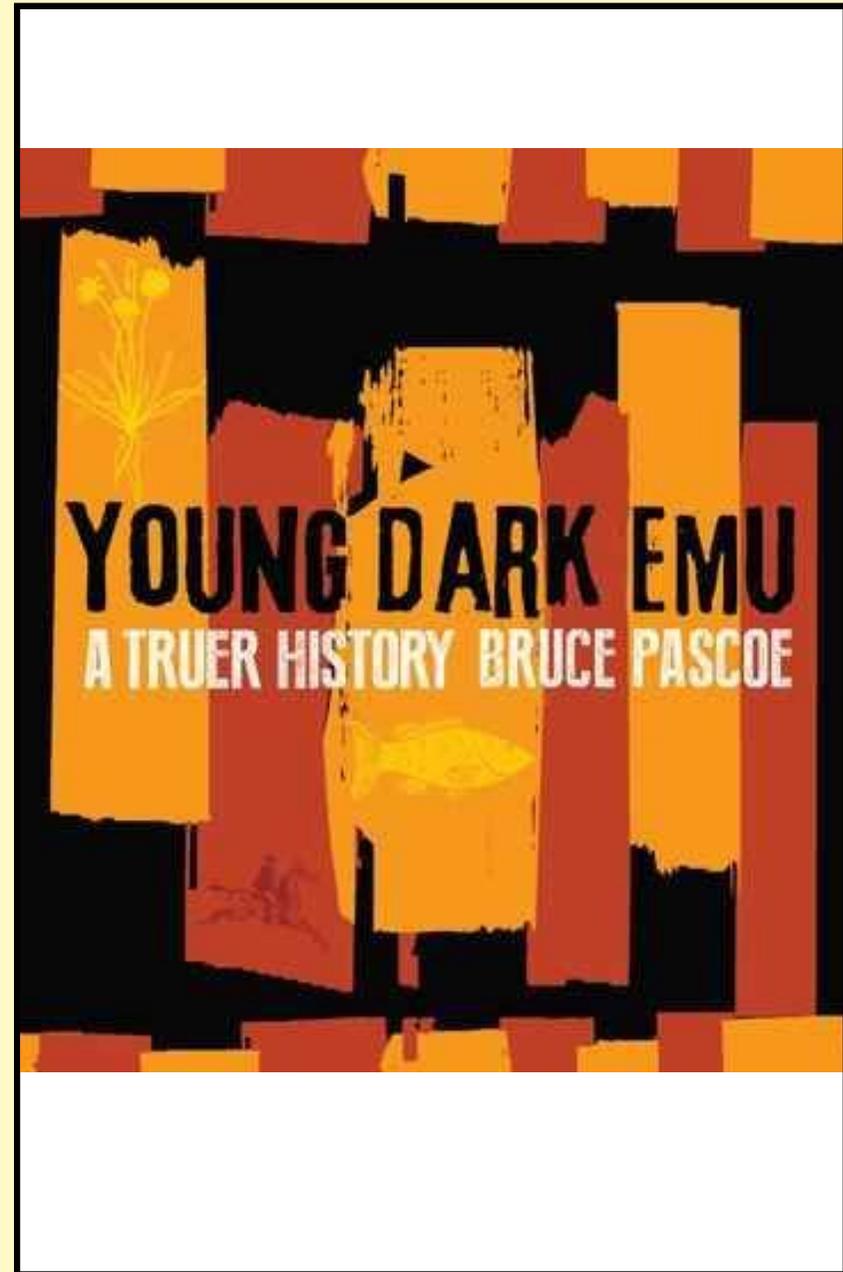
"The pattern of the year followed the seasons. If the rains came, they fell in the winter. Lambing was planned for the spring, when the grass was at its best, and the last winter showers might have left some tender growth for young lambs to nibble before their teeth developed. If seasons cooperated, the lambs were well grown, able to walk great distances for their food and water by the time the summer set in. In February, before the summer reached its peak, the lambs were shorn, and the faces and withers of the grown sheep were trimmed so that flies could not infest the places where sweat and urine soiled their fleeces. In June, in midwinter, when it was less harmful to move the animals over distances and hold them penned in yards, the grown sheep were brought to a shearing shed and shorn."

The Road from Coorain, An Australian Memoir, Jill Ker Conway.



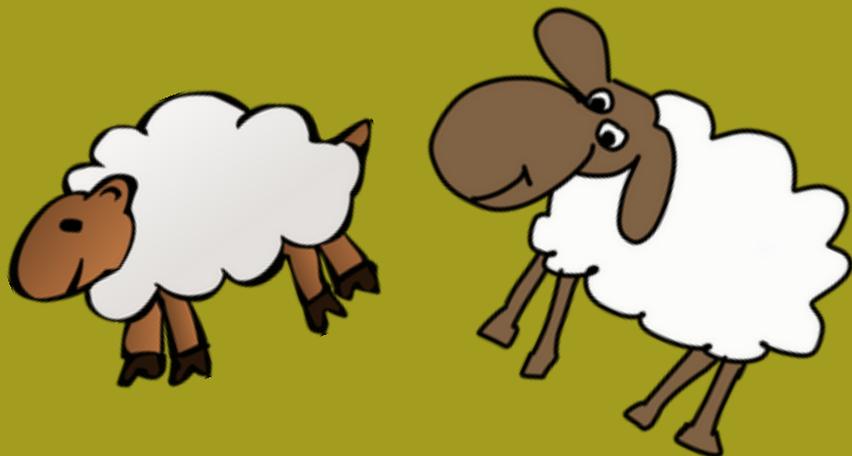
"Farmers noticed the alarming drop in productivity over a mere handful of years as sheep ate out the croplands and compacted the light soils. 'In Australia thousands of years of grass and soil changed in a few years. The spongy soil grew hard, the run-off accelerated and different grasses dominated.'"

Dark Emu, Bruce Pascoe (2018)



Wool And Sheep

Amazingly By William



Sheep Shearing

First the sheep gets sheared. You might think it is cruel but they don't get harmed in the making. It is also good for the sheep. The sheep can get too hot if not sheared. Sheep do not like the process of being shorn but after that, they feel relieved that the wool is off. It is cruel to not shear the sheep because if it is not sheared, the wool could get too heavy and the sheep can fall. If a sheep falls on it's back, that would leave it vulnerable to predators.

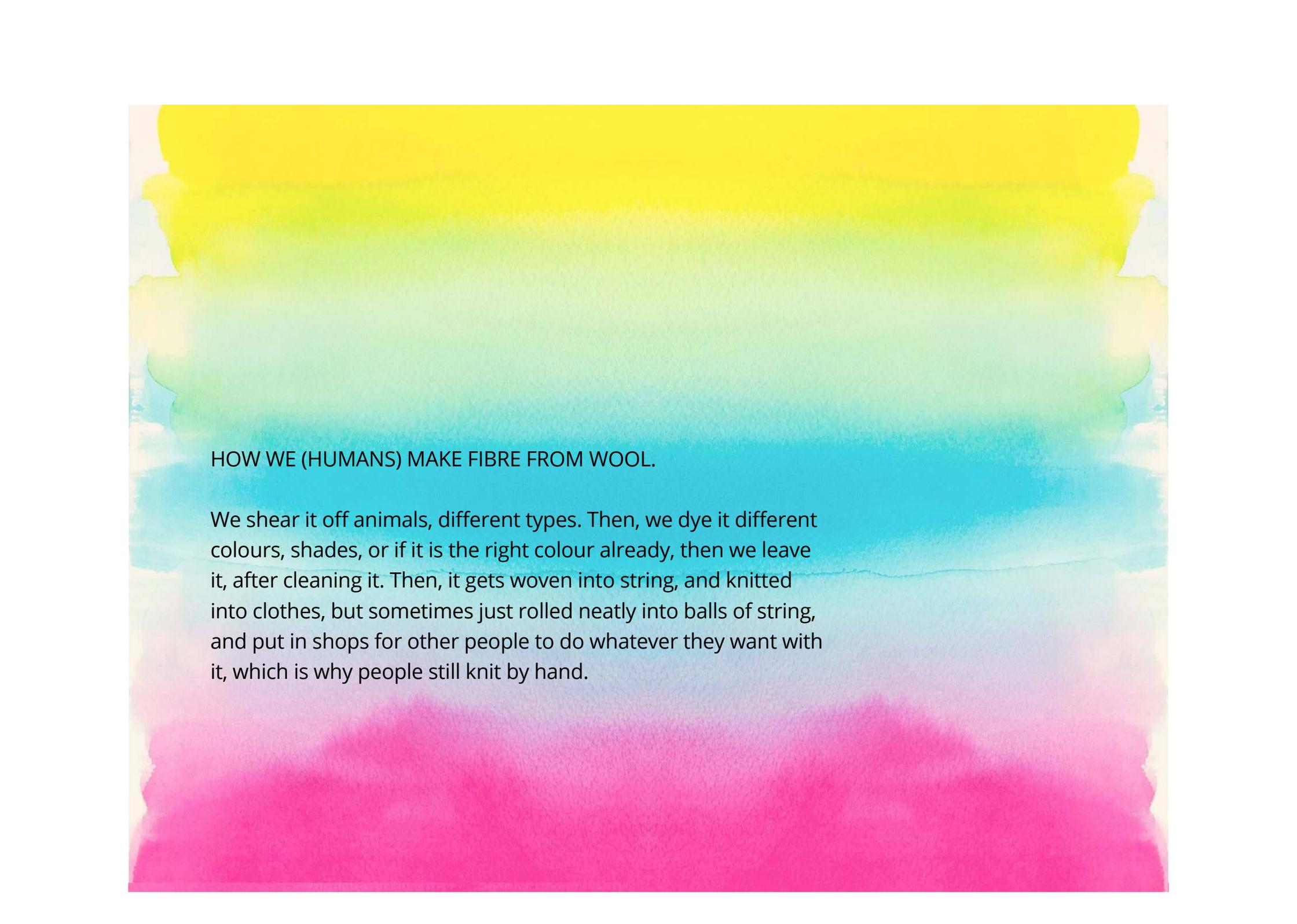
Don't worry, I do not like being shorn but It doesn't hurt me.



Washing the wool

The wool gets cleaned up to get the smell off it. Detergent is used to clean the wool and so is hot water because it is easier to get all the grease out. First you have to skirt it. This means to remove the damaged wool. The purpose of washing wool is so it can be cleaned for the next step.





HOW WE (HUMANS) MAKE FIBRE FROM WOOL.

We shear it off animals, different types. Then, we dye it different colours, shades, or if it is the right colour already, then we leave it, after cleaning it. Then, it gets woven into string, and knitted into clothes, but sometimes just rolled neatly into balls of string, and put in shops for other people to do whatever they want with it, which is why people still knit by hand.



**THE STORY OF
WOOL**

Cleaning

Before actually cleaning the wool you first have to cut all the damaged pieces of wool off the fleece. Dirty wool is very unhygienic for human beings. You always have to wear a mask whilst cleaning or you could catch a disease. You put chemicals on the wool and then they put it in a machine.



Packing

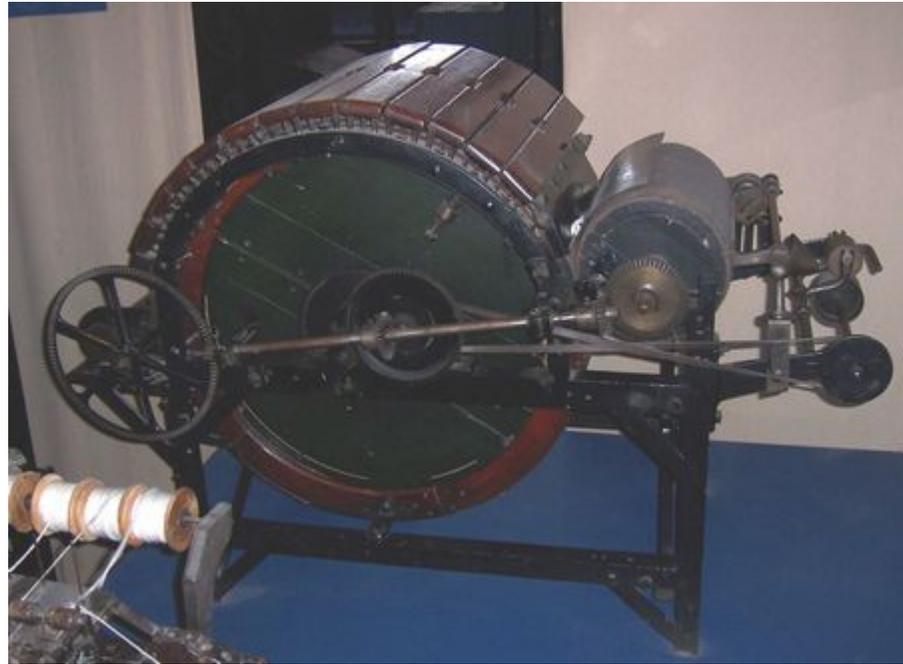
After you Shear the Sheep you Pack the Wool.

You gather it into a big pile and then you put it through a certain Machine that shapes it into a big Square. You also have to make sure that there are no bugs in it.



Carding

We use carding to straighten the wool and to make sure there are no tangles or knots in the wool before we dye it because we don't want the wool to be really knotty otherwise you won't be able spin it.
(See Spinning at Page 8)





Carding

Carding wool is the same as combing wool. Carding makes wool straight so that there aren't any knots when you're spinning it. Carding is done on a scale with machine driven drums. The carding machine combs wool by taking it back and forth from one of the drums to another.



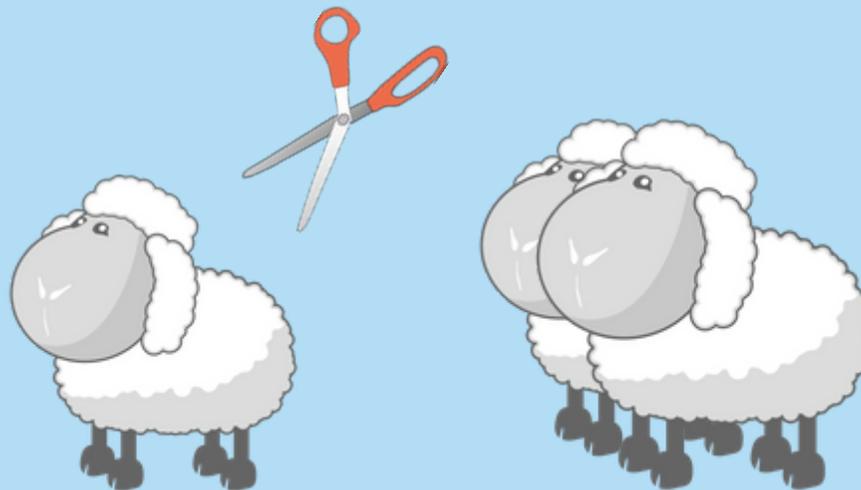
Spinning

Spinning wool turns it into thin strands called yarn. There is a frame called a spool that spins the wool and it can spin up to 90 threads at once! In the olden days people had a spindle and they twisted the wool and eventually it turned into a ball of yarn. Spinning wool turns the wool into a ball of yarn so people can knit with it.



THE STORY OF WOOL

By Charlie and Phil



Dyeing

The broken up sheep wool is plunged and left to soak in the dye. After a while it is taken out and left to dry. Wool can be dyed any colour to suit the person's preference. Different types of wool such as Merino and Alpaca react differently to the type of dye and the way it is dyed due to how fragile or sturdy it is.



Carding

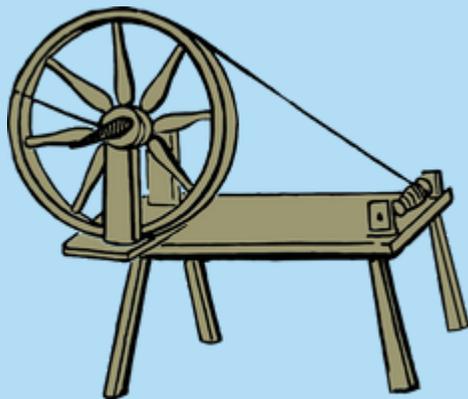
Carding is a process using machinery that untangles, cleans and mixes fibres to produce stronger fibres and yarn. Preparing wool fibres for spinning and carding is a step called teasing.



Spinning

Spinning is the stage where the fibres are made into yarn. The fibres are spun into each other to create stronger, neater strands of wool. These strands will then be made into the balls of yarn that are used for knitting.

Most spinning is done with machines but some fibres can be spun by hand. If you were to spin the wool by hand it would be as a hobby. Recently, Stage 3 were lucky enough to spin some yarn with two professionals, Dace and Jo.



CHAPTER 1: SHEAR IT!

BEFORE YOU CAN TURN WOOL INTO THREAD YOU HAVE TO SHEAR IT OFF THE SHEEP. IN SOME FARMS PEOPLE LEARN HOW TO SHEAR SHEEP WHEN THEY ARE YOUNG.

THERE ARE DIFFERENT TYPES OF SHEARS FOR EXAMPLE: THE ALLIGATOR SHEARS, THE BENCH SHEARS AND THE POWER SHEARS ARE ONLY THREE OF THE MANY TYPES OF SHEARING SHEARS AROUND.

**DID YOU KNOW :
THE GUY ON THE \$50 NOTE IS DAVID
UNAIPON AND HE IS THE ONE WHO
INVENTED THE FIRST ELECTRIC BLADE
SHEARING SHEARS.**



CHAPTER 2: CLEAN IT!

AFTER YOU SHEAR THE WOOL OFF THE SHEEP YOU HAVE TO CLEAN IT. IF YOU DON'T CLEAN IT THE SHEEP WILL STILL HAVE ALL ITS LANOLIN AND MAYBE ALL THE OTHER STEPS WON'T GO WELL IF YOU DON'T DO IT PROPERLY. FIRSTLY YOU HAVE TO PUT IT IN WATER THEN CLEAN IT WITH DETERGENT. IT'S REALLY SIMPLE!



The story of wool

By: Marissa Ristweij and Olivia Mann







AMAZING!

THE STORY OF WOOL

WOW!

By Lotte



SHEARING

The farmer gets the shears ready. He picks out a woolly sheep and brings it to the shearing room. The farmer would get his shears and start shearing till the sheep is naked (has no wool). He is trying not to scratch the sheep but sometimes he accidentally cuts the sheep with the shear. He would shear all his sheep, then send the wool to a factory.



Wool's story.



By Madison & Isabel

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- (2) Washing**
- (3) Carding**
- (4) Dyeing**
- (5) Spinning**
- (6) Weaving**
- (7) Final Inspection**
- (8) Sustainability**



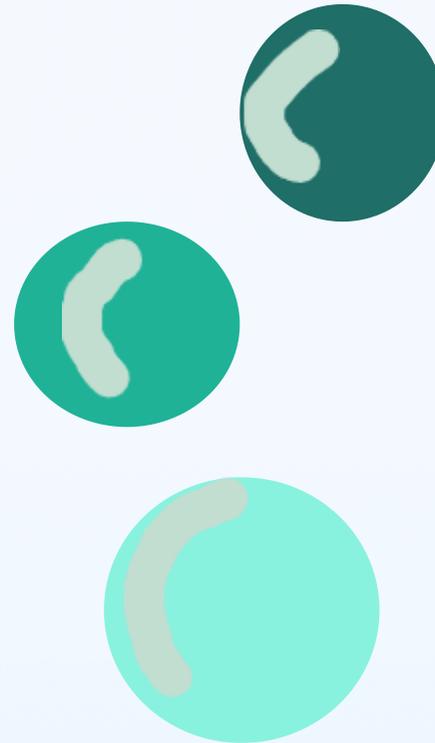


Shearing

The shearing of wool is a process where: the shearer cuts the wool off the sheep. You can use shears which are like razors scissors or you can use electric shears. You have to be careful when shearing the sheep because you might cut the sheep (you'll regret it!).



Washing



The purpose of washing the wool is to: take all the lanolin (the stuff that makes wool greasy) off the wool to make it non-greasy.

Carding

Carding is combing the wool so that the fibres aren't everywhere and it's not tangled when it's spun into yarn/wool. If you don't card the wool then the wool will be very hard to spin into yarn/wool.



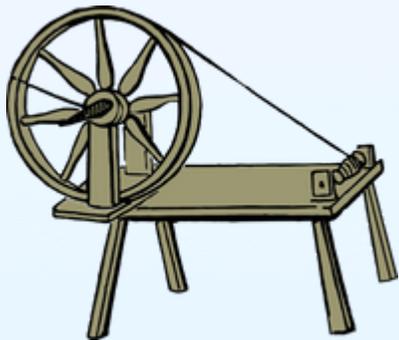
Dyeing

The dyeing of the wool is where the wool gets its colour, because not many people want white (some people like it), black (same) or brown-black coloured wool, so they dye the wool to make it in bright colourful colours.



Spinning

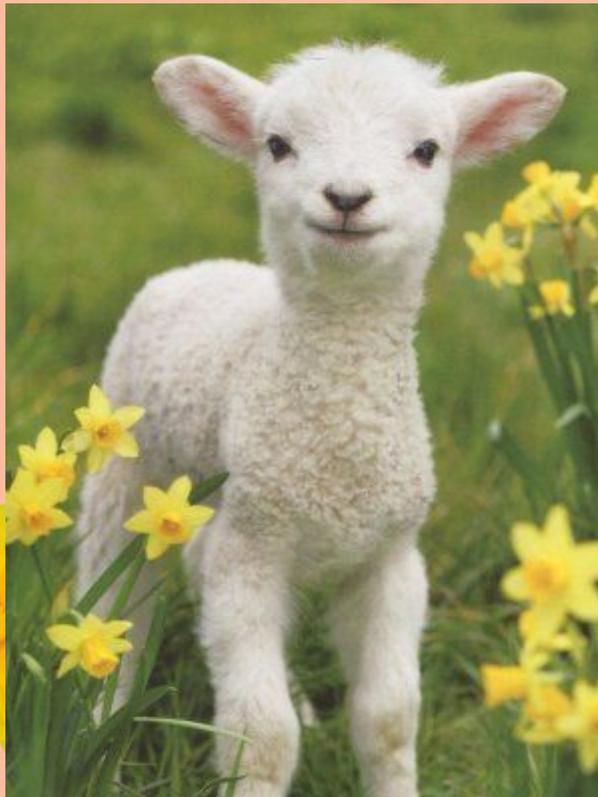
You spin the wool to make it into yarn/wool, these days you use a spinning machine. Back then they would use a spindle, it looks like: a wooden stick with a wooden circle on the stick and on the circle in the middle there's a metal hook.



Weaving

Weaving the wool is where the wool becomes fabric. To weave yarn/wool the two sets of threads are woven together at right angles to create fabric. There are different types of weave like: plain weave, oxford, twill, herringbone pattern, dobby, satin and velvet.





The Story Of Wool

By Brooke K & Aine N

Contents

1. Shearing
2. Cleaning
3. Combing/Carding
4. Spinning
5. Dying
6. Weaving/Knitting
7. Clothes
8. Sustainability



Shearing

The first step of wool is shearing. Once or twice a year the sheep get sheared in a shearing shed. But if the shearers are not careful they can harm/hurt them.



Cleaning

Secondly, the farmers clean the wool because sheep have an oil on their wool called lanolin to make them not get wet when it rains. Also, if they don't clean the wool you will find that it is harder to dye the wool.



Combing/Carding

After the wool is cleaned people get the wool and comb it to making it easier to spin into yarn because if you don't then the wool will be rough and harder to make into yarn.



Spinning

After the wool is combed it is ready to spin, in a spindle or a new modern way using a machine that is faster and easier than spinning by hand. Also they can spin more than one wool.

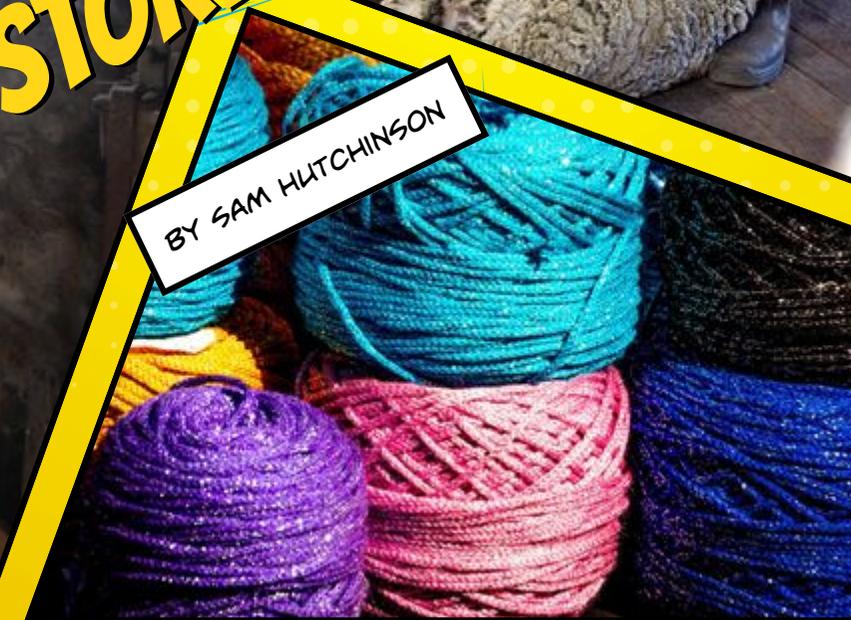
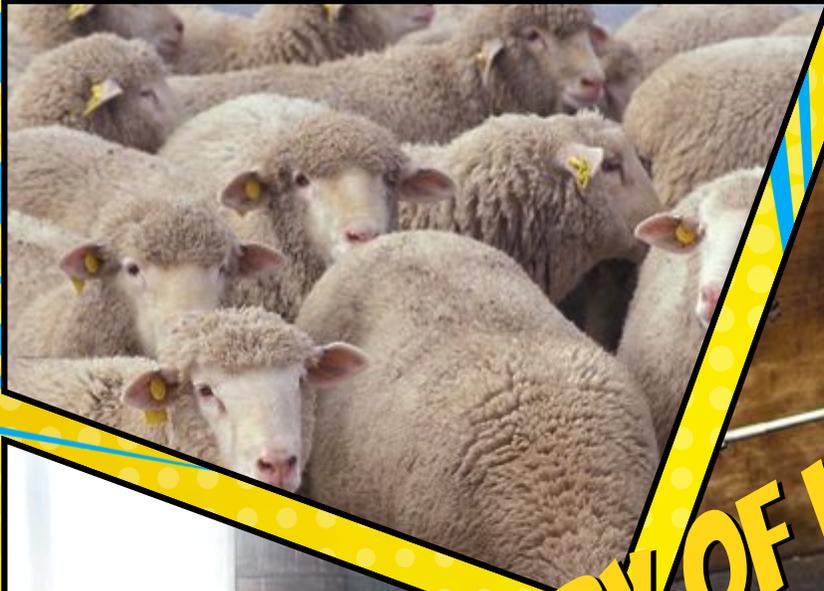


Dyeing

When the wool is made into yarn and cleaned they can also dye the wool to make it coloured. So we can have different colours on our clothing.







THE STORY OF WOOL

BY SAM HUTCHINSON

SHEERING

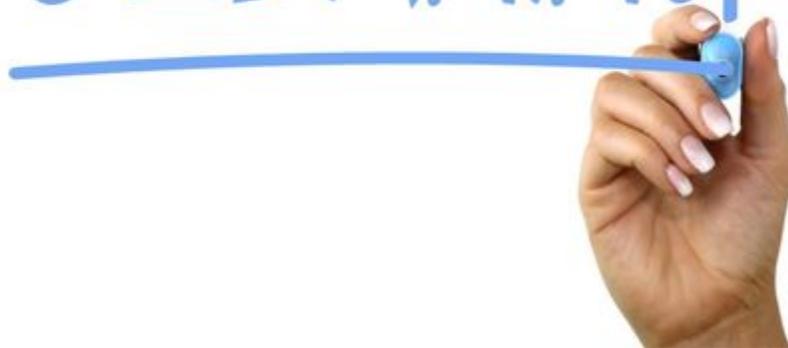
Shearing is the first step of the process. Shearing is very hard work because you have to hold on to the sheep while sheering it. George C. Devol invented robot shears that have helped shearers to prevent back injuries and made it easier to shear. Without shearing sheep or other animals, the story of wool wouldn't have started.



CLEANING

The wool is not just cleaned to get out the germs or muck. We clean the wool because it comes with a chemical called lanolin. Lanolin is used in many products we use everyday in cosmetics such as moisturiser. Cleaning wool is a very important step of the story of wool.

CLEANING



CARDING

Carding the wool is a bit like combing your hair. When in this process we are straightening the wool which helps make it easier to spin. Today, we use machines because it takes a long time to do it by hand. Carding the wool makes the next step of the process more efficient.



SPINNING

Spinning wool is a key part of the story of wool. We spin wool using a spindle but to make the process quicker, we now use mechanical items. After a short amount of time the wool will be like a string -- this is called a yarn. You can get bundles of wool that have been transformed into a yarn.



WEAVING/KNITTING

Weaving and knitting is the part where we transform the yarn into a product like socks. Before this process we sometimes dye the wool into different colours such as green. We use an item called a loom to weave it. It is easy because the process before was carding.



PRODUCT/SUSTAINABILITY

When we have completed all these steps we will have a sustainable piece of clothing. We must keep this piece of clothing for a reasonable amount of time because we have used up lots of natural resources and we must not use up too much more.



PLYING

Plying is where you wind two pieces of yarn together to make it stronger and to make it look better. But first you need to spin all of the wool and make it into yarn! You can put as many pieces of yarn as you want like you can put together 3 pieces of yarn but it just makes thicker and stronger.



The Story Of Wool



By Giselle and Imogen



Shearing the sheep

The first step of shearing the sheep is to take the wool off the sheep using an electric shearer or a hand held shearer. When you get the wool off the sheep it is normally very dirty so you would need to wash the wool



AMAZING!



Download from
Dreamstime.com

Cleaning

After the wool has been sheared off the sheep the people have to make sure they clean the wool and get all the lanolin off it. When you do this, this will make it easy to card and dye the wool.



Combing

The next step after cleaning the wool is to comb the wool. The knots need to be combed out in order to spin the wool. This will help make the wool thin, this will also help the spindle spin the wool



Spinning

After the wool has been combed the wool is then spun. The old spinners are hand held with a hook on the end of the spinner which is where you would attach the wool. When you spin the wool with the spindle it makes the wool into an individual yarn strand.



Dyeing the yarn

Once the wool has been spun into yarn the yarn is then dyed. The wool can be one colour or a mix of colours. If you do decide to dye the yarn different colours this is what makes our clothing a different selection of colours.



Weaving

The wool is then woven to make different types of material. This can also make clothing for example, scarfs, blankets, shirts, pants, socks, rugs.



Clothing

The next step is clothing. The woven wool is now turned into clothing. Clothing is what you are wearing right now, your piece of clothing has gone through many steps to finally getting to you.



Sustainability

Many of the machines use lots of water to produce the wool. This takes away some of the water in our rivers. For example at the top of the river there may be a cotton farm which uses lots of water, but for the people working at farms at bottom of the river there may not be enough water for their sheep. Sheep are one of Australia's main wool producing animals, but when the sheep stamps on the ground and eats the plants, it slowly destroys the earth. Alpacas on the other hand are still producing wool but are not having such a negative impact to the earth.

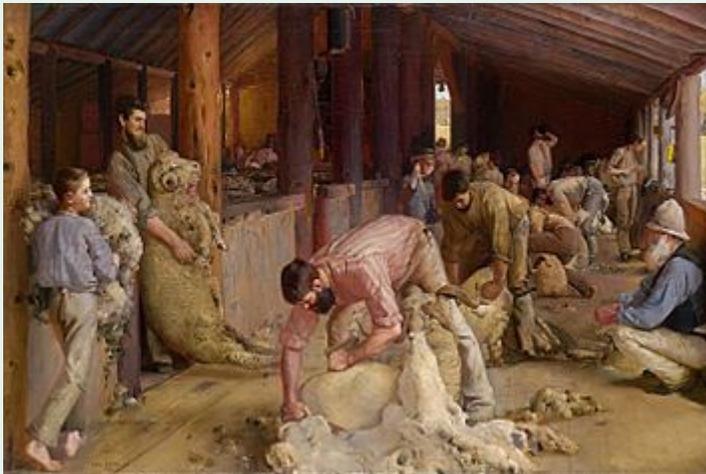
The Story of Wool



By Isabella and Michaela

Chapter 1

Shearing the Sheep



Fun Fact:

A sheep shearer from Western Australia set a personal record of 500 sheep in one day!

Firstly, farmers shear the wool off the sheep in the Spring. They do this because if the sheep's wool becomes too thick in the summer, the sheep can overheat.

Farmers shear all these sheep and put the wool into a pile, ready to be washed.

Chapter 2

Washing the wool

Firstly, farmers fill two basins with hot water and add gentle liquid washing detergent until the water feels slick when tested with a clean hand.

Secondly, farmers add the wool slowly and let it soak for ten minutes so that the dirt can loosen from the wool threads. Then, they wash the wool and remove it carefully and support it when lifting it out of the water.

Thirdly, The farmers empty the two basins and refill it with slightly hotter water and vinegar. The vinegar will help cut the excess detergent and leave the wool in a slightly acid environment.

Fourthly, they squeeze out the excess water and lay the wool on a clean, dry towel to drain.

Also farmers can also add lanolin to the wool so that it won't become wet.



Chapter 3 Blending and Combing

Now, people combine fibres of different origins, lengths, thickness or colour to make yarn.

Then, all the wool is passed through a straight, metal teeth-like comb that is made to make sure the wool fibres are able to lay parallel to one another.

The fibres are then placed all together in a long line, which is used to spin a smooth, even thread. All the smooth wool are put together to create one large piece of straight wool



Chapter 4

Dyeing Wool

Firstly, when dyeing wool, they choose a dyepot (which is large enough) to dye the wool into different colours.

Then, they take either a natural or artificial dye colours to use on the wool and drop all the wool into large pots of dye.

This used to turn the white wool into different colours. People also mix different colours to make the right colour to use on the wool



Chapter 5 Knitting

After the wool has been dyed, they use either a drop spindle or a spinning machine to spin the wool into long threads. Then the long threads are bunched together to make yarn.

People then buy yarn and knit the yarn into clothes, blankets, scarves etc. This can make warm clothes for winter but takes a long time to knit.



Chapter 6 Sustainability

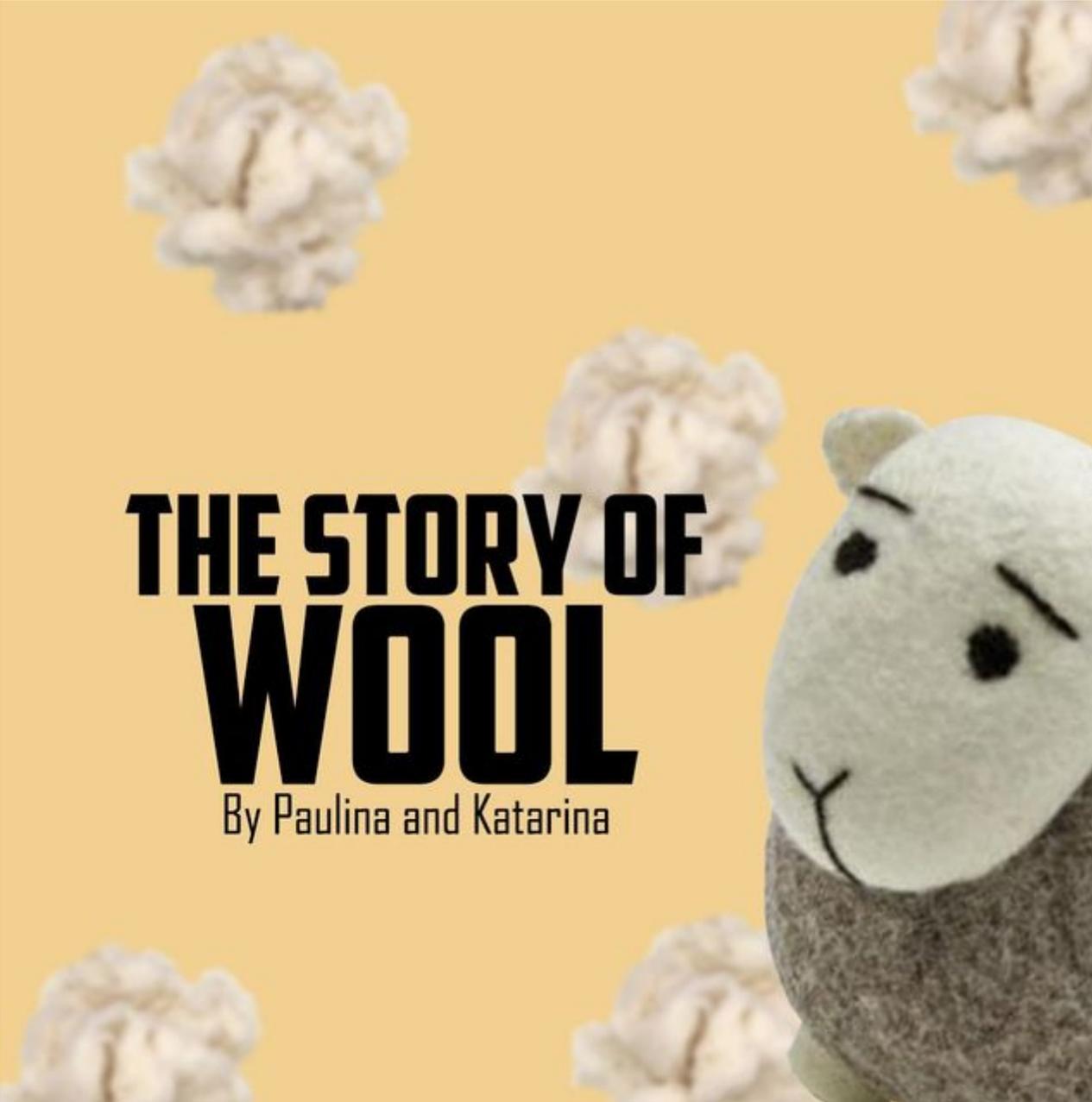
While yes, the sheep need us to shear the wool, sheep can damage the grass underneath them which will damage the plant roots and the soil due to them eating the plants and stomping on the ground.

Sheep still need to be close to human population because if the wool on the sheep is not sheared off in time, it can overheat and will become very heavy.

Cotton is not a good solution either because it takes up a ton of water. Since Australia has been experiencing droughts, there will not be enough water to sustain the cotton plant.





The book cover features a solid orange background. On the right side, there is a close-up of a sheep's head, which is white with black markings for eyes and a simple line for a mouth. The sheep's body is a dark brown color. Scattered across the background are several white, fluffy balls of wool. The title 'THE STORY OF WOOL' is printed in large, bold, black, sans-serif capital letters. Below the title, the authors' names 'By Paulina and Katarina' are written in a smaller, black, sans-serif font.

THE STORY OF WOOL

By Paulina and Katarina



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[2]CLEANING

[3]DRYING

[4]COMBING

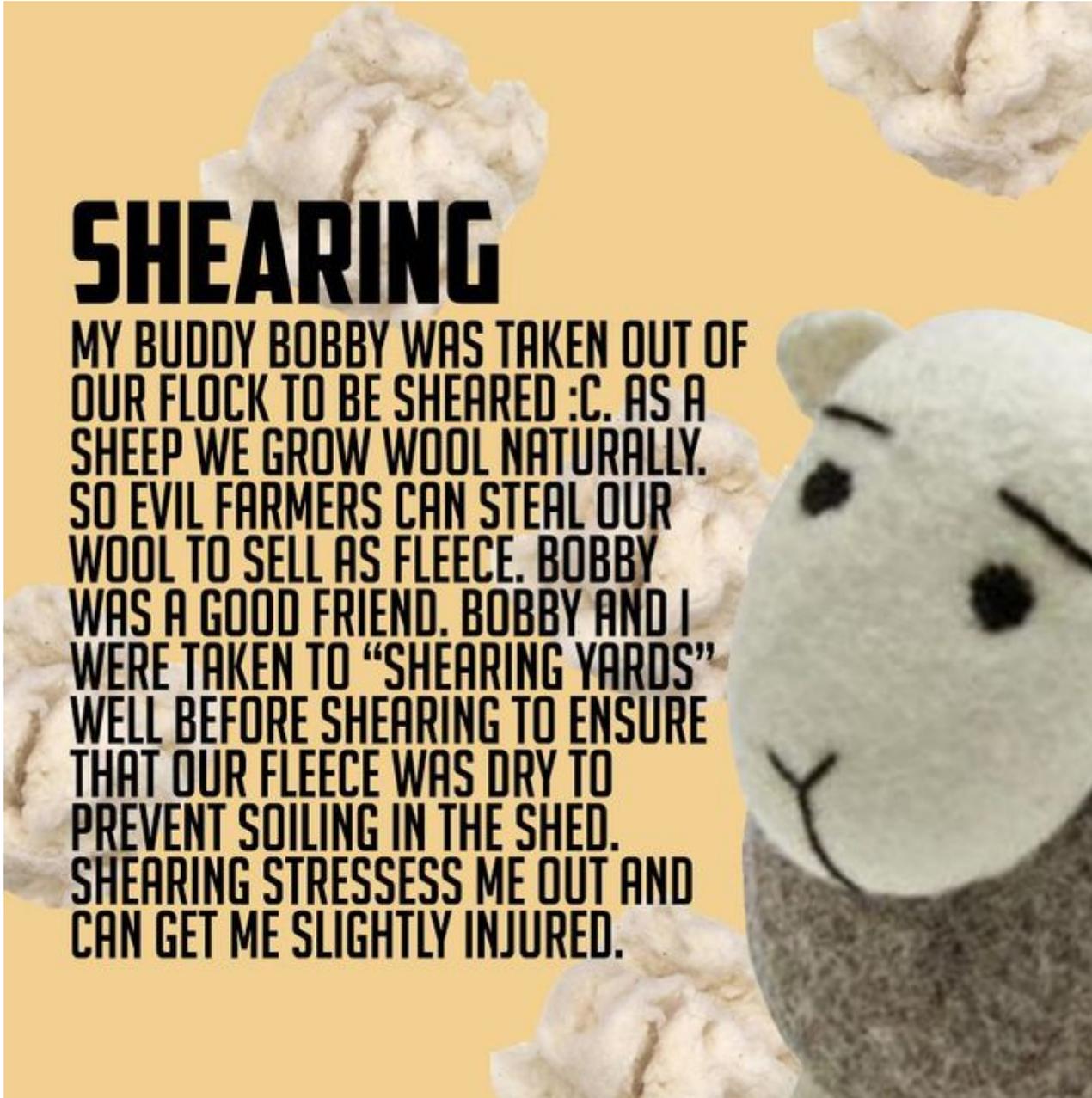
[5]SPINNING

[6]DYING

[7]WEAVING

[8]FINISHED PRODUCT

[9]SUSTAINABILITY



SHEARING

MY BUDDY BOBBY WAS TAKEN OUT OF OUR FLOCK TO BE SHEARED :C. AS A SHEEP WE GROW WOOL NATURALLY. SO EVIL FARMERS CAN STEAL OUR WOOL TO SELL AS FLEECE. BOBBY WAS A GOOD FRIEND. BOBBY AND I WERE TAKEN TO "SHEARING YARDS" WELL BEFORE SHEARING TO ENSURE THAT OUR FLEECE WAS DRY TO PREVENT SOILING IN THE SHED. SHEARING STRESSES ME OUT AND CAN GET ME SLIGHTLY INJURED.

CLEANING

A WISE SHEEP FROM MY FLOCK TOLD ME BEFORE THE EVIL FARMERS WASH OUR FLEECE THEY NEED TO SKIRT IT. SKIRTING IS WHEN THE AGITATING FARMERS CUT OUT THE DISCOLOURED PARTS OF OUR FLEECE. APPARENTLY HIGH QUALITY FLEECE IS SKIRTED.



DRYING

WHILE I WAS INSIDE MY FLOCK AN UGLY CAT CAME UP TO ME AND SHE TOLD ME WHAT HAPPENS AFTER OUR WOOL GETS CLEANED. THE EVIL HUMANS NEED TO DRAIN THE DIRTY WATER OUT OF OUR WOOL AND USE SOME DISHWASHING SOAP SO THEY DRAIN OUT ALL OF THE DIRTY STUFF SO IT'S CLEAN, BUT THEY LIKE TO TAKE CARE OF OUR WOOL SO THEY DON'T RUN THE WATER DIRECTLY ONTO OUR WOOL AND THEN THEY DRY IT FOR SOME HOURS.



COMBING

A COUPLE OF DAYS AGO I ESCAPED MY FLOCK AND I WENT TO SOME WEIRD PLACE WHERE HUMANS WERE COMBING THE WOOL. COMBING IS A PROCESS THAT MAKES OUR WOOL SOFT AND SUITABLE FOR SPINNING. WHEN COMBING WOOL THE FARMERS GET RID OF FIBERS CALLED NOILS MAKING OUR WOOL FLUFFIER. I CAN'T TELL ANYMORE BECAUSE I GOT CAUGHT.



SPINNING

A DEPRESSED SHEEP TOLD ME THAT THE WOOLS NEXT STAGE WAS SPINNING. HIS WOOL IS APPARENTLY GOING TO GET SPUN TODAY. SPINNING IS TWISTING TOGETHER STRANDS OF FIBERS FROM OUR WOOL, THE YARD IS THEN USED TO CREATE TEXTILES WHICH ARE THEN DYED AND ARE WEAVED INTO CLOTHING.



DYING

SINCE I AM A TROUBLED SHEEP I GOT PUT INTO A SPECIAL ROOM AND SAW EVIL HUMANS AND MACHINES DYING OUR WOOL. DYING IS THE 6TH STAGE OF MAKING OUR WOOL INTO CLOTHING. WHEN YOU DYE WOOL YOU CAN USE FOOD COLORING OR PROFESSIONAL DYE THAT YOU COULD GET FROM NATURAL RESOURCES.



WEAVING

A WOOLLESS SHEEP TOLD ME THAT THE 7TH STAGE IS WEAVING. WEAVING IS WHEN YOU TAKE YARN THAT HAS BEEN DYED AND WEAVE IT WITH DIFFERENT THINGS. THE WOOLLESS SHEEP TOLD ME IT'S MAINLY WEAVED IN A MACHINE. THE MACHINE IS QUITE BIG.





*By Leon
and Oscar*

The story of wool



PIC•COLLAGE



LET'S GET THIS PARTY STARTED!!

THE STORY OF WOOL



BY ALEX S AND LUCA O



SHEARING

Shearing sheep is a very important process to make wool. Shearing sheep is the first part of the process to make wool. Most farmers shear their sheep in late spring or early summer. They do this in late spring to ensure that the weather is not too cold, and they shear the sheeps wool in early summer to ensure that the weather is not too hot, and also so that the sheep don't attract too many flies.

Hand operated clippers



Electric powered clippers



DYEING

Once the wool has been cleaned, manufacturers dye the wool to create colour. Once there is colour these manufacturers can move onto the next step which is carding which you will learn more about carding on the next page.



CARDING

Carding also known as combing is used so that the fibers in the wool are straightened and all going into the same direction. Carding is a very important process because if you card wool properly then the wool becomes easier to spin. There are different types of machines that card wool. For example, there is an electronic machine that you can use to card wool and there is also a machine that lets you card by hand and there is a machine that can card hard wool or mohair. Some of the carding machines have teeth very close together, this lets the machine be able to card wool very finely.

Hand operated carding tool.



Electronic operated carding machine.



The Story Of Wool... ★

By Eloise and
Sophia



Contents

1. Shearing
2. Compressing
3. Cleaning
4. Carding
5. Dyeing
6. Spinning
7. Weaving or
Knitting
8. Sustainability



Chapter 1 Shearing

First farmers shear sheep, in the process of making wool. After the shearing process the sheep looks naked. The farmers normally do it in Springtime so the sheep don't overheat in Summer. Farmers use electric sheers so it's faster and more efficient. Before electric sheers they used clippers that look like what barbers use to cut your hair.



Chapter 2 Compressing

After shearing the wool, the second step to making wool (yarn) is compressing. They compress the wool into big square shapes that they put in packaging. These are called bales. The workers deliver the bales to a cleaner, to clean the wool more thoroughly.



Chapter 3 Cleaning

After compressing the wool, the wool needs to be cleaned so it can be rid of the lanolin (oils). They wash the wool with detergent and warm water to get rid of the mud and bacteria in the wool. The cleaning process is necessary because you wouldn't want dirt, mud, bark and smell of faeces in your clothes, yarn and miscellaneous items.



Chapter 4 Carding

After they clean the wool, they card it. Carding means: combing the sheep's wool to take out the bark and bugs in the wool. It's thoroughly cleaned but it's still a little bit dirty. They need to card the wool because it makes the sheep's wool all go in one direction, like human hair when we brush it.



Chapter 5 Dyeing

After carding the wool, the next step in the process of making wool (yarn) is dyeing. You start the process by getting dye and pouring it on to the wool they then mix it till all the wool is covered evenly by the colour. Sometimes this process takes days for drying and layering colours.



Chapter 6 Spinning

Spinning is a process of putting the sheep's wool into a drop spindle. This is how they use to do it in the olden days. Now we have modern machinery that spins wool for us. It's so much easier now, but some people still do it by hand with a drop spindle.



Chapter 7 Weaving

Weaving (knitting) can be very helpful if you live on a farm or just knitting a scarf, baskets, mittens, clothes and blankets. After spinning it has officially become yarn and you can now find clothes made out of it . You can find yarn in many different varieties such as cashmere, cotton and Alpaca. In class Joe and Daće showed us how to spin wool into yarn. How you spin it decides what thickness it will be, for example, if you do it tight it will become a thinner yarn and vise versa.



Blurb!

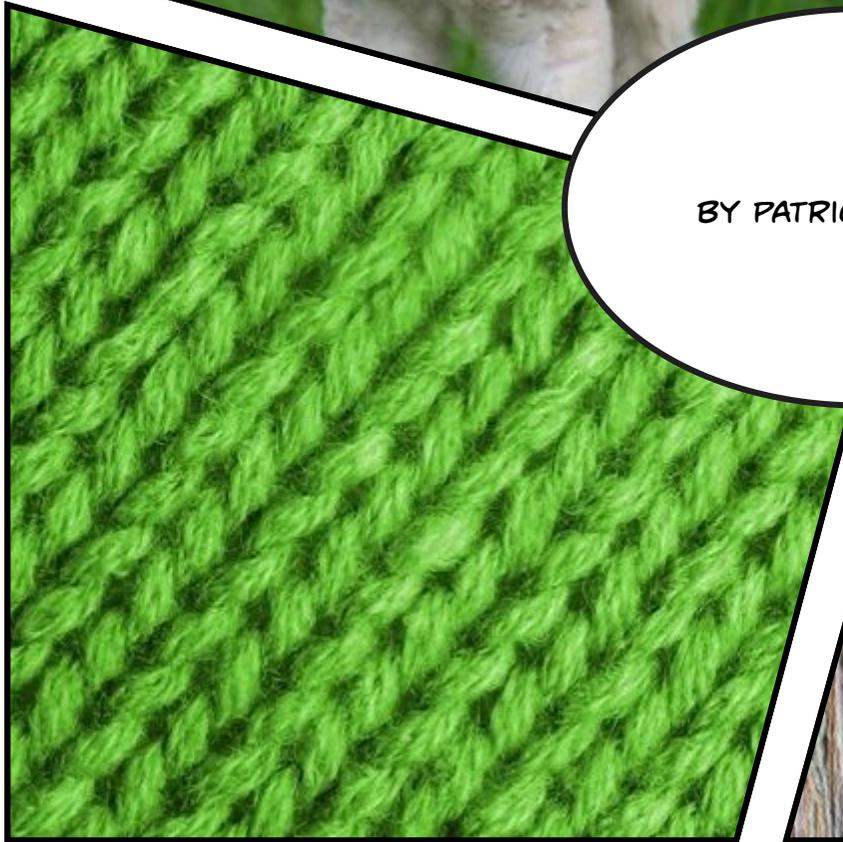
Wool...wool..wool, you won't find it on an Irish bull, you'll find it on sheep. Shear the sheep now you're full with wool! Compress, impress and dress yourself with wonderful wool -- sweaters, blankets and gloves. Read this book to find out more about wonderful wool, remember it's not found on an Irish bull!



THE STORY OF WOOL



BY PATRICK AND ELI!



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1. Shearing

2. Packing Wool

3. Washing

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5. Carding

6. Spinning

7. Weaving

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9. Final Inspection

10. Finished Fabric

AWESOME!

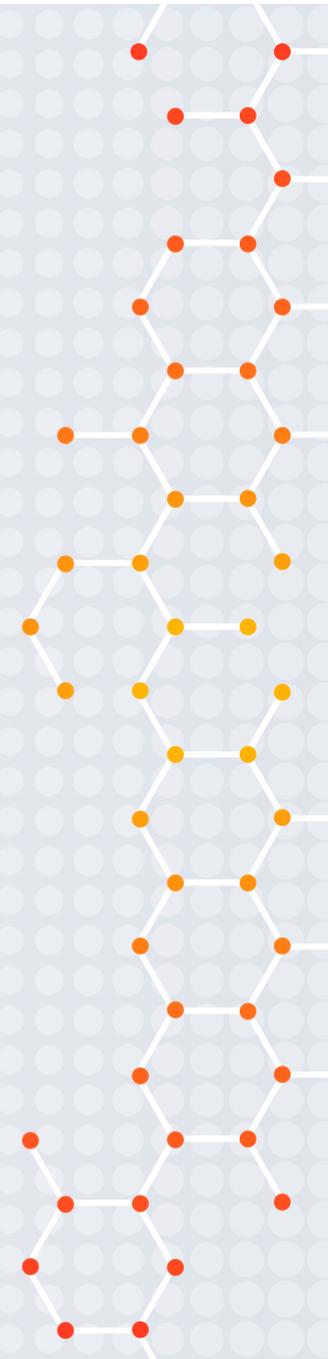
THE STORY OF WOOL

BY LIAM, LACHLAN AND AUSTIN



SHEARING SHEEP

Shearing is the process by which the woollen fleece gets cut off the sheep. The person who cuts the fleece is called a shearer. And they usually do it in early spring which is typically the time of year for sheep-shearing. Being sustainable is important when shearing sheep because you don't want to harm or kill the sheep in the process.



The Story Behind Wool



By Zoe Lupton

Contents:

Chapter One
Shearing
Chapter Two
Cleaning
Chapter Three
Packing
Chapter Four
Dyeing
Chapter Five
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Chapter Six
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Chapter One: Shearing

The first step is shearing the sheep. Shearing doesn't hurt the sheep one bit, some people think it does but it doesn't. It is like getting your hair cut at a barber. Most farmers use electric shears or a shearing machine. Other farmers use scissors or hand blades. Once the equipment is ready the farmer will bring the sheep into the shearing shed. Then they start to shear.



Chapter 2: Cleaning

Once the farmers have finished shearing they might move onto cleaning the wool or send it to a factory. If the farmers choose to clean the wool themselves first they will take out all the twigs, thorns and any other unwanted things out of the wool. Once the farmers have done that they run a tub of hot water for the wool because they have to take out an oil called lanolin that the sheep release from their body. Then lastly they take it out of the water and dry it.



Chapter Three: Packing

Once the wool is washed and combed the farmers pack it ready to be sent to the factory. The farmers have to make sure that all the wool is clean and combed and also have to make sure that the wool is packed properly.



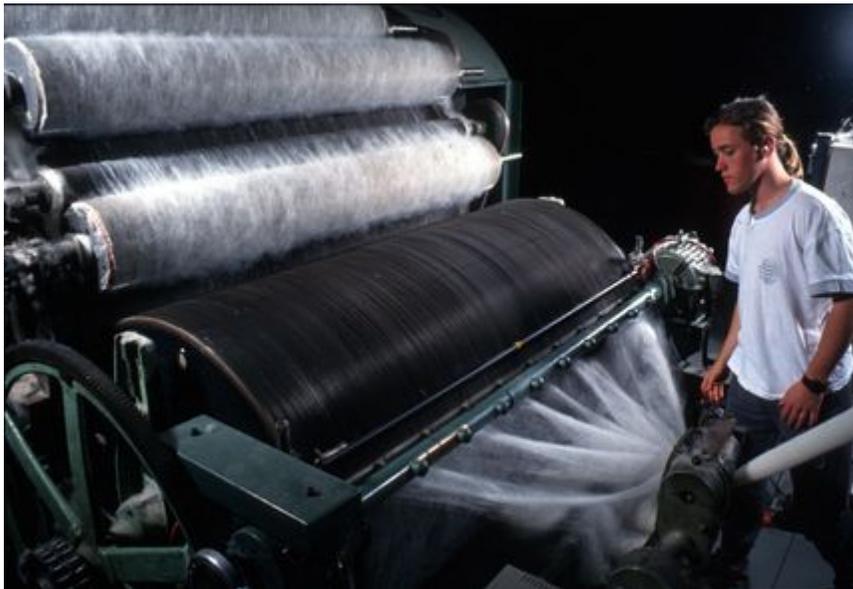
Chapter Four: Dyeing

Finally once the wool has arrived at the factory they bring the wool to the dyeing section. They bring the wool to a dyeing pot. The dyeing pot is full of dye. All they have to do is place the wool in the pot and turn it so all the wool is dyed. Since wool is made of fibre it is easy to dye.



Chapter Five: Carding

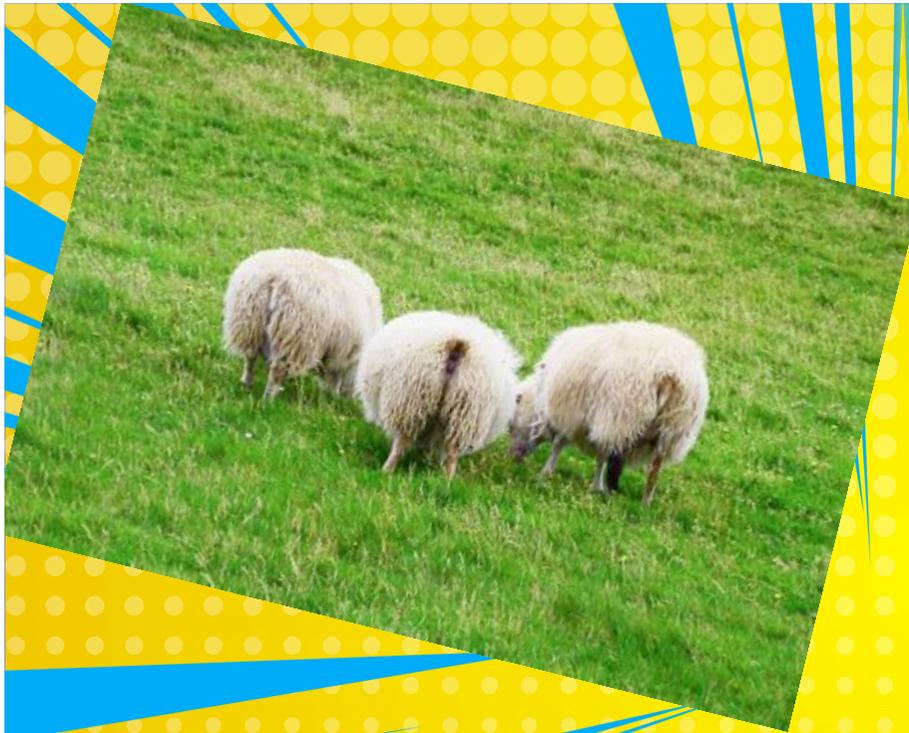
Carding is a process that disentangles, cleans and mixes all the fibres together. It is important to card wool because it helps mix together all the fibres, and if you don't the wool will turn out bad.



Chapter Six: Spinning

Spinning wool can be either done by a hand spinner or by a machine. A hand spinner is a long stick with a hook at the top and a small wooden plate at the bottom. First you would hook the wool on the hook at the top and then spin the wool.





**THE
STORY
OF
WOOL**

By Xavier, Etienne and Taye



SHEARING



Shearing is the process when the shearers shear all of the wool off the sheep. In this process sometimes the sheep are cut by the shears. Shearing has competitions all around the world and sometimes it gets really serious.



The people who shear the sheep wear special shoes to protect their feet which are called moccasins. The most convenient way to get the wool off the sheep is with shears.

Dying



This type of dyeing on this page is when the wool gets colour. For example dyeing wool green. To make this dye they heat up the dye when they are trying to make it for the sheep's wool. You have to have a dye pot other wise you cannot make dye for the wool. You can use yellow onion skins to get one of the dyeing colours.

Cleaning



There are three different ways to wash wool. Start off with filling a bucket with water and put a bar of soap next to the bucket. Then you dunk the wool in the bucket and wash it with the soap. You leave it in the bucket for around ten minutes. Empty the water with soap and add clean water. Put the wool back in the water for a bit. Then take the water out of the water and rinse. This is one of the ways to clean wool.

Shearing 🌟🌟🌟😁

Shearing process is when farmers use shears to cut the wool. Manual shears was used in the olden day when there was no electricity. The world has evolved and so has shears, these days farmers use electric shear to get the job done. It may look cruel but it doesn't hurt the sheep.



Cleaning

Cleaning, a compulsory step in making wool. You absolutely positively have to clean the wool before it goes anywhere else. Do you really want to sleep with a disgustingly dirty wool blanket filled with lanolin. You need to clean it.



Carding

It's not like a sheep can get a comb and comb itself right, so it's bound to have tons of knots. Down below is a sheep comb because if you didn't comb it wouldn't be able to see anything, just a big ball of wool. This step is very important in the process of wool because if you try to spin it while there are knots in it, lets just say it won't end very well.



Dyeing

Dyeing wool is an optional step. But it makes it look nicer and stain can be harder to see. The wool gets its color at the dye house. They put wool in big barrels and put dye in it. They let the wool soak and the dye then dries it.





The Story of Wool

By Ella and Lila

Contents :

1) Shearing

2) Washing

3) Carding

4) Spinning

5) Dying

6) Knitting

7) Clothing

8) Sustainability



How this



Goes to this



Sheep should be shorn once a year before it gets hot otherwise sheep get uncomfortable and agitated. The sheep produce 4.5 kilograms from one sheering. Sheering requires skill and you must hold sheep by the front legs. Once you have shorn the sheep on that side you must turn around and shear the entire sheep.



Once the wool has been harvested you must clean it. Before the wool is cleaned using detergent. The bits of dirt and grime is removed along with discoloured and brittle pieces of wool. The wool is then soaked in water and detergent and drained twice. Once the wool is washed it is then dried.



The Story Of Wool



By Darci Noble

Shearing

Most sheep are shorn to:

Harvest the fibre at the appropriate length for spinning into yarn, to keep the sheep healthy, to allow wool regrow, improve the sheep's ability to control its body temperature during heat waves and cold conditions and to create a clean environment for newborn lambs.

Professional sheep shearers are trained to:

Shear sheep with care and respect, shear sheep in a specific pattern that protects themselves and the sheep, harvest the wool with care, gently handle the sheep and use appropriate tools when shearing the sheep.



Cleaning

After shearing, the wool is washed, this is called scouring. Fill two sinks with hot water. To each sink add a liquid washing detergent. Then let the wool soak for ten minutes so the dirt can loosen.

Once the wool has soaked for ten minutes, when pulling the wool out support it well as you lift it carefully from the water. Squeeze it slowly and gently to help drain off the dirty, soapy water.

Put the wool in the second bath and let it soak for another five or ten minutes. Remove the wool from the water and squeeze it slowly and gently. Then place the wool on a towel or in an empty container.

Drain the sinks and fill them both with warm water the same temperature. Add a few tablespoons of vinegar to the first bath and stir it in. Then gently push down the wool, until the sink is covered. Leave it there for five minutes and then repeat in the second sink. Lift the wool carefully and squeeze out any water. Depending on the weather, it will dry completely in one to three days.



Carding

You need to comb the wool so all of the knots come out. There are two different types of combs you could use. The first one is The Noble comb, this is a circular comb. The second comb is The French comb, this comb is long and straight, with teeth on one half, this is called the linea comb. Combing separates out short fibres and the fibres in the top straightens. When combing wool, the discarded short fibres are called noils. In general, there are two systems to preparing the fibre for the yarn. These are called the worsted system and the woollen system. The worsted system is the removal of short fibres by combing and top preparation. In the woollen system, short fibres are kept.



Shown in Maple



Dyeing

The wool is dyed so the wool is colourful. Some people might like their wool blue, some might like it green, others may like it pink, the list is endless. This is how we have lots of different colours of clothing. This process can be done using any colour.



The Story Of Wool



By Lara and Ava

Contents

1. Shearing
2. Packing Fleece
3. Cleaning
4. Carding
5. Dyeing
6. Spinning
7. Knitting-Weaving
8. Retail

Shearing

Sheep are usually brought to the shearing shed yards before shearing to ensure that their fleece is dry. Most sheep are shorn by professional shearers. Sheep are typically shorn once a year usually in spring. They are shorn with electric shears or hand operated clippers.



Packing the Wool

After the sheep have been shorn their wool is packed into bales and then it can be sent off to to companies so the wool can be cleaned.



Cleaning the Wool

Wool is cleaned to get rid of any dirt and lanolin. It is cleaned by soaking the wool then letting it sit for about 30 minutes and then draining the wool and repeating it. You also have to make sure it's bubble free and then you can dry the wool.



Carding

Carding is when the fibres are combed so that all of the fibres go in the same direction. which will make it more straight and easier to sell in a shop.



Dyeing

Dyeing wool is when wool bales get put into a big tank of dye which can be any colour the company or person wants. that means it can be red, blue, pink and grey.



Spinning

Spinning wool is when the wool is spun into yarn. You can make wool into yarn with a spindle which was what they used to do back in the olden days or you can use a machine which is what we normally use nowadays. Sometimes you can use different colours to make it into rainbow yarn.



Knitting and Weaving

Knitting and weaving means that the wool has been woven into one piece of clothing, and sometimes they can be woven into blankets or rugs as well. This means you can buy rugs that are made from 100% wool.



The Story Of Wool



Written and illustrated by Mina and Emilie

Cleaning The Wool

You need to clean the wool with detergent and hot water to get out the lanolin. Sometimes you could use a machine to clean the wool or you could just hand clean it. To clean the wool you mix the hot water with detergent and spread it over the wool.



Dyeing Wool

The Dyeing of wool is the process of which you change the wools colour. You can dye wool by hand or with a machine, both ways work very effectively. To dye wool, you can either use natural colouring or synthetic colouring. You put the colouring into a bucket, then slowly and gently drop the wool into the bucket of colour.



The Story of Wool

By Marta Svilans



Contents

1. Shearing
2. Cleaning
3. Carding
4. Dyeing
5. Spinning
6. Knitting and weaving
7. Retail Selling
8. Sustainability

Shearing

Shearing sheep is where you shear the wool from the sheep. Mostly an adult sheep is shorn once a year. In the olden days you had hand held shears not the ones that are electric that we have today. Sometimes the sheep is usually sheared at the beginning of March and end of February.



Cleaning

The process of cleaning the wool is you have to use detergent, hot water and a bucket. You need to clean it because it will take out the lanolin from the wool. Also cleaning wool is very important to get the grease of too.



FROM SHEEP TO SOCKS



BY JEREMY HO

CONTENTS

CHAPTER 1: SHEARING

CHAPTER 2: GRADING AND SORTING

CHAPTER 3: CLEANING

CHAPTER 4: SCOURING

CHAPTER 5: CARDING

CHAPTER 6: SPINNING

CHAPTER 7: WEAVING

CHAPTER 8: FINISHING



Chapter 1: Shearing

Shearing is the first step in making woollen clothes. It is the process of cutting the wool from the sheep. The person who shears the sheep is called a shearer. Before the 20th century hand held shears were used. They looked like scissors but bigger and sharper. In the 20th century the first electric shears were used. They looked like razors you use when you cut your hair. Shearing is also a popular sport. It involves a shearer shearing a sheep as fast as he/she can. The current world record is 37.9 seconds set by Ivan Scott.



Chapter 2: Grading and Sorting

Grading and sorting includes sorting the wool based on quality and fineness. The people obtain only a certain part of the sheep's fleece. The workers then spin the fleece according to the type of wool it is. Some grading and sorting terms are:

Picklock (Fore shoulder) – Choicest in fineness of fibre, elasticity and strength of staple.

Prime (Middle of body) – Slightly inferior in strength, but otherwise as good.

Choice (Back) – True, but not as fine as prime.

Super (Lion) – Not so valuable as choice, but similar in general properties.

Head – Inferior sorts of wool derived from that part of the sheep,

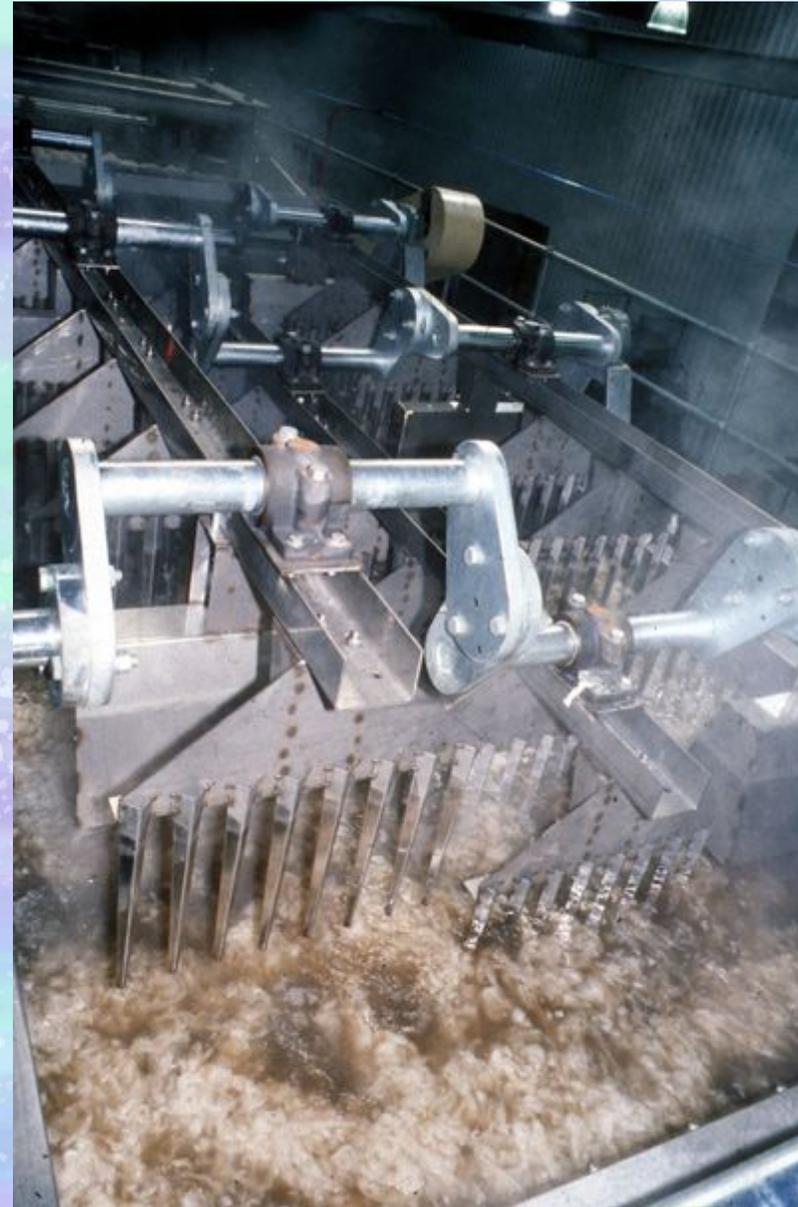
Drawn right (Lower sides) – Showing tenderness, but fair quality of wool.

Seconds (Throat and breast) – Best of the wool from these parts.

Breech – Short, coarse hair from the hinder parts.

Chapter 3: Cleaning

Cleaning includes washing the fleece. Did you know that just under 50% of the raw fleece is actually not wool at all? It is actually lanolin, dirt, sweat and other gross things. That is why the cleaning process is so important. Some people do not clean their fibres because they say that the lanolin helps with the spinning.



Chapter 4: Scouring

Another cleaning process is used (I think.) This time after the cleaning the workers do a condition test. A condition test tests the average moisture content.



Chapter 5: Carding

Carding is a process where the fibres of the wool are smoothed and disentangled. Nowadays people use machines to do the carding. Back in the olden days the people who were carding just used standard combs.



Chapter 6: Spinning

The process of spinning happens after the carding process or else it will be hard to spin. The process of spinning wool into yarn is done by first spinning the wool onto multiple rollers and then the fibres are spun into yarn. The spinning machine has a spindle that spins really fast. There is also a thing called a pigtail guide which guides the newly spun yarn onto a cone. Two people taught me how to spin wool, so that's cool.



Chapter 7: Weaving

Weaving is the process when the newly spun yarn is woven together. This process looks really cool and uses a lot of machinery. It is meant to turn yarn into cloth. The finished cloth looks cool and feels soft.



Chapter 8: Finishing

By now the fibre has reached its final state. It will undergo a few more checks and then that's it! The wool is ready to be either knitted. (Or something else.)



THE AMAZING STORY OF WOOL

BY BEN AND EUAN





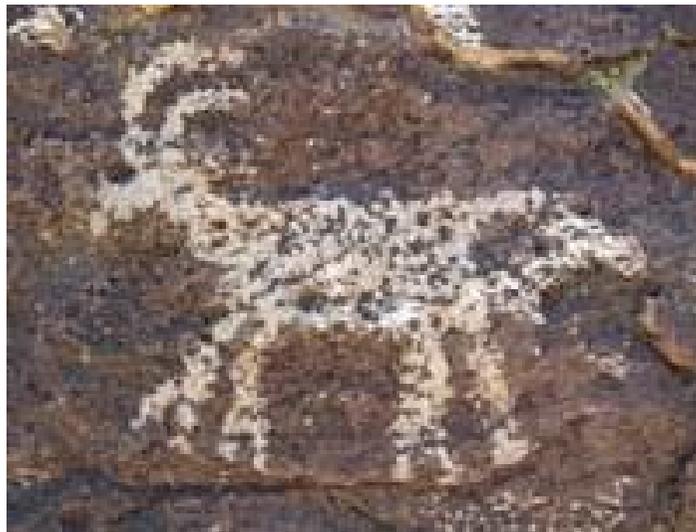
The Story Of Wool

By Alexander McGrath



The History Of Wool

The story of wool began long ago, before recorded history when Cave Men first clothed themselves in the woolly skins. They discovered a long lasting fabric which gave them protection from heat, cold, wind and rain. It was a flexible fabric which kept them cool in the heat and warm in the cold.



Sheep Shearing

Sheep shearing is the process when the woollen fleece of a sheep is cut off. The person who removes the sheep's wool is called a shearer. Sheep are shorn by professional shearing teams working eight-hour days, most often in spring, by machine shearing.



Cleaning

Different sheep breeds have different levels of grease. Any grease in the washing water is spun off and sold to be made into lanolin. After scouring, fibre might be carbonised with sulphuric acid or bleached with hydrogen peroxide.



Spinning

After being carded, the wool fibres are spun into yarn. Spinning is typically done on a mule spinning machine. Rollers in the scouring machines squeeze excess water from the fleece, but the fleece is not allowed to dry completely.



The Journey of Wool

By Lucia and Nina



After the process



Shearing

The sheep are sheared. Usually the sheep are shorn in spring and summer when it's hot. The shearing tool looks a bit like a razor. The person who is shearing the sheep is called a shearer. Shearing a sheep doesn't usually hurt a sheep, it's just like getting your hair cut. The shears are usually electric but sometimes it's just done by hand.



Cleaned

The wool is greasy because the sheep has lanolin in its wool. Then they wash the wool in a special detergent to get the lanolin off. Once it's washed they dry the wool so it's not wet. They soak the wool and let it sit in hot water for 30 minutes. They rinse it and they wring it out to make sure there are no bubbles.



Carding

After it is washed, they have to comb it with a special tool. This is called carding. Carding is when people have to comb the fleece to make it straight and smooth. Usually the wool is really knotted so they use the machine to make the wool go in one direction. After the wool is carded (by machine) it is usually very fluffy. Sometimes, people card it twice to make it to their liking. Also, some people card it by hand using a brush.



Dyeing

Dyeing is the process by which the wool is put into a big pot of dye. It sits in the pot until all of it is coloured. The wool absorbs the colour into itself. A machine pulls out the wool and hangs it to dry. Some factories dye the wool before carding. Dyeing takes around 30 minutes when you put on the lid. Some factories put on a lid to make the wool have more intense colour.



Spinning

Spinning turns the wool into yarn. Most factories do this after dyeing. A big machine gets pieces of wool and spins them into thicker pieces. All the pieces are put together to make the ball of yarn. In the olden days, people used to spin wool by hand with a tool called a spindle.



Inspection

The inspection is when people inspect the wool to make sure it is suitable to sell. Inspections are vital to make sure it is high quality. They inspect it to make sure it is properly dyed, carded and washed. Some balls of yarn are sent to shops. But most fabrics are sent to factories to be made into different clothes and then sent to shops.



Glossary

Lanolin: A fatty substance found naturally on sheep's wool. It is extracted as a yellowish viscous mixture of esters and used as a base for ointments.

Detergent: A water-soluble cleansing agent which combines with impurities and dirt to make them more soluble, and differs from soap in not forming a scum with the salts in hard water.

Absorbs: Take in or soak up (energy or a liquid or other substance) by chemical or physical action

Carding: Short-stapled pieces of wool which result from the carding process, spun and woven to make standard-quality fabrics

THE STORY OF WOOL

BY JAMES DONNELL



ABOUT WOOL

Wool is a natural material. People use wool fibre to make clothing, blankets, and other things to keep warm. The yarn is used to weave fabric or material.

The yarn of wool can also be knitted into fabric or clothing like jumpers. Alpaca, mohair, angora, camel, cashmere and vicuna are all separate types of wool.



Shearing

Sheep shearing is the process by which the woollen fleece of a sheep is cut off. The person who removes the sheep's wool is called a shearer. The annual shearing most often occurs in a shearing shed, a facility especially designed to process often hundreds and sometimes more than 3,000 sheep per day.



Washing the wool

- 1 Soak the Wool. Fill up the sink or washer with HOT water and dish soap .
- 2 Let it sit. Let the wool sit for about 30 minutes; the water will have cooled somewhat, but it should still be warm.
- 3 Drain and Repeat
4. Make Sure it's bubble free. Wring and dry.



Carding

Carding is a mechanical process that disentangles, cleans and intermixes fibres to produce a continuous web or sliver suitable for subsequent processing. This is achieved by passing the fibres between differentially moving surfaces covered with card clothing.



Weaving

Weaving is a method of textile production in which two distinct sets of yarns or threads are interlaced at right angles to form a fabric or cloth. Other methods are knitting, crocheting, felting, and braiding or plaiting. The longitudinal threads are called the warp and the lateral threads are the weft or filling.



***THE
STORY OF
WOOL***
BY THOMAS



FIND SHAWN
THE SHEEP ON
EVERY PAGE

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PAGE 12. A DRAWING OF

A SHEEP





SHEARING Washing

Sheep shearing is the process by which the woollen fleece of a sheep is cut off. The person who removes the sheep's wool is called a shearer. The annual shearing most often occurs in a shearing shed, a facility especially designed to process often hundreds and sometimes more than 3000 sheep per day.

Sheep wool is dumped in a big pot filled with cold and hot water. The water is soapy and the soap takes the grease out of the wool.

SELECTING

When people select sheep to help them to select a good sheep to shear. If they shear the wrong sheep they will not get a lot of wool. Just say if you had shorn a sheep yesterday, and then you shear it 2 days later, you will probably not get a lot of wool. They would be lucky to get wool at all. If you select a sheep that hasn't been shorn in around 3 weeks and a half you would have a lot more wool than shearing a sheep that was shorn a few days ago.



SHEARING

After you have selected the sheep you can start shearing the sheep's wool off its body. When you shear a sheep you need to be super careful not to cut the sheep instead of the wool, and if you cut the sheep too much it may die. When you shear the sheep there are many types of shears that you can use, including Electric Shears, Aplique Scissors and a few others. With shearing some places have robotic shearers but that is a horrid idea because if the sheep moves it may get really hurt.



CARDING

Carding is a process that people do before dyeing wool to untangle that wool, so they don't have to dye it again because they missed the inside of the wool because it was knotted. When you card wool there are a few ways to do it, like you could do it by hand, a flick carder, hand carders. You can also have a machine do the carding, which is more popular in wool factories, and you could cut it into two pieces but only do it if you can't untangle it by hand or machine and there is a thing called a drum carder. There is also a carding device that is not a machine that you use by hand, and it is called a carding board.



LANOLIN

Lanolin is a greasy substance that you find in sheep wool. Lanolin is washed out of wool to make skincare products. Most skin products have lanolin in them like some shaving creams have lanolin in them, some lip balms and other household products. Lanolin is also known as sheep fat but this is not true as lanolin lacks glycerides (glycerol esters). Lanolin is also used for lubricants, rust preventive coatings, shoe products and many more commercial products. Some sailors even use lanolin on their propellers. Lanolin is also used on some garments to make them water and dirt repellent.



DYEING

After you card and wash the wool you can start the dyeing process. When you dye the wool you can use a machine to dye it or you can do it by hand but it will be a lot harder to do, while not getting the dye on your hands, so machine dyeing is cleaner and easier. When you dye wool you can dye it any colour as long as you have the dye, you could even make a custom colour for yourself like a mix between purple and green. Some places even will dye wool and send it to you as yarn and it will be your custom colour.



SPINNING

After these steps you can now spin the wool with a spindle. When you spin wool you get wool that looks better and is neater than wool not being spun. If you spin wool there are many tools and ways to spin the wool like a drop spindle. You can do it by machine, by hand (much harder) and in the old days they would do it by a wooden machine. It's what sleeping beauty pricks her fingers on.





THE STORY OF WOOL

Written by Lila Guerin and Charlotte Schroder

Illustrated by the Internet

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Products

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THE SHEEP'S STORY

I was grazing in the nice luscious grass, when I was taken from the one love of my life to be shorn. I was stripped of my wonderful wool. I was left alone. Naked. Luckily, my wool grows back very quickly so I won't be cold for long.

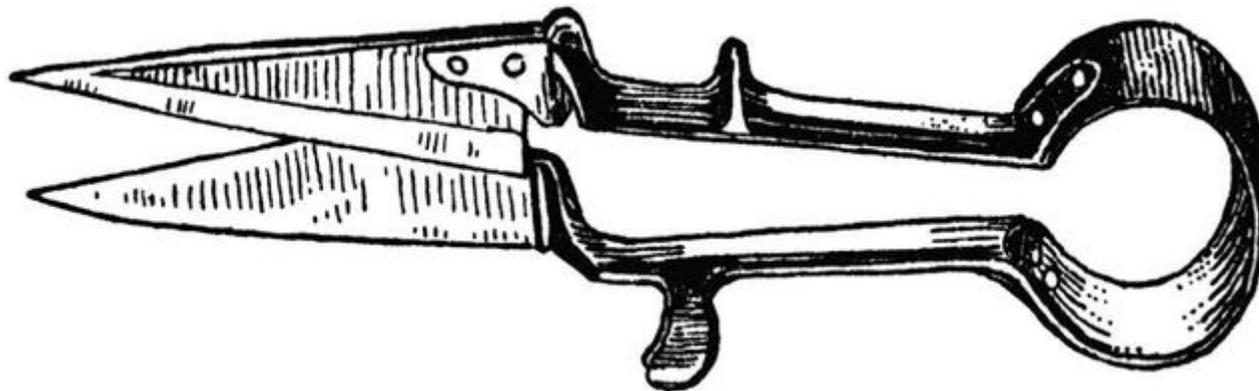


BEFORE



THE SHEARING OF THE SHEEP

The sheep is shorn with either a pair of shears (look like scissors) or a razor. The shearer must try not to hurt the sheep. All of the sheep's wool is shorn off.



AFTER



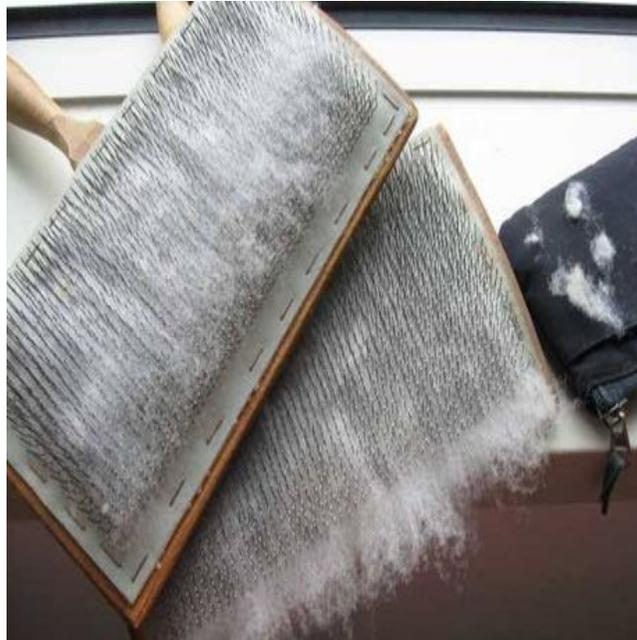
WASHING

You wash the fleece to clean it. There is lanolin in fleece which makes it all greasy. You clean it to get out the dirt and lanolin. You can use detergent.



CARDING

You card the wool to make it all smooth. The tool you card with is like a dustpan, but with bristles. Carding helps get the knots out of the fleece. After you have finished carding, the fibres are all smooth.



DYEING

You dye the wool any colour. People dye the wool because some people don't like natural colours. You don't have to dye the wool.



SPINNING

You spin the wool to make it into yarn. It is very tight and strong. You can use a spindle, which is made out of wood.



FINAL INSPECTION

Someone will inspect the wool to make sure it is good for selling and how much it sells for depending on its quality.



MAKING WOOLLEN PRODUCTS

You can make the finished wool into anything. From beanies to socks. The wool can be delivered as yarns. If you buy the wool, you can do whatever you want with it. The good thing is that wool is really warm and light!



WEARING (BY THE SHEEP WHO GOT SHEARED A COUPLE OF PAGES AGO)

I am currently wearing a Gucci sweater from my wonderful wool. It was actually all worth it.



THE
END

