

4-H SEWING PROJECT REFERENCE GUIDE



Updated March 2014



Agriculture and
Agri-Food Canada

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The 4-H Motto
“Learn to Do by Doing”

The 4-H Pledge
I pledge
My Head to clearer thinking,
My Heart to greater loyalty,
My Hands to larger service,
My Health to better living,
For my club, my community, and my country

The 4-H Grace
(Tune of Auld Lang Syne)
We thank thee, Lord, for blessings great
on this, our own fair land.
Teach us to serve thee joyfully,
with head, heart, health and hand

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Compiled by: Jade Reeve

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4-H SEWING PROJECT

Introduction

People wear clothing for a number of reasons: modesty, survival, fashion and identification. Clothing provides clues as to who we are and what we do and allows us to express our identity. Choosing to sew our own clothes and to sew projects for the home has numerous benefits. Knowing how to sew allows us to:

- Make the clothes and accessories we want
- Save money
- Learn a new hobby
- Have fun
- Make things for other people
- Feel a sense of accomplishment
- Alter, repair and recycle clothing


The topics within the sewing project are divided into three levels: introductory, intermediate, and advanced.


Introductory topics are designed for members with little or no sewing experience and will teach the basics of sewing by hand and by machine. After completing the introductory topics of the sewing project members will have the skills necessary to sew clothing, accessories and items for the home.

The intermediate topics build on the skills learned from the introductory topics and are designed for members who are able to read and follow patterns and are ready for more challenging projects. By completing the intermediate sections of the sewing project members will have the skills necessary to sew clothing, accessories and items for the home.

The advanced topics encourage participants to continue to develop their skills in order to learn how to sew tailored clothing as well as to learn how to personalize their wardrobe in order to reflect their own personal style. By completing the advanced topics, members will have the skills necessary to sew clothing, accessories and items for the home.

Core topics that all members must complete have been identified for each level (and are marked

with a  icon. **Supplementary topics** are included to help Leaders to provide variety for their club and provide flexibility so content can be included to suit the skills and interests of club members.

These topics are marked with a  icon.

Sample agendas have been included at the beginning of each major section as a resource.

Objectives

Upon completing the introductory topic, members should be able to:

- Know the basic notions needed to start sewing
- Understand the parts of the sewing machine and how they work
- Know how to sew by hand
- Prepare fabric for sewing
- Know how to use a sewing machine

4-H SEWING PROJECT - INTRODUCTION

- Know how to press and iron
- Understand basic laundering techniques
- Make basic pattern alterations
- Layout and cut the pattern from fabric
- Follow a pattern when sewing

Upon completing the intermediate topics, members should:

- Understand the parts of the serger machine and how they work
- Recognize different kinds of needles used in sewing machines
- Be familiar with different presser feet for the sewing machine
- Know how to make buttonholes and insert a zipper
- Understand how to fit a garment
- Know how to alter a pattern and make simple seam alterations
- Understand the use of interfacing
- Know how to finish seams

Upon completing advanced topics, members should:

- Know how to recycle and upcycle fabric and clothing
- Understand the basics of sewing for people with special needs
- Be familiar with linings, interlinings and underlinings
- Have knowledge of basic tailoring techniques
- Know the basics of patchwork
- Understand how colour, texture and line can be used to their advantage
- Know how to design their wardrobe

How to get the most from the 4-H experience

- Attend club meetings
- Complete activities
- Listen and ask questions
- Participate in discussions
- Achievement requirements
- Complete your record book

Equipment required

Each member will need:

- Access to a sewing machine that is in good working condition
- Sewing notions: scissors, pins, sewing needles, sewing machine needles, measuring tape, bobbins, seam ripper, all-purpose thread
- An iron and ironing board

SEWING SAFETY



For introductory, intermediate, and advanced levels (Core)

This section has been adapted from the Nova Scotia 4-H Leader's Manual Sewing Project – 1997.

Planning for a safe sewing project is important and that's what this section is all about. Members are encouraged to practice these points throughout their project year.

Sewing Box:

Keep all the sewing supplies in a sewing box. Use a sturdy box (hard plastic or shoe box) rather than a plastic grocery style bag. Sharp objects can pierce the bag causing injuries or lost items.

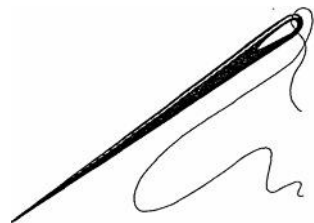
Cutting Supplies:

- Scissors or Shears– Sharp scissors are a must for cutting or trimming fabric. Keep fingers away from the blades when cutting. Keep scissors or pinking shears closed and stored in a case, when not in use. When you pass them to another person, always pass the handles first.
- Rotary Cutter– Use the special plastic mat so that the surface under the fabric is not damaged. The blade is sharp so do not put your fingers too close. When finished with the cutter be sure the guard is in place, covering the blade.



Pins and Needles:

Keep pins & needles in a safe and convenient place. Never put them in your mouth because you may swallow or inhale one, especially if you are startled or move suddenly. Putting them in your clothing can cause scratches or they can stick into you. Always check carefully for pins on the floor, a person or pet may get one stuck in their foot.



Carry or store pins in a tightly covered container or a pincushion. Pins will easily stick to a magnetic pincushion or pin catcher placed near the sewing machine.

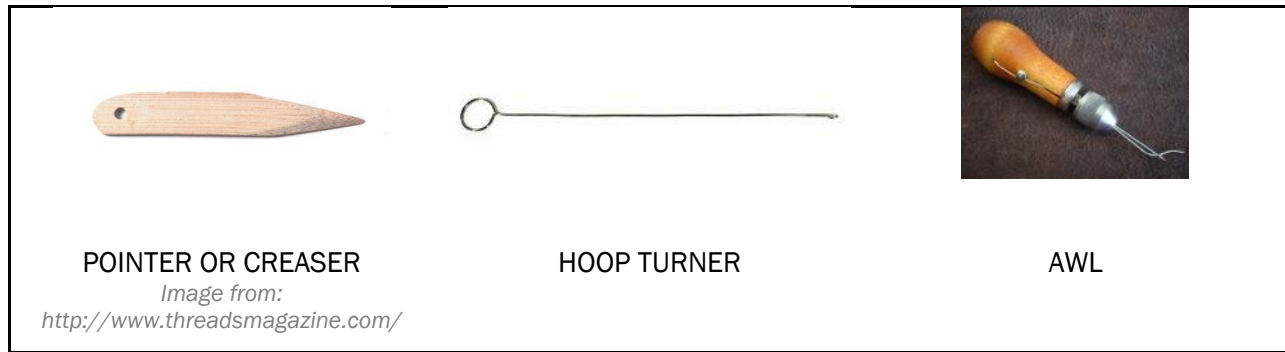
The traditional pincushion (tomato shaped) is good; however, once the fabric covering starts to wear, the pins and needles easily fall out.

A proper fitting thimble prevents the needle from puncturing your fingers. A needle threader helps prevent eyestrain if you have difficulty threading the needle.

Sharp Sewing Aids:

Tracing wheels are available with smooth or serrated edges. When marking tracing lines, keep your fingers away from the blades.

The pointer or creaser, awl and hoop turner are all sharp objects so be careful not to puncture yourself with them. When not in use store them in safe place.



A seam ripper can be used to remove stitches. Never use razor blades; they are too dangerous.

Sewing Machine and Serger:

Follow these steps to prevent any damage or costly repairs.

- Before sewing, make sure the machine/serger is in good working condition and you understand how to use it properly.
- The machine/serger should be placed on a sturdy table or cabinet, set close to an electrical outlet. Use an extension cord only temporarily. Keep the machine's cord out of people's way.
- Make sure the light is working to prevent eyestrain.

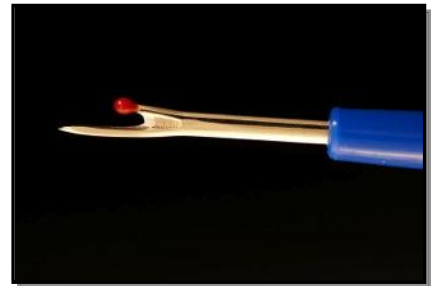


Figure 1: Seam Ripper - Image from http://commons.wikimedia.org/wiki/File:Seam_ripper.jpg

Machine Use:

- Use slow speed when learning how to use the machine.
- Keep fingers away from the machine's needle or cutting blades on the serger.
- Do not lean your face too close over the needle, if it should break a piece could fly up into your eye and cause an injury.
- Use pins with large heads so they won't get lost in the fabric. Remove pins as you get close to them to prevent bending of the pins, the needles breaking, or damage to the serger blade.
- When finished sewing, make sure to turn off the light and put the needle and the pressure foot down. Disconnect the cord from the wall outlet and then from the machine. This ensures there is no extra power that might cause a problem. Close the machine carefully and replace the cover.

Pressing Safety:

- Handle your iron with care. If it is a steam iron fill with water before plugging it in. Do not overfill because it could boil over possibly scalding your arm or hand. Use distilled water if recommended by the manufacturer. Only touch the iron on the handle. Keep hands away from steam and soleplate, you could get a painful burn. Do not let the cord dangle off the ironing board. It could get caught and pull the iron off onto you or onto the floor. If the iron does fall off, unplug it and have it checked before using it again. A fall can cause the insides of the iron to become loose so it will not work properly and cause a fire.

- Rest the iron on its heel on a solid surface. Leaving it flat on its soleplate on the ironing board can scorch the cover or start a fire if left alone long enough.
- Keep the soleplate and the steam holes of the iron clean. If the steam holes contain dirt it could spit causing it to burn or soil the fabric.
- When finished ironing, turn it off and unplug the iron. When cool, store it in a protected place.



Lighting:

- It is important to have proper light when you are working. It will prevent eyestrain and it is easier to see what you are doing. Without the proper light you could stick a pin in your hand or finger; burn yourself with a hot iron or cut yourself with a sharp object.

Electrical Safety:

- Always unplug electrical equipment before cleaning or repairing it.
- Never plug two or more pieces of equipment into one outlet. This overloads the fuse, producing heat, which can destroy the wires, causing a fire. If fuses blow or circuit breakers trip repeatedly, call the electrician.
- Never use frayed or cracked cords; exposed wires can cause a fire or give you a shock.
- Use extension cords temporarily. Never run them under doors, carpets, rugs or mats. If you must use an extension cord, never use one that is smaller in diameter than the cord of the electrical appliance you are using.

THE BASICS

THE BASICS - Sample Meeting Agenda

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Public Speaking Activity	Activity - Get to Know Each Other Game (of Leader's choice)	10 min
Parliamentary Procedure	Elect executive, hand out Record Books and discuss club requirements. Fill out club and member information in Record Books, and have each member fill out their "Member Expectations and Goals" page.	20 min
Topic Information	Discussion: Sewing Safety Basic Sewing Notions and the Sewing Machine & its Parts	20 min
Activity Related to Topic	I've Got a Notion	30 min
Topic Information Discussion	Basic Sewing Techniques (includes practice of sample stitches)	20 min
Wrap up, Adjournment & Social Time!		5 min
Take Home Activity	Everything in its Place	

1. Tools of the Trade - Introductory (Core)

There's lots to learn as we begin to sew so let's get started!



Every hobby has its own specialized tools and terms and sewing is no different. It's important to understand the terms and to know how the tools and equipment works before we start to sew.

What we'll learn in this section

In this section we will learn about:

- The basic notions needed to start sewing
- The parts of the sewing machine and how they work

Basic sewing notions

When looking at the notions in the fabric store it is easy to get overwhelmed by all the choices. Don't panic! There are only a few notions that are necessary to have when learning to sew. Other notions will be added as we learn more skills and take on more complicated projects but for now we just need scissors, pins and a pincushion, sewing needles, sewing machine needles, measuring tape, bobbins, seam ripper and all-purpose thread. It is also useful to have a container to keep all our notions in one place.

Hand sewing needles

Hand sewing needles have different thicknesses, lengths, points and eye sizes. There are numerous types of hand sewing needles and the most common are sharps, betweens, embroidery or crewel and ballpoint. The common hand sewing needles are available in sizes from 1 – 12, 1 being the thickest and longest and 12 being short and fine. Each type of needle is designed to work with specific fabrics and threads.

- Sharps – used most often for hand sewing. They have a medium length and a sharp point and a round eye
- Betweens – also known as quilting needles, they are a shorter needle with a small, round eye
- Ballpoint – have a rounded point and are used for knits
- Embroidery/crewel – the same length and sharp point as a sharp needle but they have a longer eye which allows for thicker thread or ribbon



Figure 2: Basic sewing notions - from <http://www.simplymodernmom.com/2010/05/basic-sewing-tools-and-supplies/>

Sewing machine needles

The needle may be the most important part of the sewing machine. Using the proper combination of needle and fabric will make a difference in the quality of your work. It is also important to make sure your sewing machine needles are not damaged as that could cause torn fabric or skipped stitches. A good rule of thumb is to change your needle before you start each project.

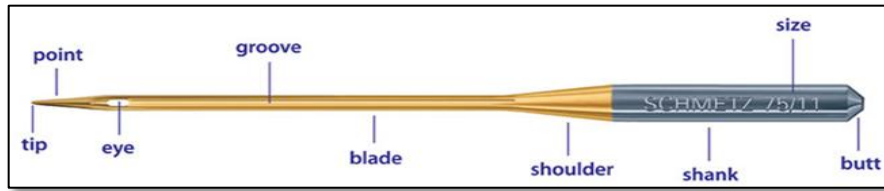


Figure 3: Anatomy of a sewing machine needle

There are six basic sewing machine needle types:

1. Universal – Has a slightly rounded point and is used for both knits and woven fabrics
2. Ballpoint – Has a rounded point, which pushes aside fabric threads instead of piercing them. Used for sewing heavy, loose knit fabrics.
3. Stretch – Similar to the ballpoint needle but the point is a little less round. For sewing knits and knit fabrics containing lycra.
4. Sharp - Pointed needle used on woven fabrics such as microfiber, polyester and silk
5. Leather – Has a cutting point and cuts the fabric rather than simply piercing it. Is used on coarse materials such as leather and vinyl.
6. Twin or Triple – There are two or three needles on one shaft and can come in a variety of points. Used for decorative stitching, topstitching and for hemming T-shirts and fleece fabrics.

The Schmetz needles website (<http://www.schmetzneedles.com>) has a very useful guide to help decide which needle should be used with each type of fabric.

Cutting Tools

Good quality cutting tools are an important part of your sewing tools. They will last for years if used only for cutting fabric and sharpened regularly. The following tips are good to remember when using your cutting tools

- Never cut more than two layers of fabric at one time and be sure to keep all pins out of the way.
- Keep your shears oiled. Place a drop of oil whenever necessary near the screw.
- Keep the joint free from lint and fluff.
- Never try to sharpen scissors or shears yourself- its best to have them professionally done. To ensure accurate cutting, they should be sharpened at the first sign of dullness.

The following cutting tools are the most common ones used when sewing:

Rotary Cutter and Cutting Mat

- The rotary cutter consists of a blade attached to a handler and looks much like a pizza cutter. The mat is made from a material that self- heals and protects your table from the blade. Instead of pins, weights are used to hold the fabric in place while you are cutting. Rotary cutters work well with all sorts of fabrics and are particularly useful in cutting out heavier fabrics, such as leather and synthetic suede.

General Sewing Scissors

- About 8 -15 cm (3-6”) in length are good for trimming threads and clipping and slashing seams. Scissors should have sharp points and round handles that are both the same size.

Bent-handle Dressmaker Shears

- Dressmaker shears are 18 - 20 cm (7-8”) long and are the best choice for cutting fabrics. To cut with shears, put your thumb through the small handle and two or three fingers through the large handle. Make long even cuts by opening the shears wide each time you cut. Keep the blade on the table so the fabric is not lifted when cutting out a pattern.

Pinking Shears

- Pinking shears cut a zigzag edge and can be used for finishing seams and hem edges. Never use them to cut out your pattern because they do not make an accurate cut. Pinking shears should be about 22 cm (9”) in length so that they are strong enough to use on heavyweight fabrics.

Stitch or Seam Ripper

- Seam rippers are generally between 10-15 cm (4-6”) long and consist of a u-shaped blade attached to a handle. A seam ripper makes for easy removal of stitches and correction of mistakes. It is important to be careful when removing stitches in order that the seam and fabric is not cut.

Sew4Home (<http://www.sew4home.com/tips-resources/buying-guide/sewing-101-top-five-cutting-tools-sewing>) has a very good guide to purchasing cutting tools.

Measuring tools

These are used for taking body measurements, checking grain lines, seam widths and the depth of cuffs and hems. Measuring tools include:

Tape Measure

- Choose a tape measure that is flexible, made of a material that will not stretch or tear, and has metal tips at each end. Your tape measure should be 150cm or 60” in length.

Seam Gauge

- A seam gauge is a 15cm (6 inch) ruler with a moveable indicator, handy for measuring short distances. A 15 cm ruler will also do or you can make a seam gauge from heavy cardboard by cutting it at the depth for a seam or hem.

Metre Stick or Yard Stick

- A metre stick is useful for marking straight long lines and measuring long lines and hems. Be sure the stick has a smooth finish and edges so that it will not snag your fabric.

Marking Tools

These are used to transfer marking (for darts, tucks, pleats, etc.) from a paper pattern to fabric. The following tools are the most frequently used when marking fabric:

Tracing Paper and Tracing Wheel

- Tracing paper or tracing carbon comes in a variety of colours and is used to trace darts, etc. on to the wrong side of fabric. The tracing wheel looks like a small pizza cutter and can have either a smooth or serrated blade. Choose a colour of tracing paper close to the shade of the fabric, but different enough so that you can see it distinctly. Try the carbon first on a scrap of fabric to make sure marks don't show through on the right side.

Fabric Markers

- Fabric markers can be water-soluble or evaporating pens or tailor's chalk, which comes in a variety of forms such as pencils and squares.

Skirt Marker

- Skirt markers are used for marking hems and checking skirt lengths. They can be used with chalk or pins or both as well and they have an adjustable slider. Markers using pins are most accurate but they require the help of a second person. The bulb type with powdered chalk allows you to work alone. A skirt marker should have a sturdy base and should be heavy enough to remain firmly on the floor.

The sewing machine and its parts

Sewing machines vary from model to model but they generally look like the diagram below. It is important to check the manual for information that is specific for your machine. Your manual will also explain how each part of your machine works.

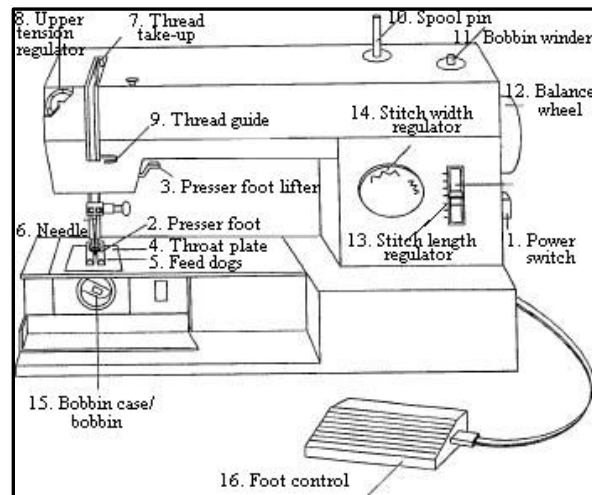


Figure 4: Parts of a sewing machine - from <http://msucares.com/pubs/images/p1302-16.htm>

Let's find out what makes the sewing machine "tick!" While sitting in front your machine, lift the presser foot, then put your hand on the balance wheel and turn it. You will notice the needle moving up and down into the bobbin case – if our machine were threaded, this motion would have made a stitch. Most machines today are electric and will have a foot or knee control. The amount of pressure on the control will make the machine go at whatever speed you want. A slow, but even speed is best. Older machines have a treadle, which is a platform that must be worked back and forth with your foot to create power.

Check out this link from How Stuff Works (<http://home.howstuffworks.com/sewing-machine1.htm>) to see how the parts of your machine all work together to make a stitch.

Presser feet for the sewing machine

Presser feet are attachments for your sewing machine and they work by putting pressure on the fabric as it is fed under the needle by the feed dogs. There is a huge selection of presser feet and each foot is designed for a specific type of sewing. The picture below gives just a sample of the feet available. Not all machines will be able to use each kind of foot so it is important to check your manual to find the feet that will work with your machine.

Figure 5: Presser feet -
http://sell.lulusoso.com/upload/20120308/presser_feet_for_household_sewing_machines.jpg

The most commonly used feet such as the all-purpose foot, the straight stitch foot, the zipper foot and the buttonhole foot are often included with a new sewing machine.

The **all-purpose foot** is the foot used the most often and you most likely used it when you made the pyjama pants. It has a wider opening where the needle goes through which allows for zigzag stitching as well.



Figure 6: All-purpose foot, credit:
<http://sewmamasew.com/blog2/2009/06/feet-feet-feet/>

The **straight stitch foot** looks a lot like the all-purpose foot except it has a much smaller opening for the needle. This smaller opening allows for better control of your fabric especially when working with finer fabrics.



Figure 7: Straight stitch foot Credit:
<http://www.craftpassion.com/2011/06/sewing-machine-foot-an-introduction.html>

The **zipper foot** allows you to sew very closely to the edge of zippers, piping or anything else that might be too thick for a regular foot. They are usually adjustable to be able to sew from the right or left hand side.

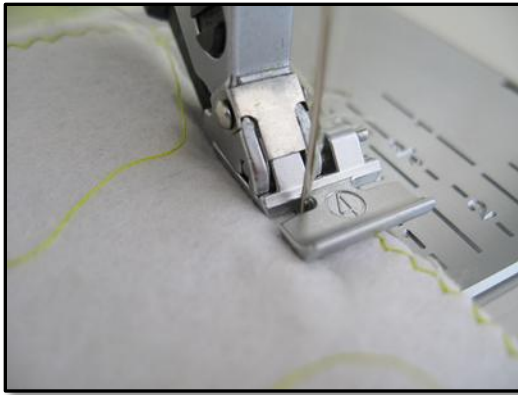


Figure 8: Zipper foot Credit:
<http://sewmamasew.com/blog2/2009/06/feet-feet-feet/>

The **buttonhole foot** is adjustable and makes buttonholes that are just the right size for the buttons you are using for your project.



Figure 9: Buttonhole foot Credit:
<http://sewmamasew.com/blog2/2009/06/feet-feet-feet/>

You can read more about presser feet on these links: “Feet, Feet, Feet” from Sew, Mama, Sew (<http://www.sewmamasew.com/2009/06/feet-feet-feet/>) and “Sewing Machine Feet” from <http://www.the-sewing-partner.com/>. The website for your brand of sewing machine is a good place to look for information as well.

2. Basic Sewing Techniques - Introductory (Core)



Construction Zone

Now that we have gathered our tools together, it's time to put them to work.

What we'll learn in this section

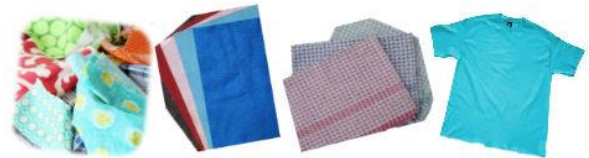
In this section we will

- Learn to sew by hand
- Prepare our fabric for sewing
- Learn to sew by machine
- Sew a pillow cover
- Sew a drawstring bag

Sewing by Hand: Practice with fabric scraps – simple stitches

Learning to sew by hand is important for several reasons: for sewing on buttons, for making simple repairs quickly, and for adding a creative touch, such as embroidery. The art of sewing, at one point, was done entirely by hand. The running stitch, blind stitch and slip stitch are the most often used hand sewing stitches.

To begin sewing by hand, you'll need a needle, thread and scissors and a piece of fabric. Anything will work for this step – a scrap of fabric from another project, felt, an old t-shirt or dishtowel. Even a piece of paper will work if you can't find a piece of fabric.



How to thread a needle

Cut a length of thread from the spool not more than 50cm (19 1/2") long. A longer piece may tangle or knot as you work with it. Cut the thread on an angle using sharp scissors. Do not bite or break the thread from the spool because this leaves a shaggy end that will be difficult to thread through the needle. Hold the needle in your left hand if you are right-handed, or right hand if you are left handed, with the eye turned so you can see light through it. Slip the end of the thread through the eye of the needle and pull it through from the other side.

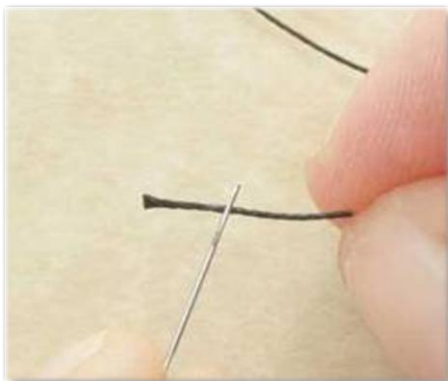


Figure 10: Threading a needle

Knotting the thread

Always use a single thread for hand sewing unless the directions say otherwise. Knot the same end you put through the eye of the needle. Using your left hand if you are right handed, or right hand if you are left handed, hold the thread from the cut end between the thumb and the first finger. With your working hand, bring the thread up and around the fingertip crossing it over the thread end. With your thumb holding the crossed threads and your working hand holding the remainder of the thread taut, gently move your thread along your finger. This action twists and rolls the thread end around to form a loop on your finger. Continue moving your thumb along

your finger until the loop slides off your fingertip, and then bring your middle finger down to hold the loop. Pull the longer thread in your right hand to draw up the loop and form the knot.

Some sewers prefer to make the loop and knot with the opposite hand. It becomes a matter of habit. Use whichever hand is more comfortable for you.

The running stitch

The running stitch is used for basting, easing, gathering and mending where there will be no pull on the fabric. Take several stitches forward, weaving the needle in and out of the fabric. The size of the stitch depends on the purpose of the stitching - longer stitches for basting or temporary stitching and shorter stitches where sewing will be permanent.



Figure 11: The running stitch

The blind stitch

The blind stitch is used when you don't want the stitches to show. This stitch is often used for hemming or for closing the opening of a stuffed toy. Start the hem on a seam. Bring the needle up through the hem edge. Take a stitch in the garment directly opposite and barely outside the hem catching only one or two threads of the fabric. Bring the needle up through the hem edge about 6mm - 1.3cm (1/4" - 1/2") apart. The thread should not show or pull on the right side.

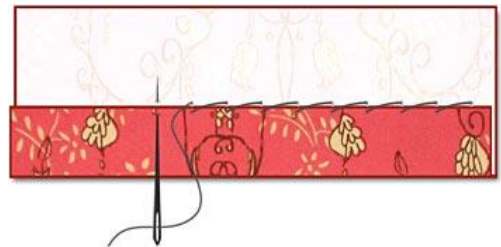


Figure 12 - The blind stitch

The slip stitch

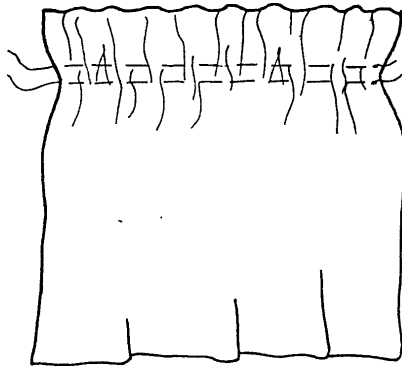
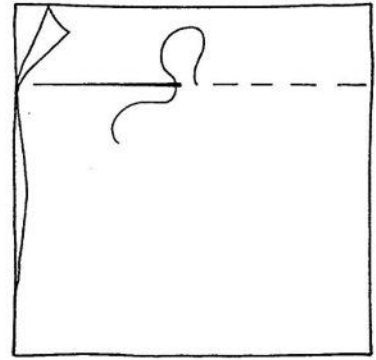
The slip stitch makes an almost invisible seam between two folded edges of fabric that have their edges folded under 6mm- 1.3cm (1/4 - 1/2"). Take a stitch through the garment picking up only one or two threads and then baste through the folded edge. Continue around the entire hem. The stitch should be almost invisible on the right side of the garment.



Figure 13: The slip stitch (illustrations of stitches from <http://www.sew4home.com/tips-resources/sewing-tips-tricks/hand-sewing-basics>)

The Basting Stitch

Work from right to left. Start with a knot. Make a running stitch 6 mm (1/4 in.) long and 6 mm (1/4 in.) apart. End by taking a double stitch. This is used as a temporary stitch to hold two or more layers of fabric together. Refer to Simplicity Sewing book: 1975 edition pg. 49, 1979 edition pg. 100.



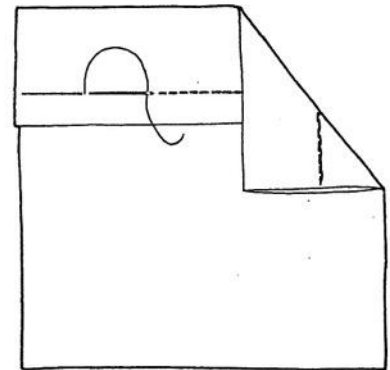
The Gathering Stitch

Working from right to left, start with a knot. Do the first row on seam line (1.5 cm/ 5/8 in.). Do the second row 1 cm (3/8 in.) from edge. Pull the ends left free to gather material. Knot the free ends together to prevent from coming out.

Backstitching

Work from right to left. Fasten thread with three small stitches in one spot. Insert needle back at the start of the first stitch and bring point of needle out 3 mm (1/8 in.) to the left of where the thread came out. Insert needle at start of second stitch. Secure end by making three small stitches in one spot. Stitches on back will be twice as long (6 mm/1/4 in.) as those on top. Stitches on top should join and look like machine stitching.

Refer to Simplicity Sewing book: 1975 edition pg. 50, 1979 edition pg. 137.



Sewing by Machine: Practice on paper - straight lines and circles

To begin sewing on your machine you will need scissors, thread, a bobbin, paper and some fabric scraps. We'll start by stitching on a sheet of lined paper without thread. Turn the balance wheel to lower the needle into the paper on the first line-lower the presser foot and start stitching on the line. Don't worry if your stitching is a bit crooked. You will find that, with a little practice, fewer stitches will stray off the straight line.

Threading your machine

The next step is learning to thread the machine. There are two threads on your machine, the upper or spool thread and the lower or bobbin thread. With the help of your project leader or sewing machine manual, learn to wind and thread the bobbin and thread your machine.

Once your machine is threaded and the bobbin is in place, turn the balance wheel until the needle goes down and back up again. There will be a loop between the toes of the presser foot. Draw the bobbin thread up and pull it and the upper thread back between the toes of the presser foot. The thread should be in this position before you start stitching.

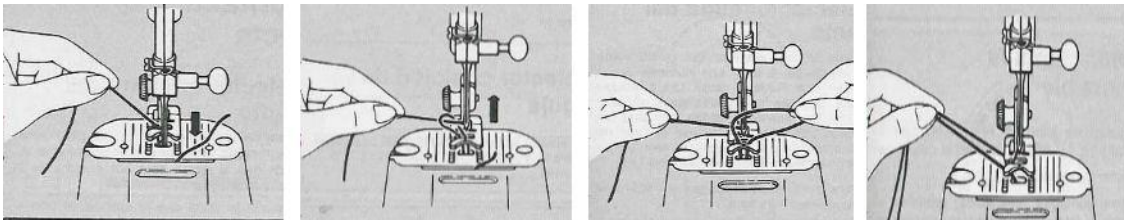


Figure 14: Picking up the bobbin thread Credit:

<http://cdn.instructables.com/F1G/BQ4S/HLUEP27U9BZ/F1GBQ4SHLUEP27U9BZ.LARGE.jpg>

Place your practice fabric on the machine so that most of it is to the left of the presser foot and on the machine or table so the weight will not drag on the stitching. Turn the balance wheel to put the needle down exactly where you wish to start. Slowly lower the presser foot. Guide the material with your left hand. Your right hand can assist once the machine is started. The thread ends should be held with your left hand until you have sewn a few inches to ensure that they don't become tangled in your machine.

Check the Tension

After you've sewn a few inches, check the tension (tightness of the thread). There are two tensions on a machine, upper and lower. The upper controls thread from the needle; the lower threads from the bobbin. If the tension is correct, the stitching should look the same on both sides of the fabric. Your sewing machine manual will describe how to correct tensions.

Finishing Off

To stop sewing, slow down when you are near the end of your stitching line. Always stop with the thread take up bar at its highest point so the thread won't pull out of the needle when you begin to sew again. Lift the presser foot and push the fabric back, snipping threads so about 15cm (3") of thread is left between the toes of the presser foot, and you're all set to start again. Secure stitching by using the reverse mechanism on your machine and backstitch at the beginning and end of each seam for about 2.5cm (1"). Once you are finished your sewing, trim off thread ends.

Straightening and preshrinking fabric

Before you cut out your fabric, you will need to be certain that the grain is straight. This is important in order that your finished garments fit and hang well. The grain of a fabric is the direction of the yarn in woven fabrics. The lengthwise yarn or warp runs vertically, up and down, and is called the lengthwise grain. The crosswise yarn (weft or filling) runs horizontally, from side to side, and is called

the crosswise grain. At the outside of the lengthwise yarns you will find the selvage where the warp yarns have been woven very close together for approximately 0.6-1.3 cm (1/4 -1/2).

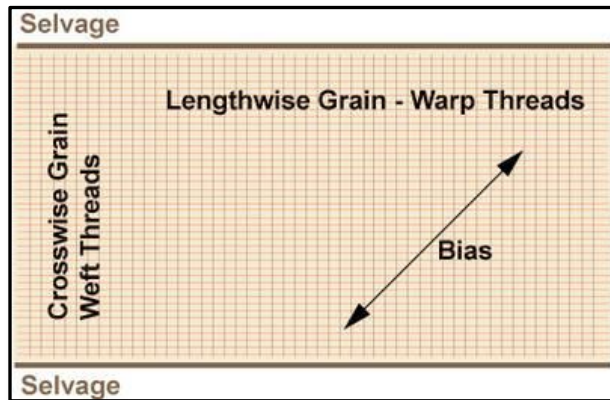


Figure 15 Fabric grain. Credit: http://quilting.about.com/od/fabricembellishment/ss/fabric_grain.htm

The threads of a fabric are usually straight when they are woven, but sometimes they become twisted because the fabric is handled so much after it is taken off the loom.

To straighten the grain we need to first use one of the following methods to straighten the fabric ends to ensure a single weft thread is running along the cut edge from selvage to selvage:

- Pull a crosswise thread gently and cut along this line
- Unravel thread until one thread runs the width of the fabric
- Clip the selvage and carefully but firmly tear the fabric from selvage to selvage. Use this method only on firm fabrics that will not stretch or snag.

Now fold the fabric in half lengthwise with the selvages meeting. The cut edge and the selvage should form a perfect right angle, and the raw edges should match from the fold to the selvage. This means that the fabric is on grain.

If the fabric is still not on grain, try unfolding it and stretching the fabric on the bias in the direction of the short corner. If the fabric is very crooked, dampen it first before trying to pull it. It may be impossible to straighten a fabric that has an easy care finish that keeps it from wrinkling because the finish locks the grain in position permanently. Use the fabric as it is, even though the threads are not at perfect right angles.

Straightening knit fabric that is off - grain may be next to impossible. Check to make sure knit fabric is straight when you buy it, or if you find it is off-grain when you cut it out, the store where you bought it should give you a refund or allow you to exchange your fabric.

Preshrinking washable fabric before sewing is a good idea to prevent shrinking of your garment from washing and steam ironing. Check the manufacturer's label or the end of the bolt to see if the fabric had been preshrunk. To preshrink fabric, launder it following the washing instructions on the care label. Most fabrics that have to be dry-cleaned do not have to be preshrunk. Wool requires a special method of preshrinking.

Pressing

Pressing is essential for constructing a neat looking article or piece of clothing. Pressing makes the difference between a garment that looks professionally constructed and one that doesn't. Always press as you sew. Pressing tools are very important pieces of equipment for sewing.

What we'll learn in this section

In this section we will learn about:

- The tools needed for pressing
- The difference between pressing and ironing
- How to press and iron

Tools for pressing

We need just a few basic tools when pressing and ironing:

- Iron - A good iron is a "must" because each seam or part that has been sewn must be pressed before the next sewing step. A combination steam and dry iron is very useful. To keep your iron in good working order, follow the instructions in the manual.
- Ironing Board – An ironing board should be adjustable to various heights and have a firm, clean padding with a tight-fitting, heat resistant cover. An ironing board should also sit level so that it doesn't rock while you are ironing or pressing.
- Pressing cloth – A pressing cloth is used to prevent fabrics from taking on a "shine" when they come in contact with a hot iron. Your press cloth should be only dampened and used with a dry iron to provide steam and moisture.
- Tailor's Ham – A tailor's ham is not essential but is very useful when pressing areas that need shaping such as curved seams, darts, sleeve caps, suit collars and lapels.

How to press and iron

Pressing is not the same thing as ironing. Do you know the difference?

Pressing refers to placing the iron on the fabric firmly but lightly and lifting it each time you move it. Ironing is moving the iron back and forth along the grain line without lifting the iron up. This removes wrinkles from clothes after they have been washed. Pressing smooths and moulds your garment to give it the desired appearance. Whether pressing or ironing, be sure to move your iron along the grain line of the fabric or it may stretch out of shape.

For tips on buying an iron and keeping it in good working condition, check out the information at sewing.org.

Make It: – Envelope-style Pillow cover

(adapted from <http://www.sixsistersstuff.com/2012/08/easy-envelope-pillow-cover-tutorial.html>)

Now we are ready to create our first sewing project – a cover for a pillow. For this project you will need:

- Sewing machine
- Sewing machine needles
- Sewing pins
- Scissors
- Marking pencil

- .5m of pre-washed, straightened cotton or poly/cotton blend fabric
- Thread to match fabric
- 41cm (16") square pillow form
- Measuring tape

Making the pillow cover:

1. Carefully measure and mark a rectangle on your fabric that is 41cm x 92cm (16"x36"). If you would like, you can draw this shape on a piece of paper and then place it on your fabric, pin in place and then cut it out.



Figure 16: Measuring the pillow cover

2. On each short edge fold under .25cm (1/4") and press. Fold over each end .25cm (1/4") again and press. Pin in place and sew along the pressed edge to make a narrow hem, being sure to remove the pins as you come to them. When sewing by machine, it is important to backstitch about 2.5cm (1") at the beginning and end of each seam. Backstitching means to go backwards over the stitching to reinforce seam ends so they will not unravel.



Figure 17: Making a narrow hem on each short end

3. Now lay the fabric with the wrong side up and with the long side towards you. Measure and mark 16cm (6 ½”) from one short end and 24cm (9 ½”) from the other short end. Turn fabric right side up and fold ends to the middle along the marks you made. Pin each side seam, and sew with a 1cm (½”) seam allowance. Trim the seam allowance at each corner.

4. Turn each side right side out.

5. Insert pillow form into cover. Enjoy!



Figure 18 - Fold short edges to middle



Figure 19 - Turn right side out



Figure 20 - Finished pillow

Make It: – Drawstring bag (adapted from <http://www.makeandtakes.com/simple-sewing-for-kids-drawstring-bag>)

Our second project is a drawstring bag that can be used to hold things such as a book, toys or even fabric scraps. We're going to make a bag that is 20cm x 15cm (8" x 6"). For this project you will need:

- Sewing machine
- Sewing machine needles
- Sewing pins
- Scissors
- Marking pencil
- Safety pin
- 43cm x 18cm (17" by 7") prewashed, straightened cotton or poly/cotton blend fabric
- Thread to match fabric
- Measuring tape
- Ribbon, string or yarn for drawstring

Making the drawstring bag:

1. Lay your fabric with the right side down. Fold over each of the short ends .25cm (¼") and press. Fold the short ends 2.5cm (1") and press and pin in place. Sew along folded edge being sure to remove pins as you come to them. This is going to create a casing to insert the drawstring of your bag.



Figure 21: Fold and sew short ends of fabric

2. Fold the fabric in half with the right side facing in. Pin and sew along the unfinished edges starting at the bottom and finishing at the stitching line of the casing you just sewed. You need this part open to thread your string through.



Figure 22: Sewing the sides of the bag

3. Turn your bag right side out.
4. Cut a piece of string, about 60cm – 90cm (24" – 36") feet long. Tie a knot at one end and attach a safety pin to it.
5. With your safety pin as a guide, thread your string through the holes in the bag. Go through one side and continue on to the other side. Take off the safety pin and tie the two ends together.



Figure 23: Inserting a draw string

6. Your bag is ready to be filled!



Figure 24: finished bag

3. More Tools of the Trade - Intermediate (*Core*)



We're going to build on the skills we have already learned as well as introduce some new techniques and tools in this level.

Tools of the Trade

While you were at the fabric or the sewing machine store, you probably noticed a huge selection of tools and gadgets available for purchase. While they may not be needed when you first learn to sew, some of them will be very useful to you as you develop your skills.

What we'll learn in this section

In this section we will learn about:

- The parts of the serger machine and how they work
- The different kinds of needles used in sewing machines
- Presser feet for the sewing machine

The Serger

A serger will not replace your conventional sewing machine, but the two together will make an unbeatable team. A serger stitches, trims and overcasts in one step at almost twice the speed of a conventional sewing machine. Sergers have varying number of threads with which they sew; there are 2, 3, 4 and 5-thread machines. A serger is not capable of making buttonholes, installing zippers or topstitching but it is particularly handy for sewing things such as T-shirts, sweat suits and children's wear.



Figure 25: Serger Credit: <http://www.pfaffsewingmachines.co.uk/index.php/overlockers/pfaff>

Features of the serger

The serger has many of the same parts that a conventional sewing machine has as well as features that are unique to sergers:

- Stitch Length regulator (or feed regulator) – controls how long the stitch is.
- Stitch Width Regulator – controls how wide the stitch is.
- Pressure Regulator – a screw on top of the machine to adjust pressure foot tension.
- Hand Wheel – connects the Serger motor with the other moving parts.

- **Stitch Finger** – a metal prong that stays between the fabric and the thread until the stitch is completely formed. It can be either on the throat plate or on the presser foot.
- **Tension Regulator** - dials may be on the outside or set into the machine. They control the tension for each thread.
- **Needle(s)** – may have one or two needles and they can be conventional or industrial types. Industrial needles are less expensive and more durable than the conventional. When inserting a needle, the groove always faces the front.
- **Feed System** – consists of the feed dogs, needle plate and presser footwork working together to move the fabric evenly through the machine.
- **Knife Blades** – trim the excess seam allowance before the seam is stitched. There is usually an upper knife blade, which moves up and down, and a lower knife blade, which does not move. On some machines the upper knife can swing out of the way when trimming is not desired.
- **Loopers** – upper and lower loopers are used instead of a bobbin to form stitches. The looper threads do not go through the fabric but instead lock together with the needle threads.

Optional Features:

- **Free-Arm** – useful for children’s clothing, cuffs and pant hems.
- **Rolled Edge Attachment** – built-in on some machines for creating rolled edges.
- **Elastic Applicator Foot** – automatically stretches elastic as it is being serged.
- **Tape Sewing Foot** - a presser foot with a slot through which twill or other stabilizing tape can be fed while serging.

How a Serger Works

Sergers have a completely different mechanism for forming a stitch than conventional sewing machines. Serger stitches are produced through the action of needles and loopers instead of a bobbin. The needle never moves sideways and the machine never sews backwards. In a sewing machine, the needle thread is carried around the bobbin by the shuttle hook, catching the bobbin thread and pulling it up into the middle of the seam. On a serger, the needle thread is interlaced with threads carried by loopers. Each looper has an eye at the end, through which its thread passes. Since loopers do not have to pierce the fabric, they are thicker than needles and have a larger eye.

Slowly turn the balance wheel on your machine with the front door open while you watch the sequence for making a 3 or 4 thread overlock stitch with a two-needled serger.

1. The needles come down through the fabric and begin to rise. The lower looper moves across from left to right under the needle plate, picking up a loop of thread from behind the needles. The lower looper continues toward the right and the needles continue to rise
2. The upper looper moves upwards, catching a loop of thread from behind the lower looper. The upper looper continues upwards, moving to the left over the top of the fabric. The lower looper begins moving back toward the left. The needles continue upward, reaching the top of their stroke
3. The needles start downward, catching a loop of thread from behind the upper looper. The lower looper moves to the left as the upper looper moves to the right and down. The loops of the needle thread slip off the lower looper and the loop of lower looper thread slips off the upper looper.
4. The upper looper moves up and down, catching a loop of thread below the fabric, then moving up and over on top of the fabric so the needle can catch its loop. The overlock

stitch must be formed over the edge of the fabric so the upper looper can connect with both the lower looper and the needle without touching the fabric. Therefore sergers have knives to cut an even edge. The knives have a scissor-like action; the upper knife moves up and down against the stationary lower knife.

5. Finally, Sergers have stitch fingers. The stitches are formed around this finger. This along with properly set looper tensions keeps the edge of the fabric from crumpling. After the stitches form they remain on the finger for another 1.3 cm (1/2") or so.

Threading the Serger

While you are learning to serge it is best to use all-purpose serger thread. Threading a serger appears to be complicated but it really isn't that difficult. Start by turning the hand wheel to move the loopers to a position where they do not cross. Then just follow the threading guide in the instruction manual or on the door of the serger and thread the needles last.

Once the serger is threaded you can very quickly change thread colours by using the tying-on method. Clip the threads close to the spools. Put the new threads on the spool stand. Tie the old threads to the new threads, using a square knot. Run the machine slowly until the knots get to the needle. Clip the knots off and thread the needles. Bring all the threads under and slightly to the left of the presser foot. Run the machine slowly to form a chain. Check that the threads are snugly in the tension dials and then you're ready to serge.

Adjusting the Tension

Before sewing on your garment, always test the tension on a fabric scrap. If the tension is correctly adjusted, the loops will meet at the edge of the fabric. If the loops don't meet, check that the machine is properly threaded before changing the tension.

To adjust the tension, refer to the instruction manual. It probably has photos or drawings to help you decide which thread needs to have the tension adjusted. Keep a record of the tension settings you use for each project. This will save you time in setting the tension for future projects that use similar fabrics and threads.

To help you learn which thread forms which part of the stitch, use a different colour of thread for each looper and needle. Try some practice seams. Adjust each tension individually and see how it affects the stitching.

This link from [eHow](https://www.ehow.com/how_12148141_serger_threading.html) provides a video that may be helpful when learning how to use a serger.

Serge Ahead!

Unlike your conventional sewing machine, the presser foot on a serger can be left down all the time. For a smooth start, serge a 5 – 7.5 cm (2 – 3 inches) thread chain, then gently feed the fabric under the foot. If you're sewing very thick fabric or several layers, you may want to use your thumb to lift the front of the foot onto the fabric. When you get to the end of the seam, continue serging off the fabric and create another thread chain. Once you have some experience serging, you may want to try other methods of starting and finishing seams.

Stitches

Not every type of serger is capable of making the same stitches. What stitches your machine will do will depend on whether it is a two-thread, three-thread, three/four thread, four-thread or five-thread serger. Most models will be able to perform overlock and flatlock stitches and are capable of blind hemming.

Beware of Pins

When sewing with a serger you must be very careful not to hit a pin with the knives. If this happens, the pin can be cut in two, sending pieces of the pin flying through the air, which is a real danger. You may also have to replace the knives and have the machine's timing adjusted. Place pins vertically to the left of the presser foot. If you must put them horizontally, to hold pleats or tucks, remove the pins as they get close to the knives.

Oops!

No matter how careful you are with your sewing, sometimes mistakes are made. Overlock stitches look very permanent but they are actually easy to remove. Smooth out the tail chain and locate the needle threads. They will be the shortest threads in the chain. Hold the needle threads and push the looper threads close to the fabric, under the upper looper threads, cutting them as you go.

When re-stitching the seam, remember that it has already been trimmed so just guide the fabric along the edge of the knives. If the seam needs to be taken in you don't have to remove the old stitches first; simply sew the new seam and the original stitches will be trimmed away.

Securing Tail Chains

Unlike your sewing machine, a serger cannot backstitch. To keep stitches from ravelling, the tail chain must be secured. Use one of these methods:

- Smooth out the loops in the tail chain with your fingers and thread it through a large tapestry needle. Weave the needle under the serged stitches for about 2.5 – 5 cm (1 – 2 inches). Cut off the rest of the tail.
- Apply liquid seam sealant to the stitches at the end of the seam. After it dries, cut the tail chain off.

Decorative Threads

After you become more experienced, try using some of the many decorative threads that are available.

Not all decorative threads will work in all sergers. You will need to do some testing to discover which threads will be most successful for you and to find out the “look” you want to achieve with your stitching.

Monofilament nylon, topstitching thread and woolly nylon are the easiest decorative threads to use in a serger. They require minor tension adjustments and can be used in both loopers and in the needles.

Rayon, silk and metallic threads require more tension adjustment but are not difficult to use. They are easier to use in the upper looper than in the lower looper.

Crochet thread, pearl cotton, ribbon and yarn are the heaviest, thickest decorative threads and need the most tension adjustment. To ensure even feeding of balls or skeins, feed the thread by hand, making sure there is always slack in the thread as it enters the first thread guide.

Love and care of your serger

Like your sewing machine, your serger needs to be kept as free from lint and dust as possible. Lint builds up quickly under the throat plate and can clog knife blades, causing skipped stitches. Dust often with soft brushes supplied with your machine or use compressed air to clean your serger. Be sure to cover your serger when it is not in use. Your serger may or may not require oiling - some newer models don't. Before oiling, read your manual and check with your dealer. Use oil specially made for sergers and refer to your manual for oiling points.

The needles on your serger will need to be changed occasionally. Needles with sharp, smooth points are essential to carefree serging. If the needle is slightly dull or burred, it will cause a clicking noise and may result in skipped stitches. Change the needle when skipped or irregular stitches occur. Be certain you replace your dull needle with another needle of the right type and size.

The knife blades on a serger may also need replacing periodically. Unlike scissors, serger knives cannot be re-sharpened. Check your serger manual to learn how to change the knives. If you avoid cutting pins, your knives will last much longer.

Your manual should also contain a section on troubleshooting, should you be having any problems with your serger operating properly.

Purchasing a serger or sewing machine

When investing your money in a piece of equipment that is quite expensive, you will want to make a good purchase decision. You will want a machine that will work efficiently and that will last a long time as well. Consider these points when looking for a sewing machine or serger:

- How expensive a sewing machine or serger do you want? How much can you afford?
- What features are you looking for in a sewing machine or a Serger? Are you trying to decide between the two? What do you want the machine for? (Sergers are generally less versatile and are more expensive than sewing machines.)
- Do you want a very basic model, a deluxe model or something in-between?

Once you have decided what you are looking for in your machine, visit stores that sell sewing machines and sergers. Ask lots of questions at the store and find out what other machine owners think of their models.

After you've decided on a few models that you like best, shop around for your best deal and find a dealer who offers good service. Consider if your sewing machine or serger can be fixed locally or if it will have to be sent away to be fixed. Also, find out how long the warranty on the sewing machine or serger lasts and what it covers. If something goes wrong with your piece of equipment just after you buy it, you'll want to have it repaired or replaced easily and inexpensively.

Sewing Machine

Most machines come with at least two stitches, a zigzag and a straight stitch. Do you want to have more stitches, such as a blind hem stitch or some decorative stitches? Would you prefer a flatbed or a free-arm model? The free-arm models have a narrow arm for sewing tubular items such as sleeves or pant legs. You might also decide whether you want a portable or console machine. A console machine is heavier and is built into a cabinet. If you plan to move a lot or have minimum space for a machine, a portable may be ideal. It is lighter, takes up less space and can be stored away easily after use.

When considering a machine's performance, consider stitch quality, speed and feed control and overall convenience. Stitch quality is judged by evenness, straightness and uniformity of stitch length and balance. How precise is the stitch quality? Judge machine responsiveness in speed and feed control - how smoothly it stops and starts, how fast and slow it sews, how much it coasts after shut off and how well it allows control of feeding while doing curves or sewing along fabric edges. Noise and vibration are also important features to consider.

Some problems can arise that are related to the safety of the machine. One is the spacing allowed between the raised needle and the released pressure foot. Another is the position of the lamp on the machine. Will burns be a problem?

Other important aspects to consider include:

- Is the knee or foot control comfortable for you to use?
- Is the machine easy to thread and is the bobbin easy to load?
- Is the bottom tension conveniently located and easy to adjust?
- Is the instruction book clear and complete?
- Can the feed dogs be dropped out of the way for darning and embroidering or are special attachments required?
- Are the cover plates easily removed and are all parts readily accessible for cleaning, oiling and greasing?
- Is the light bulb easy to replace?
- Are the service parts carried in stock?
- Does the machine have steel or nylon and steel gears? If something happened to damage the gears, the nylon would break to prevent any further damage from occurring, whereas steel gears would continue to run until damage was too severe to rectify.
- What machine is the best deal according to price, features and accessories?
- Does the sales outlet have a good reputation for service?

Sergers

Not all Sergers can create every type of Overlock stitch. You need to understand what each stitch can do and then select the model that does what you want. There are 2, 3, 4 and 5-thread machines.

- 2-Thread - doesn't sew seams, just finishes them. A good machine if you only want to finish seam allowances and edges. Flat locking is easy and very flat. Some 2-thread machines can sew a rolled edge.
- 3-Thread - can sew seams. Makes a balanced stitch that looks the same on both sides - great for reversible clothing. Can flat lock and is excellent for knits.
- 4/3 Thread - excellent for clothes that will experience hard wear. Interesting decorative effects can be created when different colour threads are used in the needles. Can flatlock.
- True 4-Thread - good for loosely woven fabrics. Remove the left needle for a 2-thread overedge stitch for finishing seams. Remove the right needle for a straight chain stitch.
- 5-Thread - has two needles and three loopers: an upper, a lower and a chainstitch looper, it sews a 5-thread safety stitch made up of a 2-thread chainstitch and a 3-thread Overlock stitch. Some 5-thread machines also sew a 4-thread safety stitch, a 2-thread overedge stitch and a 4 or 3-thread mock safety stitch. Each stitch may also be used separately.

Serging methods are very different than conventional sewing methods. Ask if lessons are included with the serger.

Have the dealer demonstrate the various features. Pay attention to how many adjustments are needed to change from one feature to another. See if the controls are on the inside or the outside of the machine. Don't buy a serger until you have tried it yourself. Some models are easier to control and use than others.



4. Sewing Techniques - Intermediate (*Core*)

Construction Zone

What we'll learn in this section

- Making buttonholes
- Inserting zippers
- Make It: Pillow cover with buttons
- Make It: Zippered pouch or bag

Making Buttonholes

When making buttonholes with a buttonhole foot, follow the directions included with the foot. If you don't have a buttonhole foot, follow the directions below to make buttonholes with your zigzag foot.

The length of the buttonhole should be the diameter of the button, plus the button thickness, plus 1/8". For ball-shaped buttons, pin ends of paper together around the button. Remove the paper strip and flatten it so there is a fold opposite the pin. The buttonhole should be the measurement of the paper strip plus 3mm (1/8"). Note: if using a ball-shaped button with a shank, do not pin the paper strip around the shank as it will make the measurement too large.

Sewing a buttonhole using a zigzag foot from [Do It Yourself.com](http://www.doityourself.com/stry/how-to-sew-buttonholes)
(<http://www.doityourself.com/stry/how-to-sew-buttonholes>)

1. Measure the button and mark the center of the buttonhole with a fabric pencil.
2. Position the fabric so that the needle is on the left side of the pencil mark. Sew a line that is the length of the button measurement.
3. Leaving the needle in the fabric, turn the fabric 90 degrees and sew the bottom of the buttonhole approximately 1/4 inch long.
4. Turn the fabric another 90 degrees and sew the right side of the buttonhole the same length as the left side.
5. To finish the buttonhole turn the fabric another 90 degrees and sew the top of the buttonhole. The line will be approximately 1/4 inch and will finish at the top mark of the left hand side of the buttonhole.
6. Cut any loose thread and use a seam ripper to release the center fabric from the buttonhole.

Buttonholes, whether machine-worked or hand worked, are done after the facing is attached. Horizontal buttonholes are best for fitted clothes as they withstand stress better. Vertical ones are used on tabs or bands.

Always test buttonholes on a scrap of fabric before you do them on your garment. Misplaced or sloppy buttonholes are difficult to repair.

Tutorials for making buttonholes with a buttonhole foot can be found at Sew, Mama, Sew (<http://www.sewmamasew.com/2009/06/how-to-make-a-buttonhole/>) and The Purl Bee (<http://www.purlbee.com/sewing-tutorials/2008/3/20/buttonhole.html>) and this link will take you to a video from eHow (http://www.ehow.com/video_4433258_making-hole-using-zigzag-stitch.html), which explains how to make buttonholes with a zigzag foot.

Inserting Zippers

There are many ways to insert a zipper. The method used depends on the location of the closing. The centered or slot application is used for centre front or centre back openings; zippers at the sides seam of pants, skirts, and dresses are usually inserted using the lapped zipper method

Your pattern will instruct you on how to insert the zipper in the garment you are making and there are many how-to tutorials and videos available on line to help learn how to insert zippers. This video from Wendi Gratz at Shiny Happy World (<http://www.youtube.com/watch?v=nFibAuZ4D4w>) gives clear instructions on inserting a centred zipper. Sewing a centred zipper is the subject of this tutorial from The Undercover Crafter (<http://www.undercovercrafter.com/2011/11/easy-zipper-tutorial.html>) and the insertion of an invisible zipper is explained in this tutorial from Coletterie (<http://www.coletterie.com/tutorials-tips-tricks/tutorial-installing-an-invisible-zipper>) .

Make – It: Pillow cover with button closure

(adapted from <http://thediymommy.com/sew-a-buttoned-pillow-cover/>)

This project is very similar to the pillow cover you made in the first level except it has a button closure. The buttons can match your fabric or be a contrasting colour if you would like to add a decorative touch to your pillow. For this project you will need:

- Sewing machine
- Sewing machine needles
- Zigzag foot or buttonhole foot
- Sewing pins
- Scissors
- Marking pencil
- .5m of pre-washed, straightened cotton or poly/cotton blend fabric or 1m if your pillow form is larger than 41cm (16")
- 3 Buttons to match or contrast with your fabric, ¾" to 1" wide
- Thread to match fabric
- Pillow form
- Measuring tape

Making the pillow cover:

1. Measure your pillow form from end to end (length) and side to side (width). If using a square pillow form, these measurements will be the same.
2. The fabric for the back of the pillow cover is cut 2.5cm (1") larger than the pillow form to allow for 1.25cm (½") seam allowances. If you want to center a pattern from your fabric on the pillow, keep this in mind when cutting (a yellow flower was centred on the back piece of this pillow).
3. Multiply your pillow length by 0.66 (2/3). Add 7.7cm (3") to this measurement for a seam allowance and a fold. This is the length of the large front piece, which is approximately 2/3 of the length of the pillow. The width of this piece is the same as your back fabric piece/pillow form width. The buttonholes will go on the hemmed edge of this piece. Measure twice and cut once, keeping in mind fabric pattern placement!
4. Multiply your pillow length by 0.33 (1/3). Add 16cm (6") to this measurement to allow for a seam allowance and fold plus an extra 7.7cm (3") to go beneath the large piece for the

button placket. This is the length of the small front piece, which is approximately $\frac{1}{3}$ of the pillow length. The width of this piece of fabric is the same as the fabric for the back piece/pillow form length. The buttons will be sewn on the hemmed edge of this piece. Measure twice and cut once!



Figure 26: Cutting the fabric pieces

5. To make the button placket on the front pieces, fold the raw edge along the width of one short front piece and one large front piece 1.25cm ($\frac{1}{2}$ ") and press. Fold again 6.25cm (2 $\frac{1}{2}$ ") and press. Sew 6mm ($\frac{1}{4}$ ") from the folded edge.

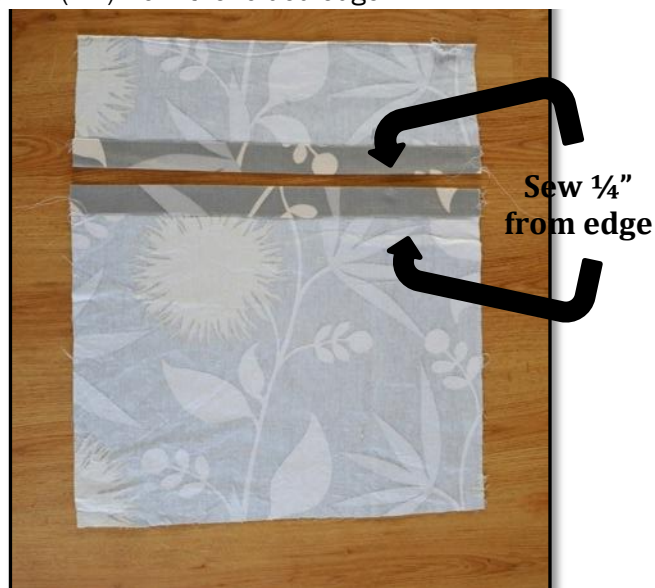


Figure 27: Preparing the button placket

6. Find the center of the top button placket using a measuring tape. Mark the center with a marking pencil or pin near the hemline. If using a buttonhole foot, follow the directions for making buttonholes for your machine, beginning at the mark you just made. If using a zigzag foot to make buttonholes, make another mark the size of the button directly below the first mark (for example, if your button measures 2cm ($\frac{3}{4}$ ") inch, make a

second mark 2cm ($\frac{3}{4}$ ") below the first mark) to determine where your buttonhole begins and ends.

7. Using the same technique, mark another buttonhole centred between the middle buttonhole and the edge of the pillow. Repeat for the other side.



Figure 28: Marking buttonholes

8. Place the large front piece on top of the small front piece with the right side of each piece facing up and the hems together. The large piece should overlap the smaller piece by 6.25cm (2 $\frac{1}{2}$ ") and will cover the hem on the small front piece. Pin at each end and then baste .25cm ($\frac{1}{4}$ ") from the raw edges.



Figure 29: Piecing front of pillow

9. Place the front and back right sides together and pin. Sew around the edges of the pillow with a 1.25cm (½”) seam allowance. Trim the corners at an angle. Turn the pillow right side-out through the opening. Push the corners out.



Figure 30: Pin front to back and sew along the edges

10. Mark the location for the buttons on the top front piece, centring them vertically. Sew the buttons at the marks.



Figure 31: Mark the location of the buttons

11. Insert the pillow form in the opening, button up and enjoy your pillow!



Figure 32: Finished pillow cover

Make – It: Zippered pouch or bag (adapted from <http://www.sewdelicious.com.au/2012/09/simple-zip-pouch-tutorial-for-beginners.html>)

This project will give you some practice on inserting zippers. You can make the pouch any size you desire – just make sure you change the size of zipper to match the size of the pouch.

For this project you will need:

- Sewing machine
- Sewing machine needles
- Zipper foot
- Sewing pins
- Scissors
- Marking pencil
- 2 pieces of cotton, poly/cotton or home decorator fabric, each measuring 5.5” by 7” (Home decorator fabric is a bit sturdier but cotton or poly/cotton will work as well)
- 6” zipper to match or contrast with your fabric
- Thread to match fabric
- Measuring tape

Making the zippered pouch

1. Take one piece of fabric and place the zipper and fabric right sides together along the long edge of the fabric. Make sure your fabric is correctly positioned if the print on your fabric is directional. Pin in place.
2. Attach the zipper foot to your machine. Place the zipper and fabric under the pressure foot and lower the needle into position. There are faint lines in the zipper tape that you can use as a stitching guide. Start sewing, guiding your zipper and fabric through gently.
3. A little tip for sewing around the zipper tab - sometimes you will get close to the zipper tab and your presser foot will collide with it, or at least struggle to sew past it. Place your needle down into the fabric, lift your presser foot, and gently move the zipper tab by zipping or unzipping the zip. Once the tab is out of your way, lower your presser foot and continue sewing.



Figure 33 - Sewing the zipper



Figure 34: Sewing around the zipper tab

4. Once you have completed the first side, repeat the process for the second piece of fabric. Line up your fabric and zipper right sides together.

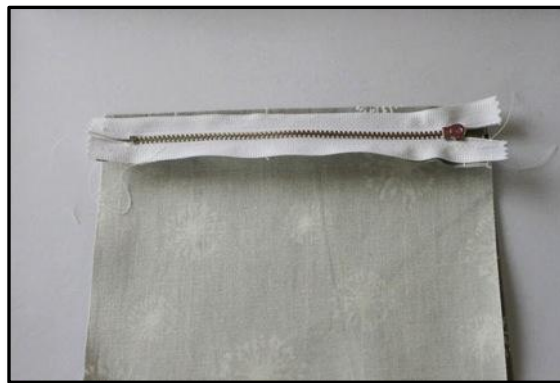


Figure 35: Sewing the other side of the zipper

5. Carefully sew the other side. Once you are finished you will end up with this:

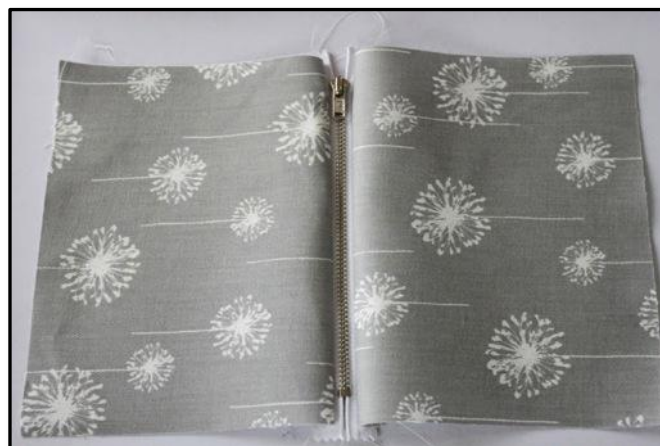


Figure 36: Zipper sewn in

6. For a nice finish, topstitch along the fabric close to the zipper. This also helps to stop the edges inside the pouch get caught in the zipper. Gently press your fabric (and remember - if you are using a plastic or polyester coil zip, don't let the iron touch the

coils as they could melt). Stitch a neat line a couple of millimetres from the zip/fabric seam. Once you are done, you will have this:

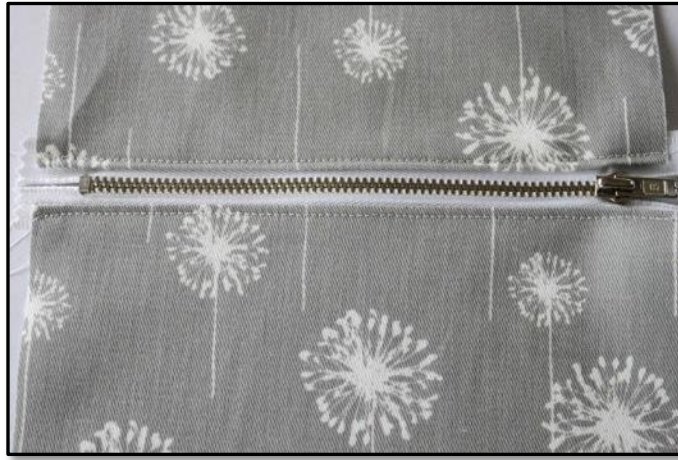


Figure 37: Topstitching along zipper

7. This is really important - open the zip now! You need a hole to be able to turn the pouch right way out once you have completed it, and if you forget to open the zip you will have to unpick stitches!



Figure 38: Unzip the zipper part way

8. Now fold your pouch right sides together. Pin around the edges.



Figure 39: Fold right sides together

9. When you fold your zip pouch right sides together to prepare sewing up the sides, the zipper teeth need to face away from the exterior fabric. You can see in the picture that

the open part of the zip naturally folds that way, with the zip teeth facing out, or away from the exterior fabric.

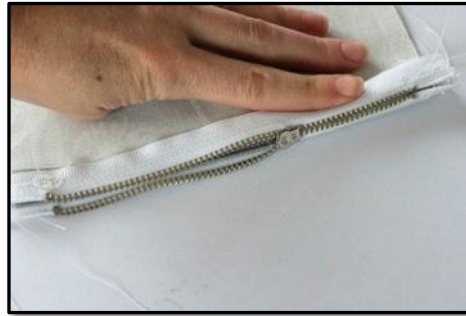


Figure 40: Ensure zipper teeth are facing out

10. Pin your sides into place and sew around the three edges.



Figure 41: Sew around the edges

11. Trim excess fabric and clip across the corners, being careful not to snip through your stitches.



Figure 42: Trim corners

12. Turn your pouch right sides out and gently push the corners out.



Figure 43: Finished pouch

13. You are finished! Now you can use your pouch to store all your bits and pieces!

If you would like to do another project with a zipper, check out this link for a tutorial to make a zippered pillow cover. (<http://www.aloadofcraft.com/2010/07/tutorial-how-to-make-zippered-throw.html>)

5. Recycling and Upcycling - Intermediate / Advanced (*Supplementary*)



At this point in the program you should be confident in your sewing skills and your ability to understand how your clothing should fit to flatter. We're going to continue to learn new sewing techniques in this level as well as learn how to use our imagination to create without patterns.

- According to Dictionary.com, the definition of upcycling is “to process (used goods or waste material) so as to produce something that is often better than the original” and the definition of recycling is “to treat or process (used or waste materials) so as to make suitable for reuse”. When the 1912 Hobble Skirt, which tapered from the waist to a very narrow hem, went out of fashion, imaginative women simply turned their hobble skirts upside down, letting the gathered waist flow out at floor level. Some clothes that are in your closet may be in good shape but have gone out of fashion and perhaps they too can be recycled or upcycled into something new.

Before starting to recycle or upcycle a garment ensure that it is clean and all soil and stains have been removed. Locate worn areas by holding the fabric up to the light. Check to see if creases from hems, darts and seam lines can be removed if you wish to do so and that the stitching has not left holes in the fabric. These holes may disappear if pressed with a damp cloth and scratched gently with a fingernail on the wrong side of the fabric.

Here are a few ideas to how you may want to recycle and upcycle your clothing:

- Elbow patches can be placed on worn elbows of jackets or shirts.
- Patch pockets or decorative appliqué can hide worn areas or stains. Braid or embroidery could also be used to disguise tears, holes or stains.
- Use strips of contrasting fabric over frayed necklines and cuffs.
- Shorten the hem of a skirt if it is too long to be in fashion; lengthen it if hemlines have dropped. If the hem is not wide enough to be let down, apply a ruffle or a false hem. For a false hem, cut a strip of fabric that can act as a facing, sew to the bottom of the skirt, press the facing to the inside of the skirt and stitch the hem.
- If narrower pants are in style, narrow the legs by taking in the outside seam and the inseam the same amount.
- Cuffs can be removed from the bottom of pants or false cuffs can be added if you have extra fabric.
- Make your old pants into knickers or cut them off for shorts or culottes.
- If you don't like the colour, try dyeing your garment. Even shoes can be dyed a different colour.
- Mend the tears with mending tape as it won't show on the right side. Try reweaving holes by unravelling threads around the damaged area and weaving new threads, plucked from seam or hem, through the entire area.
- Change the sleeves or neckline of your garment.

Cut off the sleeves and collar of an old jacket. Make a few more alterations and you have a tabard, which is a type of vest that will keep you warm on chilly days.

- Cut off an old shirt dress for a shirt. Use a shirt you already have as a guide for length. Hem or zigzag along the cutting line.
- You can use the extra fabric you cut off to make facing. Or cut out two layers of a simple animal or figure shape from the extra fabric and stitch them together with right sides facing, leaving an opening to turn it right side out and stuff it with old pantyhose for a pillow zoo. Embroider a fun face on your animal or use old buttons and trim for the face.



Figure 45: Sock monkeys from [Good](#)

- If you end up with a whole boxful of scraps, try making a patchwork pillow or quilt.
- Make a tubular cover to slip over a wastebasket.
- Use cut off fabric to make accessories. You could make a sash, scarf, necktie or hat. Aprons, hot pads and shoe bags are other things you could make from discarded clothing.
- Cut off the bodice of a dress and you have a skirt. Or you could make a jumper or sundress out of an old dress. Just remove the sleeves then cut out a jumper, sundress or scoop-neck top using a top you already own and like as a pattern for the neckline. From a dress that is too short you could also make a tunic.
- Make a denim book bag or tote out of you old blue jeans or make your blue jeans into a denim skirt. To make the skirt, cut off the inseams of the jeans all the way up both legs and across the crotch. Two triangles of whatever fabric you choose can be sewn into the spaces.



Figure 44 - T-shirt to cardigan from Tidy Brown Wren:
<http://tidybrownwren.blogspot.ca/2011/05/how-to-recycle-stained-shirt-into.html>



Figure 46 - Scarf from a t-shirt from Ms Not So Perfect



Figure 47: Jeans to skirt from <http://ofpinksandfairytales.blogspot.ca/2011/03/from-old-jeans-to-summer-skirt.html>

- Take in the side seams of a garment that is too big or add gather, pleats or tucks to take up the extra fabric.
- Remake one of your garments for a small brother, sister or friend.

If you want even more ideas on recycling and upcycling your clothing check out this blog (<http://jembellish.blogspot.ca/p/clothes-upcycling-projects.html>) that has over 300 ideas for upcycling clothing or The New Dress a Day blog (<http://www.newdressaday.com/>) that has ideas on how to upcycle 365 dresses. Turn a glove into a chipmunk with the directions at Bored Panda (<http://www.boredpanda.com/diy-glove-into-chipmunk/>). If you have some old sweaters check out this collection of links - <http://savedbylovecreations.com/2012/10/50-ways-to-reuse-old-sweaters.html> - for ideas on to repurpose them into clothing and items for the home and this link - <http://foothillhomecompanion.blogspot.ca/2008/02/repurposed-fingerless-gloves.html> - shows you how to make fingerless gloves from an old sweater. Use your imagination - you'll be amazed at the number of creative ideas you can come up with once you start!

If you choose to recycle a garment for your project work, take before and after photographs to record the improvements you have made.

Clothing that you no longer wear and that is in good shape that you decide not to remodel can be sold at garage sales or at a special clothing consignment store. If you are considering taking clothes to a consignment store, find out more about the store. What sort of clothing do they prefer? What about seasonal clothing? What happens to the clothing if it doesn't sell? These are just a few things you may want to ask before leaving clothing to be sold.

Adding some of your own fabrics and notions to ready-made items can also make personal touches to your wardrobe. These little touches will personalize your wardrobe and they don't take a lot of time and effort to create. Here are a few ideas:

Accessories

- Belts, earrings and hair accessories can all be easily make from coordinating fabrics. Look in the craft and fabric stores for lots of ideas on how to create your own.
- Inexpensive button cover kits are available in many fabric stores and are designed to clip over the top of a standard flat button. Glue an eye-catching button or gemstone to the top of button cover and you have a great accessory that you can move from garment to garment.

Lace it up

- A row of lace, ribbon or piping can add pizzazz to any garment. A lace collar, removable or sewn on, can make an old blouse look new. Add some beads or sequins for holiday wear.

Button Bonanza

- Decorate a shirt, cap or vest with dozens of buttons. You can raid the button jar or buy a bag of great-looking buttons at a reasonable price. For a cheap chic look, use safety pins, beads or other crafty items.
- Instead of using matching buttons on a shirt or jacket, select a set of mix-matched buttons. It is best to pick one characteristic that all of the buttons will have in common- shape such as colour or texture.



Figure 48 - Button headband from The Ribbon Retreat

Zip it up

- Use zippers to give yourself a new opening for your creativity - they don't have to work; they don't have to lead anywhere. Simply sew a zipper on to a shirt or jacket as an accent
- Add a colourful zipper pull for a fun jacket.

Colour it!

- Use fabric paints, dyes and markers to add some finishing touches to your sewing. Or buy a solid colour or unbleached fabric and add an all-over design to "create" your own fabric and lay the pattern out.

Block it

- Colour blocking is a simple technique that can give you a very dramatic effect and is great for sweatshirts and other simply-styled garments. Before laying out your pattern decide the colour scheme. This could be chosen by pattern piece. For example a shirt could have the left sleeve colour "A," right sleeve colour "B," left front colour "C," right front colour "A," back colour "C: and the collar colour "B."
- Or you might want to make the top third of your shirt one colour and the bottom two-thirds another colour. In this case you will need to cut each of the pattern pieces in two horizontally, except the collar. Remember to add the seam allowance to each of these pieces before laying out the pattern. Colours don't all have to be solids - try using a print or two!

Designer Touches

There are many designer touches that add a more completed look to a hand sewn garment and make it look more professional. For instance, topstitching, covered buttons or belt loops are simple yet effective ways to add a designer look to a piece of clothing. Here are some more designer touches, which will add a look of professionalism to your sewing projects:

- Belt loops or carriers – Check out this link from Sewing.org (http://www.sewing.org/files/guidelines/12_245_belt_loops.pdf) for the directions on how to make some simple belt loops and carriers.
- Rolled Hems – Commonly used on handkerchiefs, lingerie materials, edges of frills and baby clothes, rolled hems make for a very professional looking finish. To make a rolled hem:

- If you are right-handed, roll the freshly cut raw edge toward you between the left thumb and forefinger. Aim to enclose about 3mm (1/8") into a 1.5mm (1/6") roll.
- Work from right to left and roll only 2.5 or 5cm (1-2") at a time. Use overhanging stitches about 4.5 mm (1/4") apart by slipping the needle under the roll and slanting it out at the top of the roll, which is the outer edge of the hem. Be careful across seams.
- Fabrics that fray easily or are very soft are improved by first stay-stitching 3 mm (1/8") from the edge; better still, stitch 6mm (1/4") from the edge and trim to 3mm (1/8") to give a crisp, unravelled edge.
- Arrowhead or Sprat's head stitch - To finish the ends of pockets, pleats or darts on plain fabric, consider using an arrowhead or Sprat's head stitch. They are not commonly used now but are frequently found on vintage garments. To make an arrowhead:
 - Mark all the triangles with tiny basting stitches before beginning the first one. Bring the needle out at the lower left corner. Take a tiny stitch across the top point and then a stitch across the base of the triangle.
 - Work down the top and in from the bottom until the triangle is closed.
- Buttonhole twist is the best type of thread to use - regular thread is too fine. Lace Inserts

One of the prettiest details for feminine fashions is the insertion of lace. The inserts may be placed in areas of a garment that are flat and without darts or curved seaming. Most often the inserts are applied to the bodice, vertically, horizontally or diagonally, and alternated with bands of self-fabric. Other styling uses are in sleeves, cuffs and even in full, gathered skirts. Follow these directions to apply a lace insert:

- Pin lace in position on garment section and check to see that placement gives the desired effect. It's best to apply insert before seaming garment sections together. In this way, ends of lace are included in the regular seam.
- Baste lace in position along both edges. Topstitch close to edge. If lace has a scalloped edge, stitch along notches of scallops. Fabric is usually trimmed away underneath the lace for a see-through effect, but you may also leave fabric, creating a lace banding top.
- If you wish to cut fabric away, cut it away from the wrong side, to within 6mm (1/4") of stitching. Press trimmed seam allowances away from the lace. Stitch again, from the right side, over the first stitching to keep the seam allowances in place. On fabrics that ravel, use a seam finish.
- When two lace inserts require joining at a seam, pin them carefully with edges matching and stitch a regular seam.
- Press seam open. Stitch each seam allowance 6mm (1/4") from seam and trim close to stitching. This finish gives a neat nearly invisible seam.

There are many designer touches you can add to your projects. Experiment and use your imagination and you may be able to create something that is uniquely your designer touch.

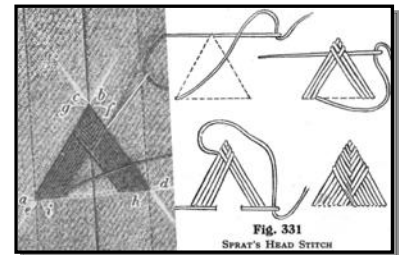


Figure 49 - Arrowhead or Sprat's Head stitch. Credit: <http://www.burdastyle.com/blog/vintage-in-detail-arrowhead-tacks>

Using More than One Pattern (Pattern Adaptation)

Another way to achieve a unique garment is to combine two different patterns, for instance, the sleeve of one shirt pattern with the bodice of another to make something completely different from either pattern.

Before you attempt to do this you note the following general guidelines:

- Don't try to interchange patterns for woven fabrics and patterns for knits. Knits don't require the same fitting (darts, etc.) as woven fabrics do.
- When interchanging patterns, try to visualize what problems might occur and attempt to rectify them before cutting the pattern pieces from the fabric.
- Check the sizes of the pattern pieces. It is much easier to alter a paper pattern than to alter the garment piece later on.
- When substituting one part of a pattern for another, be sure the openings will match. For instance, a collar must fit the neckline, sleeves must fit armholes and a substituted bodice must fit the skirt for which it is intended. Sometimes alterations may have to be made on both pieces. When interchanging the backs and fronts of bodices, make sure shoulder seams and side seams are the same length. Alter if necessary.

As you gain a little experience, the possibilities are limitless. Try simple interchanges first, and then proceed with more difficult ones.

Creating your Own Patterns

Pattern-making by use of measurements and fitting the fabric length over a form is called "draping." You may wish to use a dress form or "dummy" when draping. Draping is a fairly complicated technique and requires a lot of practice. You'll find it easier to start designing your own styles by modifying a basic pattern.

Some minimum amounts of ease suggested for freedom of movement are as follows:

Body Measurement	Pants and Dresses	Coats
Bust or Chest	5 - 7.5 cm	10 - 12.5 cm
Waist	0 - 2 cm	Depends on style
Hips	5 cm	5 - 10 cm
Upper Arm	5 - 7.5 cm	2.5 - 10 cm
Back Waist Length	1 - 1.5 cm	1 - 1.5 cm

There are also simple things you can do with darts to change patterns. Darts can be converted to gathers or can be released to make boxy jackets or tent dresses. For more complicated changes, you may have to go to a pattern or a garment you have made previously. The more experience you have, the more you'll be able to design completely on your own. If you do try making a garment from your own design, it's wise to make a trial garment from muslin or some other inexpensive fabric before cutting into your good fabric.

Sewing Shortcuts

There are a lot of procedures that seem to take forever in sewing, like cutting a pattern out or making hems or perhaps its buttonholes that you dread. Whatever your vices in sewing are, there are usually easier ways of doing them.

CAUTION: When making something very special (e.g. a tailored jacket) be prepared to spend a lot of time and effort. Sewing shortcuts might not always be a wise idea for this sort of garment.

Here are some tips the pros use for faster sewing:

- Choose an easy pattern or one that is easy to sew. They often give sewing hints as well.
- Use firm fabrics that are easy to handle and require no lining and little preparation.
- Before starting to sew, make sure you have everything you'll need to complete the garment such as buttons, zippers, interfacing, etc.
- Have all the equipment you'll be using nearby. Keep a cup of water and press cloth by the iron. Tie a pair of scissors and a pincushion to your machine so they won't keep disappearing. An extra pair of scissors at the ironing board may be helpful, too.
- Save on clean up time by taping a paper bag to your cutting surface and sewing table for easy scrap disposal.
- When you're fairly confident with pinning and cutting, try using tape to hold the pattern to the fabric.
- Cut and mark everything at the same time. Group similar construction jobs together. Interface all pieces that need it at the same time. If you're using a fusible type of interfacing, you'll avoid jumping up and down from the machine to the iron. Stitch as many darts and seams- as you can at once, then do your pressing.
- Start using the continuous stitching method. Group various small pieces together - facings, cuffs, pockets - stitch as much as you can without breaking the stitching and then clip everything apart later.
- Don't let small amounts of free time slip by unnoticed. There are lots of sewing tasks you can finish in ten minutes such as topstitching a hem, fusing on interfacing, stitching darts, assembling a collar, grading seams, trimming off loose threads, or ripping out a mistake.
- If you have access to a serger, use it to sew seams. Sergers stitch the seam and finish it at the same time, which makes it much quicker.

Some notions and products that may save time when sewing include:

- Adhesive Sewing Tape – A useful guide for even topstitching on straight seams and edges.
- Double-Faced Basting Tape - Holds layers of fabric together for easier stitching and matching.
- Fusible Web - Bonding material for hemming, tacking, mending, applying trims and appliqués.
- Liquid Seam Sealant - Useful for sealing the ends of serger thread chains.



6. Clothing for people with special needs – Advanced (Supplementary)

Clothing for elderly and physically impaired people needs careful consideration as their clothes must be easy to put on and take off and easy to fasten and unfasten.

Safety is especially important for people who cannot react quickly or who easily lose their balance. A moderate width in pant legs and skirts can allow easy movement but will not catch under canes or crutch tips when a person rises. Roomy pockets, either on clothes or attached to wheelchairs or walkers provide convenient storage for articles they use regularly such as glasses, tissues or a book but may not be able to carry if using a wheelchair or crutches.

Fabric selection is important as well when sewing clothing and items for people with special needs. If making a garment with a woven fabric, a size larger is frequently needed for ease in dressing and comfort. Knits are appropriate if they don't pull or snag easily. For people with limited physical movement, flame retardant fabrics should be used. Garment designs also make it easier for the physically challenged and these include:

- Front closures in garments
- The use of Velcro instead of zippers or buttons
- Using elastic in waistbands or at waistline
- Shirts that have a flared design
- Buttons that they are large and easy-to-manage, although buttons should usually be avoided if at all possible
- Wrap-around styles of tops and dresses
- Blouses that are designed to go over the waistband rather than being tucked-in
- Large pockets that are placed in easy-to-reach locations on garments
- Slightly tapered pant legs
- Above-the-elbow sleeves
- Raglan sleeves for ease of movement
- Lower necklines
- Using elastic thread to sew on buttons
- Large zipper pulls

This link (<http://www.sewingsupport.com/sewing-how-to/free-patterns-and-projects/bags/wheelchair-walker-bags.html>) has patterns for walker and wheelchair bags and this link at Fashion Freaks (<http://en.fashionfreaks.se/>) has advice and patterns for making adaptable clothing.



7. Linings, Interlinings and Underlinings - Advanced (*Core*)

Linings, interlinings and underlinings build structure into a garment and while they generally cannot be seen when wearing a garment but they are an important element of many pieces of clothing. Linings, interlinings and underlinings are each used for a specific purpose and it is important to know which to use when sewing. It is also important to choose linings with properties similar to those of your fabric. You won't want to use a dry clean only lining with a washable fabric unless you plan to dry clean that particular garment. Refer to the “4-H Sewing Project: Fabric Care and Use Guide” for more information on working with different types of fabric.

Linings

Linings are used to:

- Make clothing look finished inside (encloses seams, darts, and hems).
- Make clothing easier to slip into and take off.
- Make garments opaque if an open weave or sheer fabric is used.
- Help keep the shape of a garment if a loosely woven fabric is used.

Linings are assembled separately from the garment and then sewn into the article. Coats and jackets usually have separate lining pattern pieces whereas linings for dresses and skirts are usually cut from the same pattern pieces as the main garment.

Linings can be made from a variety of fibres such as polyester, lightweight silk, acetate, and from various blends. Linings may be machine washable or dry cleanable depending on the fibre from which it is composed.

More information about linings can be found online at Sew Mama, Sew (<http://www.sewmamasew.com/2010/06/all-about-lining-a-garment/>) and Sewing.org (<http://www.sewing.org/html/lining1.html>)

Interlinings

Interlinings are used to add additional warmth and structure. It may consist of a layer of fabric placed between the garment and the lining as in jackets, coats, and suits. Several types of interlinings are available such as flat wool fabric and cotton flannels. Interlining may have a fleece back, a metallic back (such as Milium) or a flannel back. Dacron fibrefill adds minimum weight to a garment and may be quilted to the outer fabric or to the lining fabric to provide the desirable warmth in a ski jacket, coat, or a winter lounging robe. Chamois, a soft leather, is another type of interlining found in more expensive ready-made winter coats. Interlinings can be made as a separate layer or as an underlining.

Underlinings (Backings)

Underlinings consist of a firm cloth used to cover the inner surface of a garment to give shaping and body to the garment, just as interfacing does. Many fabrics used for interfacing can be used for underlining. The main difference between the two is that underlinings are used to give support to the major design lines such as a whole skirt or dress. Interfacing is used simply on such things as collars, facing or waistband. Cut from the same pattern pieces as the garment, the underlining is joined to the outer fabric pieces before the seams are stitched; thus the two layers are handled as one during construction. Underlining may be used with or without linings.

Check out this link from Threads Magazine (<http://www.threadsmagazine.com/item/4999/understanding-underlining>) for more information on underlinings.

8. First steps in patchwork - Advanced (*Core*)

What we'll learn in this section



In this section we will learn the basics of patchwork. There are many great reference books available on patchwork and quilting as well as online sites, including Diary of a Quilter (<http://www.diaryofaquilter.com/p/beginning-quilting-series.html>)

Introduction to patchwork

Patchwork is the act of sewing pieces of material together by hand or machine to form a larger piece of fabric. The design is generally made of repeating patterns using geometric shapes to make the piecing easier. When the larger piece is finished it is backed with another piece of fabric and has a filler, such as batting, in between the two layers. The layers are then tied together with yarn or thread or quilted with a running stitch by machine or hand.



Figure 50: Quilting on a whole cloth quilt. Credit: <http://www.quilttracks.ca/wp-content/uploads/2012/04/Wholecloth-Contact-Us-Banner.jpg>

A quilt is essentially two pieces of fabric with a layer of batting in between. The inner layer provides warmth and the layers were stitched together to keep the inner layer from shifting during use. Quilting has a long history, having been traced back to ancient China and Egypt. Quilting was also used in Europe to construct the padded garments used under armour. Quilting became more common after that time and was used in men's and women's clothing to add structure as well as warmth. Quilting was used in bedding to provide warmth as well.



Figure 51: Examples of patchwork. Left is a simple block pattern and on the right is a friendship star pattern

Easy block quilt: <http://www.littlebluebell.com/2011/09/finished-100-quilts-for-kids.html>

Friendship star: <http://serial-quilter.blogspot.ca/2011/05/home-from-retreat.html>

Tools of the trade

There are many tools and gadgets available for quilting but to start you essentially just need the tools you already have for sewing. A rotary cutter, ruler and cutting mat make cutting out your pieces easier but they aren't essential for this first project. If you decide to continue quilting, you will no doubt want to add them to your sewing box.



Figure 52: Basic quilting supplies.

Credit: <http://www.diaryofaquilter.com/2010/09/basic-quilting-supplies.html>

Getting started

We'll be making a nine patch block as our first patchwork project. It is a simple block and while the pieces can be cut with a template and scissors, it is much easier and quicker with a rotary cutter, ruler and mat. Templates are patterns made from a strong material such as cardboard or plastic and are cut to the size and shape of the pattern you are making. For this block you will need to make a 4" template.



Figure 53: Nine patch blocks.

Credit: <http://theninepatchproject.wordpress.com/2012/01/15/block-2-the-reverse-of-the-basic-9-patch/>

If using a rotary cutter to cut your fabric, follow these steps (note: these steps are for right-handed users; switch hands when necessary if left-handed):

1. You will need to straighten the fabric before beginning to cut your pieces. To do this, fold the fabric in half, matching the selvages. If using a fat quarter, there will only be one selvage so you will simply fold the selvage to the opposite raw edge.
2. Place the fabric on the cutting mat and ensure the fabric is flat and the fabric grain is straight.
3. Position your ruler at right angles to the fold, aligning a horizontal line of the ruler to the folded edge of the fabric.
4. Hold the ruler in place with your left hand and with your rotary cutter in your right hand, trim the uneven edge of the fabric. CAUTION: Ensure your fingers are not over the edge of the ruler on the side you are trimming.
5. To cut, ensure you are rolling the cutter away from your body and make sure the ruler stays firmly in place on top of the fabric.
6. To cut the pieces for your project, rotate the cutting mat if possible or if not, just the fabric 180 degrees.
7. To cut the pieces you need, measure from the edge that was trimmed the width of the piece. For instance, for our project, you would cut a strip 4" wide.
8. Unfold the fabric, trim off the selvage and cut the desired size from the trimmed end. For our project, that will be 4".
9. Continue cutting as many pieces needed for your pattern.

CAUTION: The blade of the rotary cutter is extremely sharp. Always keep the blade cover on and in a locked position when not in use. Keep the cutter away from children and others who are not familiar with a rotary cutter. Always ensure your fingers are not over the cutting edge of the ruler. It is advisable to wear a cut resistant glove, such as the Klutz Glove (<http://www.gonesewing.com/servlet/Detail?no=4795>), if possible.

If you would like to see a tutorial on cutting with the rotary cutter, check out Sew Many Ways (<http://sewmanyways.blogspot.ca/2011/05/how-to-cut-fabric-squares-with-rotary.html>) or this video (<http://www.youtube.com/watch?v=1ebyZrgklbk>) on YouTube.

Choosing fabrics

To make this block you'll need .25m (or ¼ yard) or a fat quarter of 2 fabrics, one light and one dark. A fat quarter is a piece of fabric that is .25m but cut into a square rather than lengthwise. Fabric made from 100% cotton is most commonly used in patchwork although many use a poly/cotton mix as well. The key is to not mix the fabrics in your patchwork as they wear and wash differently.

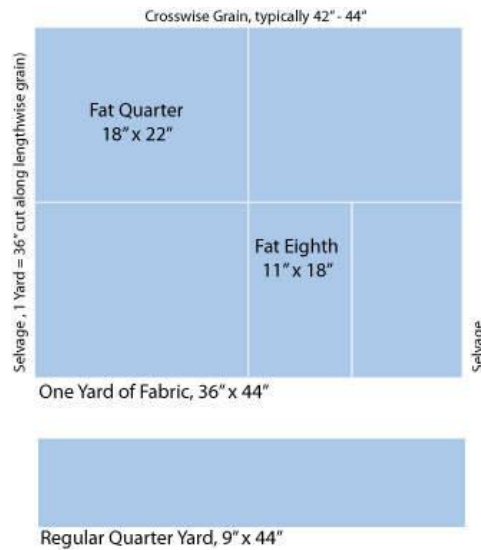


Figure 54: Fat quarter. Credit: http://quilting.about.com/od/stepbystepquilting/ss/fat_quarters.htm

Fabric

The fabric you choose for your projects makes each quilt unique. It is quite intimidating when you look at all the fabrics to choose from when making your first quilt. There are two things that are most important when looking for fabric: colour and scale.

Colour

There is a lot of reference to light and dark when discussing quilting fabrics. If you looked at a black fabric and a white fabric, it would be very easy to say which is the dark fabric and which is the light. However so much of colour selection in quilting is based on shade and tone as well as how the fabrics blend with one another. Take a look at the quilts in figure 10. It is very clear in each quilt which are the dark fabrics and which are the light ones. However, if you compared the quilts to each other, every fabric in the second would be considered a light colour.



Figure 55: Quilts with light and dark fabrics
 Dark and light quilt from http://doublenickelquilts.blogspot.ca/2011_01_01_archive.html
 Oatmeal quilt from <http://crazymomquilts.blogspot.ca/2012/08/oatmeal-quilt.html>

Scale

The scale of a fabric refers to the size of the print. A quilt needs a combination of large and small scale prints to provide contrast. The fabric on the left in figure 11 would be a large scale in this group and the two on the right would be small scale.



Figure 56: Fabric scale

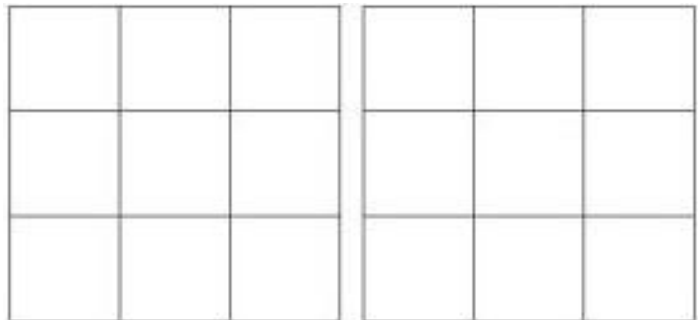
<http://www.lazygirldesigns.com/blog/claire-handbag/how-to-dress-claire-handbag-in-drama>

It may take you some time and practice to pick fabrics for your projects and you may find easier to start by picking fabric from the same collection. Also, ask the staff at fabric stores for advice as they are great resources when picking out fabrics, especially when you are just beginning to quilt. You can also find advice on line at [Quilting 101](#) and [Quilting for Dummies](#).

Cutting accurately

One of the most important elements of successful patchwork is accuracy both in cutting your fabrics and in sewing them together.

Decide which of your two fabrics will be fabric A and which will be Fabric. It may help to make a sketch of your block to see which colours and arrangement you like best.



You will need to cut out 4 squares from fabric A and 5 squares from fabric B. If using a template and scissors, carefully trace around a 4" square template onto the back of your fabric. If using a rotary cutter, cut your fabrics as directed in the cutting directions above.

Sewing accurately

Seams in patchwork are generally a scant $\frac{1}{4}$ " whether sewing by hand or machine. It is essential that your seams are consistent in order that all the patchwork pieces will align with each other when it's time to sew everything together.

Piecing your block (adapted from <http://www.daystyledesigns.com/9patchquiltblock.htm>)

1. Take your fabric squares to your sewing machine and arrange them as shown below:



2. Flip over the middle squares over the left hand squares and piece each of these seams with an accurate $\frac{1}{4}$ " seam allowance.



3. Lay all the pieces back down and this time flip the right squares over and chain piece each of these seams.



4. Finger press first, then press the seams with a hot, dry iron so they are open.



5. Lay out the three strips of squares and fold the top over the middle. Place pins $\frac{1}{8}$ " away from the seams so they match perfectly.



6. Stitch this seam, then pin the last row on carefully and stitch the last seam. Finger press, then press both seams open with a hot, dry iron on the back of the block.



7. Your first patchwork block is finished!

You can now make more blocks and assemble them together to quilt or you can use this single block to learn how to quilt.



9. Tailoring Techniques - Advanced (*Supplementary*)

A professional-looking tailored garment requires the use of several special techniques. These are some proper tailoring methods that you might like to try. Several tailoring books are available if you want more information on the topic. Husgvarnaviking.com has some very good information as well as step by step animations on tailoring techniques and there are some very good articles on advanced sewing and tailoring techniques at Kwiksew.Mccall.com.

Patterns

A tailored garment will take a considerable amount of time to make and therefore a classic pattern for a piece of clothing that can be worn many times is probably the most suitable choice.

Muslin Shell

You should fit your tailored garment as well as possible before laying out your fabric or cutting it. Construct a trial garment from muslin and make any alterations that are necessary, then transfer the alterations to your pattern.

Notions

Some specialized notions will make sewing your tailored garments easier and make them more professional looking:

- Stay Tape - A cotton or linen tape in a plain weave (not twill) about 1cm wide will be required. It is applied to areas in a garment where it is necessary to maintain shape and prevent stretching.
- Shoulder Pads - These may be purchased or you can make your own.
- Thread - #50 mercerized cotton thread is recommended in most cases.
- Beeswax - When rubbed against thread, it stiffens the thread to keep it from tangling and knotting. It can be found in most fabric centres.
- Between Needles - Sharp needles are the type of needles that you usually use in hand sewing, but between work best for making small stitches on heavy fabric.

Preparing your fabric

The first step in preparing your fabric is to preshrink it. Use one of the two methods mentioned in the section on woollen construction below and in the “4-H Sewing Project: Fabric Care and Use Guide”. It is also advisable to preshrink all washable linings, interfacings, underlinings, interlinings and zippers.

Collars

Grain line is very important as a collar, which is cut on the grain, hugs the neck and folds over smoothly with no wrinkles. If the collar is cut off-grain, it will wrinkle and sag. When trimming collar seams, cut away interfacing at the corners before stitching to avoid bulkiness. Grade seams leaving upper collar seam the widest. Press seams open first, then together, with the under collar seam eased slightly under. Understitch the curved edge.

Facings

If facings are used, tack at intervals. If a bias facing is used, it is hand sewn down all the way along the bias strip. If you use a facing, understitching will help the facing to lie flat.

Fly Fronts

Fly fronts are commonly found in blue jeans and men’s trousers. For information on sewing fly fronts, refer to your pattern or a sewing reference guide.

Pleats

Pleats are folds of fabric used to control fullness and may be crisp or soft depending on whether they have been creased. Use soft pleats in skirts or pants instead of darts to allow ease; a kick pleat at the lower edge of skirts will provide ease when walking. Pleats may be used as a design feature in full skirts, dresses and blouses.

Different types of pleats include straight or knife pleats, box pleats and inverted pleats. Straight or knife pleats are made by folding all pleats in the same direction. Directions on the pattern guide sheet usually instruct you to fold the fabric on the solid line and bring the fold over to the broken line. Unless otherwise stated, pleating is done from the right side of the garment. Pin pleats in place and baste across the top. If pleats are to be creased or topstitched, it should be done at this point.

Box pleats consist of two straight pleats facing in opposite directions. Inverted pleats are two box pleats with their fold meeting at the centre.

Tucks

Tucks are folds of various depths that are stitched into place according to the design of the garment. They give fullness and provide a decorative detail on a garment and they may be placed inside or outside the garment. Blind tucks are made wider than the space between the tucks so that the next tuck covers the line of stitching. Pin tucks, commonly used on baby clothes, are very narrow. To sew tucks, follow the steps below:

1. Fold the tuck, matching the marks accurately. Pin into position.
2. Baste along the marked line.
3. Secure the thread, stitch along the line and secure the thread.
4. Remove the basting and press.

Tucks may be pressed to one side so that the fold of the tuck is in line with the stitching line. Open-ended or released tucks should not be pressed beyond the stitching line. Tucks that are stitched on the right side may be carefully pressed on the right side with a press cloth.

Tailor's Tacks

These are used for transferring pattern symbols or alteration markings to a double layer of fabric. Follow these steps below to make tailor's tacks:

1. Use double thread
2. Work from right to left.
3. Take a small stitch, and leave 2.5 cm (1") of thread.
4. Take a second stitch at the same place, this time leaving a loop.
5. Continue in this manner along the outline.
6. Pull the fabric apart as far as the loop will allow.
7. Carefully clip the threads between the layers of fabric, leaving tufts of thread on each side.

Fabric

Beginning tailors should select medium weight fabric. Lightweight, heavyweight, hard-surfaced, loosely woven and napped fabrics as well as stripes, plaids or checks require extra time and care in construction.

Fabric made with 100% wool or with a high percentage of wool is ideal for tailoring because it responds exceptionally well to moulding and shaping techniques used during construction and pressing. Wool is also resilient, flexible and comfortable to wear and abrasion resistant. It is a versatile fabric, available in a variety of colors, textures and designs. If you prefer to tailor with fabrics such as linen, corduroy or novelty suiting, you may need to adapt some of these tailoring procedures. Acrylic tends to stretch out of shape using tailoring methods.

Interfacing

Hair canvas should be used for interfacing wool suits and coats. Most hair canvas is composed of wool or cotton and goat hair. It provides body, has excellent moulding qualities and helps to retain garment shape without stiffness.

Lining

Lining fabric should be of good quality, soft and smooth, and lighter in weight than a garment fabric. The fibre content and construction of the lining should be compatible with the garment fabric and its intended care.

Interlining

Interlining is a layer of fabric placed between the garment and the lining to provide additional warmth in coats. Flannels, high lofts, lamb's wool or fleece-like fabrics may be used with allowances made for additional bulk.

Underlining

The selection of an underlining is determined by its particular use and purpose in the garment. The fibre content and construction of the underlining should be compatible with the garment fabric and its intended care. Underlining should be smooth, and lighter in weight than garment fabric. A medium-soft finish is suitable for most fabrics.

Topstitching

Topstitching is done on the outside of the garment whenever possible because most machine stitching looks much better on the top than underneath and the stitching lines can be better controlled from the visible side. Topstitching adds decoration and is effective in helping fabric to lie flat.

Machine stitching should be adjusted to 3-4 stitches per cm (7-10 stitches per inch) when topstitching. Depending on the look you want, regular thread or heavier topstitching thread (buttonhole twist) can be used on both bobbin and the spool pin, though this heavier thread is really only necessary on the spool pin if you're stitching from the right side of the garment. If topstitching thread is not available, double regular thread can be used on the spool pin. The thread used to topstitch can be the same colour as the thread you used to sew the rest of the garment or you may wish to choose a contrasting shade.

Topstitching should be one continuous line with no breaks in the stitching. When starting and stopping the topstitching, leave long threads 5 cm (2") long. Carry these threads to the wrong side of the garment and either weave them into the seam allowance or tie them to another thread. Basting before topstitching when you are just learning to topstitch helps to ensure that the stitches are an even distance from the edge.

Topstitching can be done during construction or after the garment is finished, depending on its nature and location. The garment should be tested for fit before seams are topstitched or it may make for a lot of extra unnecessary ripping out.

Woollen Construction

Tailoring often involves wool fabrics or fabrics with a high percentage of wool and there are special techniques that must be used when working with wool.

Preparing Woollen Fabric

Woollen fabric should be shrunk before cutting to straighten the grain and prevent further shrinkage after the garment is made. Although you may plan to dry-clean the finished garment, a very damp atmosphere, showers, perspiration and spilled water may still cause wool to shrink. The London Shrink Method is recommended for evenness of shrinking in most woollen fabrics.

London Shrink Method:

- Pull a thread on grain and tear or cut along this thread.
- Fold fabric with right sides together lengthwise.
- Wet a sheet and wring out excess moisture.
- Place sheet on your fabric so that sheet entirely covers the fabric.
- Fold and wrap in a dampened towel or place in a plastic bag for six to eight hours.
- Repeat if grain is not perfect on removal of sheet.
- Allow to dry. Press gently if required.

Cutting and Marking Wool

Use large dressmaking or tailor's shears for cutting. It may not be easy to cut accurate notches in woollen fabric that ravel badly or in lumpy tweeds. Test the fabric on long straight seams and if notches ravel out use tracing paper, dressmaker's chalk or tailor's tacks to mark the notches. Tracing paper can also be used but the colour may disappear on woollen fabric so it's best to test before using this method.

Pressing Wool

Press using steam from a steam iron or a damp cloth. Let heat and dampness, rather than pressure, open the seam. To prevent shine, leave seam damp and flatten with a pounding block to force out steam.

In soft or tweedy woollens, the ease in the sleeve caps, the ease at the elbows in two piece sleeves, or the ease in French bodices can be shrunken out by carefully steaming and pressing.

When Pressing Seams - Hold the iron just slightly above the seam until steam forms. Remove the iron and gently pat the seam flat with a pounding block or with your hand.

When Pressing Darts - Fold darts in the wrong direction. Lay a damp cloth over top or use a steam iron. Hold the iron above the dart until steam forms then fold the darts in the correct direction and steam in place. Remove the iron and put the dart flat with the pounding block. This method makes the dart line on the outside smooth and flat. For heavier woollen fabrics, such as those used for suits and coats, it may be necessary to cut the dart down the centre line and press the dart open. (Remember not to cut right to the point.) Double pointed darts in heavier woollen fabrics should also be pressed in this manner. A metal knitting needle (do not use plastic as it may melt) stuck into each point when pressing will help achieve sharp points.

For the final pressing on the right side, use a woollen and cotton press cloth, placing the woollen side against the garment and dampening the cotton side with a sponge if necessary.

Construction Zone

To put into practice what you have learned in this section, find a piece of clothing that can be altered and upcycled such as making a t-shirt into a cardigan. A jacket with a lining, such as this curved jacket pattern from Burda - http://www.burdastyle.com/pattern_store/patterns/curved-jacket-122012 - or one of these lined jackets from McCalls - http://mccallpattern.mccall.com/m6655-products-29597.php?page_id=115 - is the perfect project to learn the tailoring techniques discussed in this section.

THE NEXT STEPS

THE NEXT STEPS - Sample Meeting Agenda

Welcome, Call to Order & Pledge		5 min
Roll Call		5 min
Parliamentary Procedure Minutes & Business		10 min
Topic Information Discussion	Patterns	20 min
Activity Related to Topic	What's My Size?	30 min
Topic Information	Choosing a Pattern (5 minute discussion, 45 minute activity) Activity: Pattern Markings	50 min
Wrap up, Adjournment & Social Time!		5 min
Take Home Activity	Designing Women and Men	



1. Patterns - Introductory (*Core*)

Now that you have learned how your sewing machine works and have completed two projects, it's time to learn how to sew using a pattern.

Patterns for clothing, accessories and home decorating projects can be found at fabric stores and also on-line. The pattern catalogue at the fabric store carries styles as up-to-date as the latest fashion magazine. The catalogue contains photographs and illustrations of all the styles the pattern company offers. The pictures of the garments will provide ideas for suitable fabrics and trims as well as suggestions for accessories.

The pattern catalogue is arranged in categories such as kids, misses, home decorating and accessories. Along with the style illustrations, are back views, the sizes in which the pattern is available, suggested fabrics and the amount of fabric required. Look for special instructions such as "For Knits Only."

What we'll learn in this section

In this section we will learn:

- How to measure yourself
- How to choose a pattern
- How to choose fabric
- How to read the pattern envelope
- How to prepare the pattern pieces

Measuring Up!

The first step to pattern buying is to know the measurements of your body. Patterns have the same sizes as clothing in the store but the numbers very rarely match - the pattern will usually be a bigger size than the clothing you buy in the store. This is why it is very important to buy patterns based on the measurements of your body. To measure yourself, you will need a piece of string, a tape measure, a piece of paper and pencil to write down your measurements and someone to help. To start, tie the piece of string at your natural waist line.

Measuring for Girls

- Bust: Place a tape around the fullest part of the bust just touching the top of the shoulder blade and the back.
- Waist: Measure around the waist at the string.
- Hip: Measure around the hip in the fullest area usually 18 – 23 cm (7-8") below the waist.
- Back Waist Length: Measure down the centre back from the prominent bone at the base of the neck to the string at your waist.
- Skirt Length: Measure centre front or back from waist to desired length.
- Dress Length: Measure centre back, base of neck to desired length.

Measuring for Boys

- Neck: Measure around neck base.
- Chest: Measure around the fullest part.
- Waist: Measure around natural waist at string.

4-H SEWING PROJECT – THE NEXT STEPS

- Sleeve Length: Measure from centre base of neck over shoulder and bent elbow to wrist.

Write these measurements down and bring them with you when you go shopping for your pattern and fabric. This link from Sew Mama, Sew (<http://www.sewmamasew.com/2008/05/how-to-measurements/>) has some really good advice on measuring correctly.

1. Neck: Measure circumference at the fullest part of the neck.

2. Back: Width Measure from the prominent neck bone down centre back 10 to 15 cm (4- 6 in.). At this point measure across the back between body folds formed by arms hanging straight.

3. Chest (High Bust): Measure at under arm above the bust.

4. Bust Measure around the fullest part.

5. Waist: Measure at ribbon or string around the waist.

6. High Hip: Measure 5-10 cm (2- 4 in.) below the waist over top of hipbones

7. Full Hip: This is the fullest part of the hip, usually 10-23 cm (4 - 9 in.) below the waist.

8. Back Waist: Length Measure from the prominent neck bone at back neck base to waist.

9. Front Waist: Length Measure from the shoulder at neck base to the waist (over bust point on gals).

10. Arm Length: With arm slightly bent, measure from the shoulder (where the sleeve would set in) to elbow, then to the wrist bone above the little finger. Arm length is measurement of both. Record both measures - the one from shoulders to elbows; and from shoulder to wrist.

11. Wrist: Measure at wrist bone.

12. Skirt: Length Measure from the centre back waist to the floor or the desired length.

13. Pants: Side Length Measure at the side from the waist to the floor or the desired length.

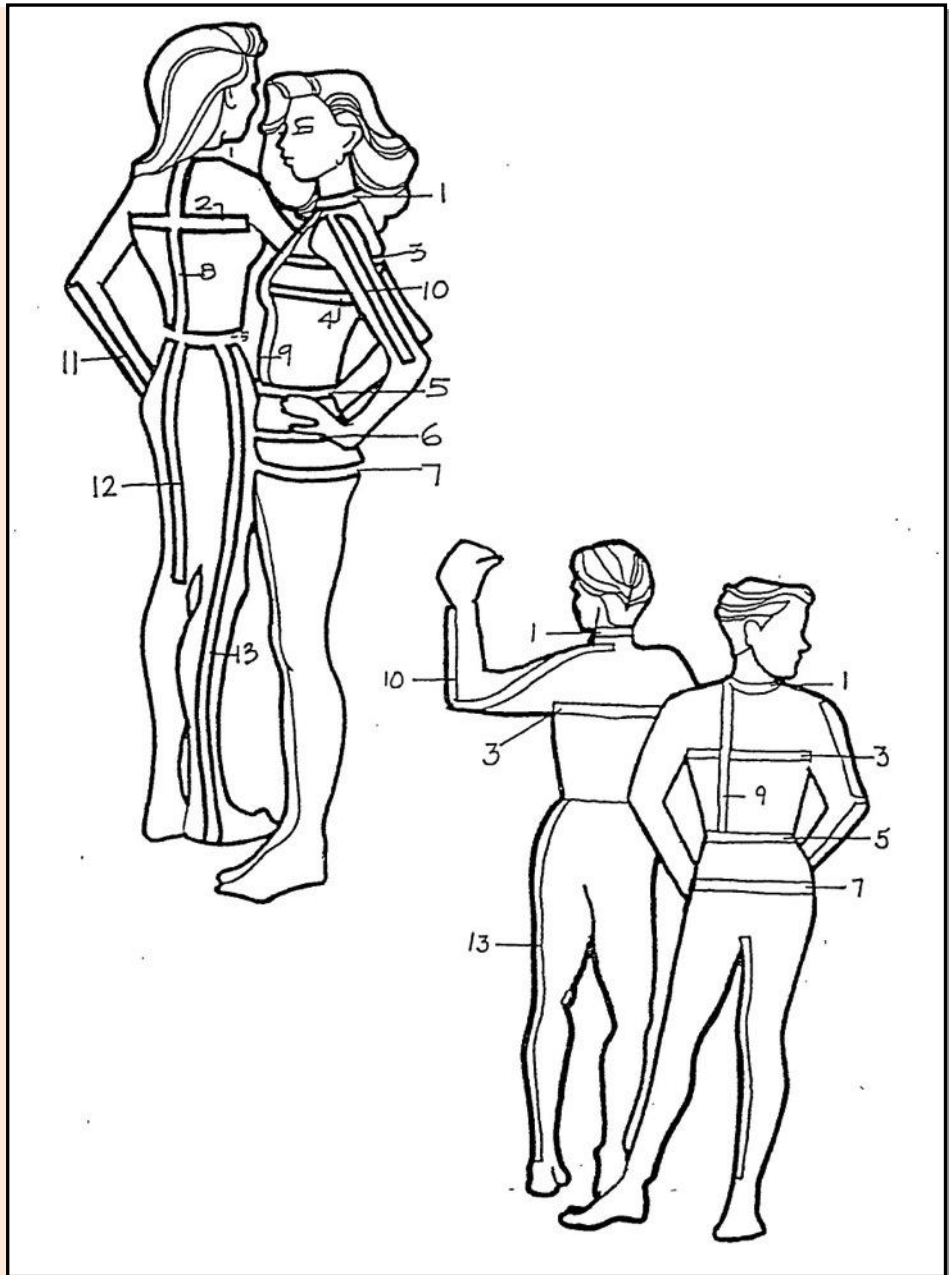


Figure 57 - : How to measure - image from the Nova Scotia 4-H Leader Resource Manual, 1997

Choosing a pattern

Our first project is going to be a pair of pyjama pants so it's time to go shopping for a pattern and fabric. When beginning to sew it is preferable to shop at a fabric store if possible as there will be knowledgeable salespeople available to answer any questions you may have.

Patterns are sold in envelopes and the envelope provides a lot of important information.

The front of the pattern envelope includes the pattern number, the size of the pattern and shows the completed project, often on a model, and will also show any variations of the main pattern.

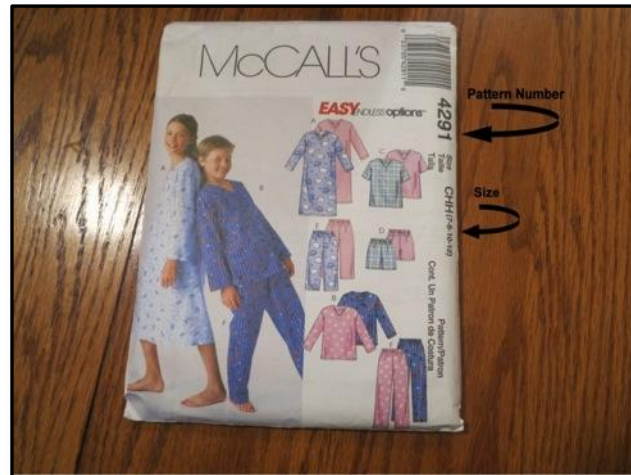


Figure 58: Front of the pattern envelope

The back of the pattern envelope has a lot of important information that is necessary to complete the project. The back of the envelope tells you:

About the garment

- A sizing guide which aids in deciding which size to make
- A brief description of the garment including design and construction details
- Line drawings of back views of the style variations available in the pattern. These show design lines, which help indicate how difficult the style, is to make.
- Finished length of the garment. This is helpful in determining the need for pattern alterations.
- Width at lower edge of garment. This indicates how full the garment is and is useful for comparing one pattern with another.

About the fabric

- A list of suitable types of fabrics for the design. Look also for precautions about unsuitable fabrics, for example, "not suitable for obvious diagonals."
- "For knits only" means you cannot use a woven fabric for the style as there would not be enough ease allowed in the pattern. It would also be indicated if extra fabric is required to match plaids, stripes, one-way designs or if extra fabric is needed for fabric with a nap.

Amount of fabric to buy

- This is listed in the yardage chart. To use the chart (see below); look across the top of the chart for your size. Circle it. Look down the left side of the chart for the view you are making and the width of the fabric you are buying. Circle it. Now draw a vertical line down from your size and a horizontal line out from your circled view. The number where the two lines meet is the amount of fabric in metres or yards that you need to buy.
- Interfacing and lining, if required, are usually listed in the yardage chart.

About the notions needed

- A list of all the notions you need for making the garment such as a zipper, or buttons, thread, trim, etc., with recommended sizes and/or amounts.
- Make sure you have your fabric and pattern handy when you purchase your notions so that, if necessary, you can match colours and/or can easily refer to your pattern for the information you need.

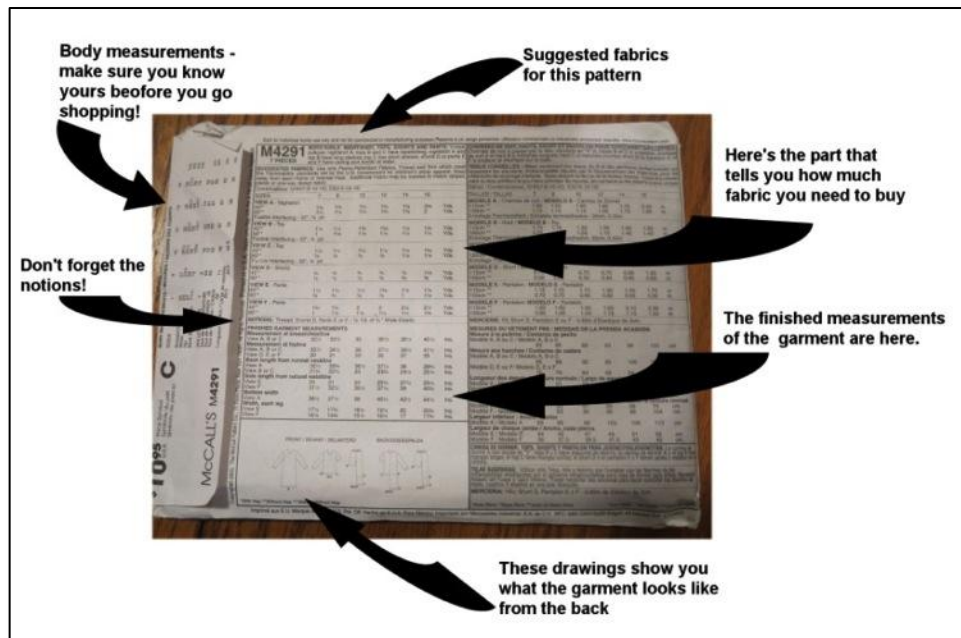


Figure 59: The back of the pattern envelope

Buying Fabric

Fabrics are sold by the metre or yard, usually in standard widths of 90cm (36") or 115cm (45") and most fabric in stores are on rolls or wrapped on bolts. A bolt is a firm, flat piece of cardboard or board. Look at the end of the bolt or roll to find out such information as fabric width, fibre content, fabric care and cost per metre or yard. You may also notice smaller pieces in "remnant" bins. A remnant is a piece of fabric from the end of a bolt or roll and is generally sold at a lower price than regular fabric.

Follow this checklist when buying your fabric:

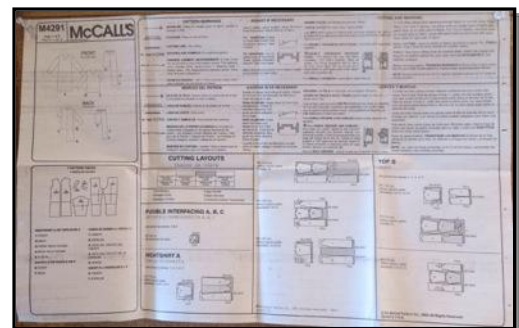


Figure 60: Pattern instruction sheet

4-H SEWING PROJECT – THE NEXT STEPS

- The fabric you have chosen was suggested on the pattern envelope and is compatible with the style of garment/ article you are making.
- The care recommended for the fabric is suitable for the project you are making. For your first sewing projects, look for fabric that is easy care and that will still look good after several washings.
- The fabric is easy to handle especially for your first project. Cottons and cotton/polyester blends are generally easy to sew because they hold creases well, stitches may be removed without leaving marks or holes and cotton is not slippery to handle. Plain fabrics or fabrics with small prints which look right from any angle are easier to work with than large designs, stripes, plaids, or fabrics with a one-way design.
- The fabric is woven, knitted and printed on grain.
- The fabric has a label for fibre content and care instructions and the care instructions are easy to understand.

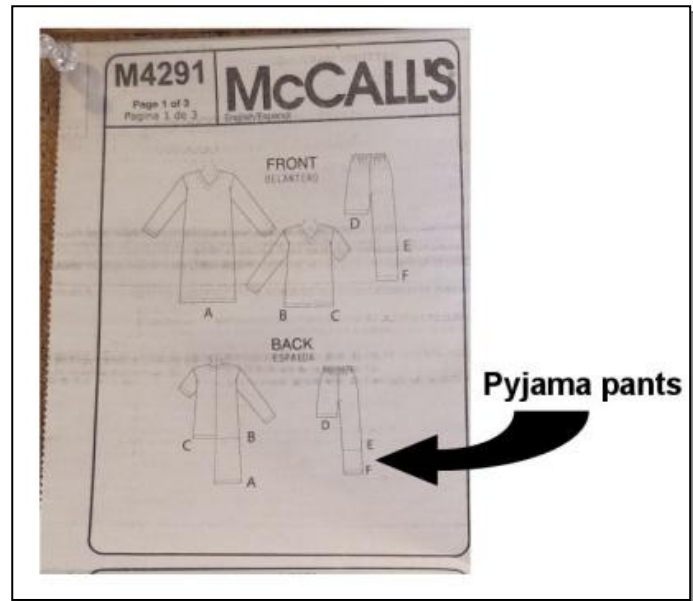


Figure 61: Pyjama pants

Preparing the pattern pieces

The pattern envelope contains instruction sheets and tissue or paper pattern pieces. The instruction sheet includes the cutting guide and the sewing guide. It might be a little overwhelming to see all the paper and lines and symbols at first so let's break it down into small steps.

First take out the instruction guide. There is a lot of important information on the instruction sheet and it is important to read it carefully.

Let's start with the pictures of the finished projects. Each project is labelled with a letter and you need to find the letter for the pyjama pants, which on this pattern is "F".

Next you need to find which pattern pieces you need to make the pants. On your instruction sheet, look for the section that tells you how many pieces are included in this pattern and then look for the pieces that you need to make view "F".

You need two pattern pieces for your pants, number 6 and 7. Now you can pull out all the pattern tissue – carefully as the tissue can tear rather easily. Once you have found pieces 6 and 7 set the other pieces aside. There are a lot of lines and symbols on the tissue so it's time to look at the instruction sheet again to find out what they all mean. Look for the section on your instruction sheet called "Pattern Markings".

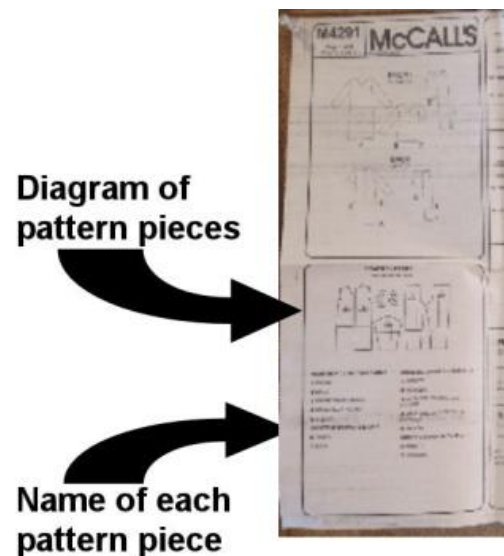


Figure 62: Pieces needed for pyjama pants

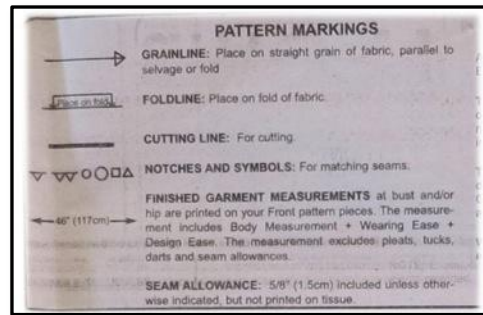


Figure 63: Pattern Markings

The arrows, dots and dashes may seem meaningless and confusing at first but the symbols are the pattern's way of telling you how to sew correctly without the use of words. Construction will be much easier if you know these symbols and what they mean. Pattern symbols are generally standard from pattern to pattern.

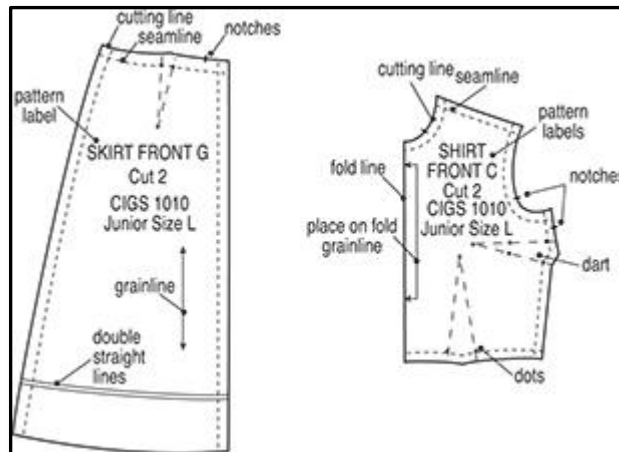


Figure 64: Markings on pattern pieces. Credit:

http://idiotsguides.com/static/quickguides/hobbiescrafts/sewing_basics_how_to_read_and_interpret_a_pattern.html

Here are the explanations about the symbols you may see on your pattern pieces:

- Cutting line - the heavy outlines on which you cut or the line on the piece for an alternate shorter/smaller view from the same pattern.
- Seam line - broken lines showing the stitching line.
- Dots for adjusting sleeve ease - match those on the sleeves with those on the armholes. Mark the dots with a tracing wheel or a tailor's chalk.
- Seam line arrow - indicates direction for cutting and stitching.
- Place on fold - an arrowed bracket. Place the pattern edge exactly on the fold of fabric to cut out
- Double line across pattern pieces - use this line to lengthen or shorten your pattern before placing on the fabric for cutting.
- Centre line for dart - fold along this line before stitching
- Straight-of-grain fabric symbol - a double headed arrow. The line should follow the straight grain of fabric as closely as possible.

4-H SEWING PROJECT – THE NEXT STEPS

- Buttonholes and buttons - indicate the length and the exact location of the buttonhole.
- Seam allowance - is 1.6 cm (5/8") from the cutting line unless otherwise indicated. For stitching accuracy mark curved seams.
- Centre front line - mark dots at top and bottom, pin and press to mark the centre in line.
- Notches - diamond shaped symbols for matching when sewing. Always cut notches outward, not into the seam allowance.
- Dots - for accuracy, match to dots on other fabric pieces when sewing. Mark with tracing wheel or tailor's chalk
- Special cutting instructions – if the pattern piece is used more than once, or if facing interfacing is cut from the same pattern, the number of pieces that need to be cut is printed on the pattern.

The Complete Idiot's Guide: Sewing Basics

(<http://www.idiotsguides.com/static/quickguides/hobbiescrafts/sewing-basics-how-to-read-and-interpret-a-pattern.html>) is a good resource for more information on reading and interpreting patterns

Now that you understand the markings, you can carefully cut out the pattern pieces for the pyjama pants.



2. Alter a Pattern - Introductory (*Core*)

Construction Zone

What we'll learn in this section

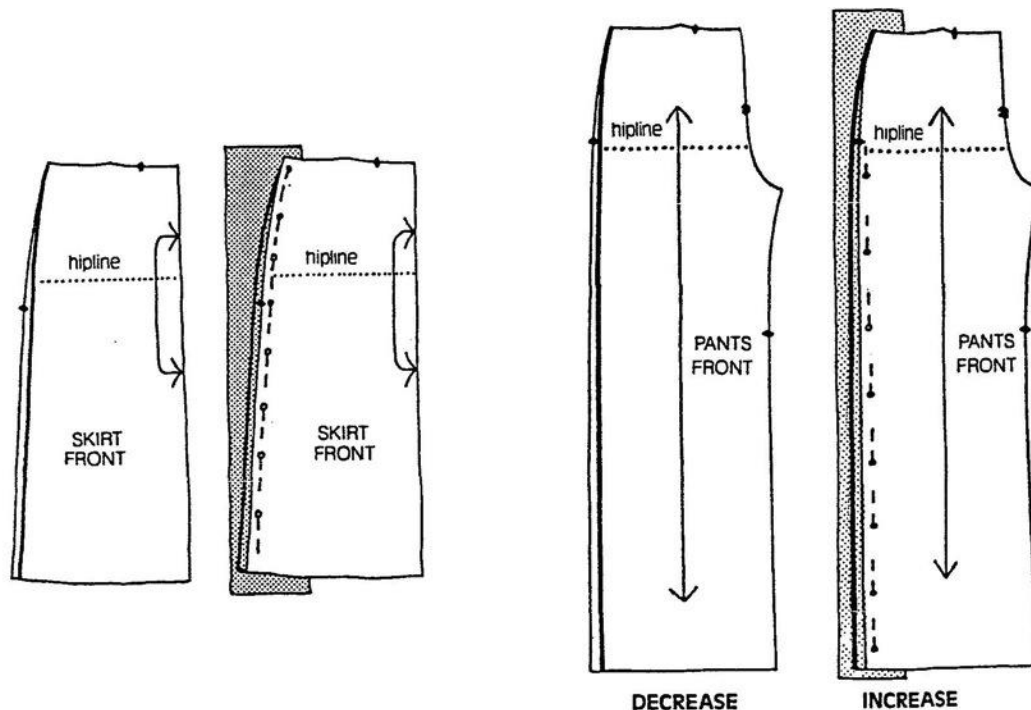
- Basic Pattern Alterations
- How to layout and cut the pattern from fabric
- How to mark patterns
- How to follow a pattern when sewing

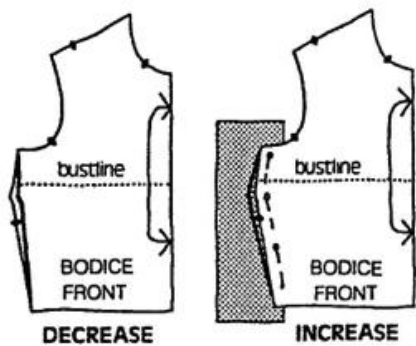
Basic Pattern Alterations

If your measurements don't exactly match the pattern size, you may need to make some alterations or changes in the pattern. Remember that clothes are made slightly larger than your body for comfort and appearance. The difference between your actual measurements and the measurements of the garment is called ease. Ease is a pattern that allows you extra room for movement within your clothes; after all, clothes aren't a second skin.

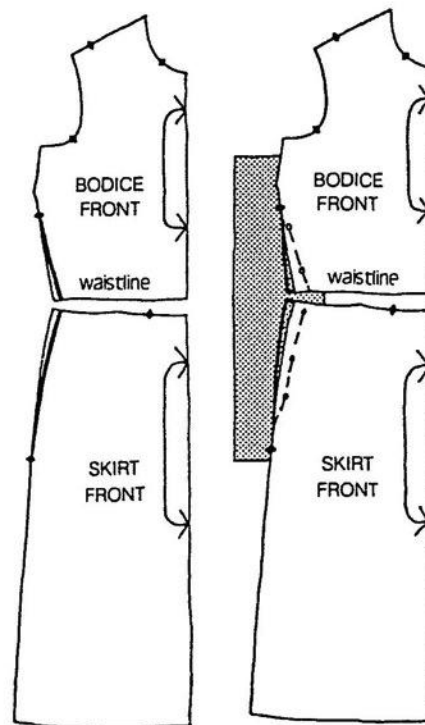
Simple Rules to Follow:

1. Bust, waist and hip adjustments up to 5.0 cm (2 in.) can be made at the side seams. Mark one fourth of the amount to adjust in or out at the side cutting lines.
2. For increases of more than 5.0 cm (2 in.) in the hips and all waistbands, draw a line parallel to the grain line through a dart if possible. Cut the pattern along the line and spread it evenly 1/4 of the needed amount, tape to paper. To adjust the waistband slash and spread at the side seams or decrease the amount at the side seams too.

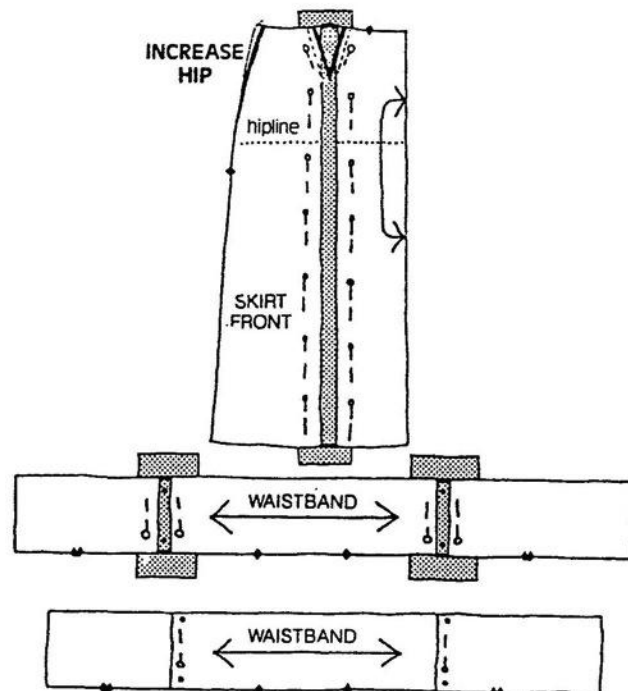




- Remember to make the same adjustment on each piece that will be stitched together.

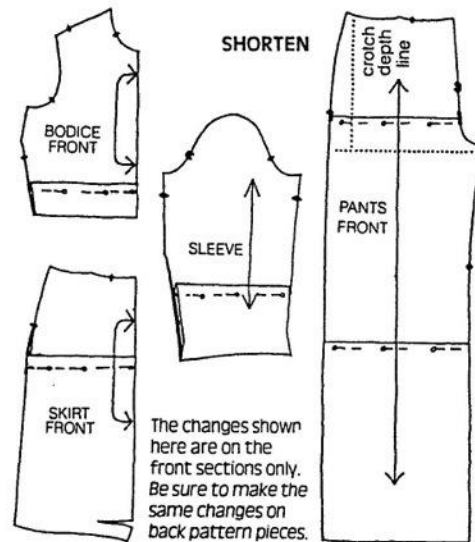


- Length adjustments are made on the pattern pieces where the words "lengthen or shorten here" are found.



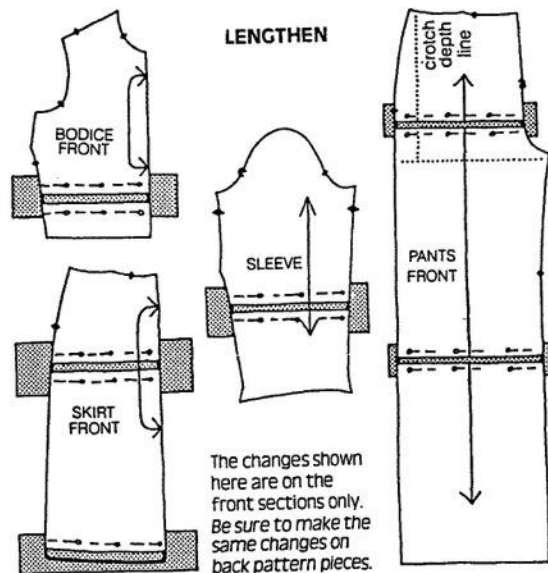
Shortening a Pattern

Fold over the pattern on the line marked lengthen or shorten here. Remember that the fold should be half of the amount that you are shortening the pattern. If the pattern says to shorten at the hem, fold up the paper pattern the same amount along the hem.



Lengthening a Pattern

On your pattern you will find a place marked lengthen or shorten here. To lengthen, cut on the line and separate the pieces the required amount. Pin or tape a piece of paper in the opening. To lengthen a hem, place paper at the lower edge and extend the cutting lines, redrawing the bottom edge.



How to layout the pattern pieces and cut the fabric

The section titled “Cutting Layouts” on the instruction sheet will show the recommended way(s) to fold your fabric and how to place the pattern pieces.

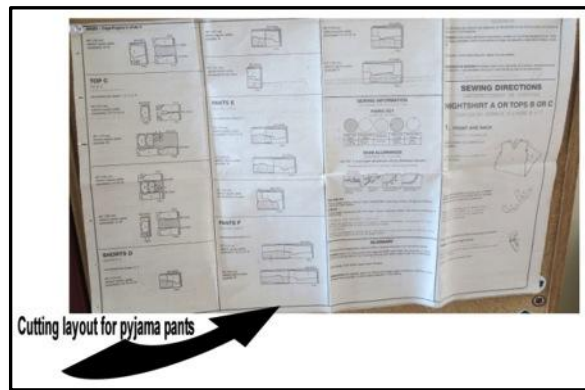


Figure 65: Cutting Layout

Before laying out your pattern on your fabric you should ask yourself:

- What style am I making?
- What size is my pattern?
- What width is my fabric?
- Am I using napped fabric?

The terms with nap and without nap are important ones to understand when cutting out your fabric. Without nap means that there is no up or down direction to the fabric. Pattern pieces can be placed facing in either direction. With nap means that there is a definite up and down direction to the fabric whether in design, weave or texture. All pattern pieces must be laid out facing the same direction. This will require extra fabric and your pattern envelope should tell you how much. Be sure to take a close look at your fabric to see if it does have a definite up and down. Sometimes the up or down fabric is only detected by the way the light hits the fabric and may go unnoticed until the garment is made - and then it is too late.

Fabrics with nap include:

- Pile fabrics such as velvet, velour and corduroy;
- Fuzzy fabrics like brushed flannel and fake fur;
- Shiny fabrics such as satin, damask and some knits;
- Uneven plaids or stripes;
- Printed or woven patterns with a “this end up” look, such as flowers all growing one way.

The layout you use will depend on the view you are making, your pattern size and fabric width. The following information is found in the cutting guide:

- A diagram of all the pattern pieces.
- The name of each pattern piece and all the views for which it is used
- The suggested cutting layout(s).

Follow your pattern layout carefully.

Pinning the Pattern to the Fabric

Here are some tips for you to keep in mind as you lay your pattern pieces on the fabric:

- Be sure the pattern pieces are placed on fabric perfectly on the grain line. Use a tape measure and measure from the grain line to the fabric edge. The measurement should be the same at all locations along the grain line to ensure that you have your pattern piece on grain.
- Be sure that “on the fold” lines are on the fold and that the fold is on the grain. The fold must be parallel to the fabric edge. A tape measure will help you to make accurate folds.
- When pinning, hold both the pattern and fabric flat against the table. Place the pins at right angles to the pattern edge.
- Place the pattern pieces close together to avoid wasting the fabric.
- If a napped fabric is to be used, all pattern pieces will have to be placed in the same direction.
- Pattern pieces which require both a right and left side (ex. left and right sleeve) must be turned over, or reversed, when the second piece is cut if the sleeves are not cut out together on folded fabric (which would automatically produce a right and left)
- Have an experienced sewer check your pattern layout before cutting when you are first learning how to layout your fabric and cut your pattern.

When you have finished pinning all your pattern pieces to the fabric carefully cut around each piece. Be sure to cut your fabric on a flat hard surface; a kitchen table or sewing table is ideal. Use your shears and cut with long even strokes. Cut with the grain of the fabric. Your pattern pieces have arrows showing you which direction is with the grain. Cutting against the grain may stretch the fabric out of shape. Also remember to:

- Keep the fabric and your scissors on the table as you cut.
- Cut the notches away from the pattern rather than into the seam allowance.
- Keep the pattern on each piece until you transfer the markings. (dots, lines, stitching etc.)

Marking pattern pieces

Once you have finished cutting your pieces, you will need to transfer the markings from the tissue to the fabric. There are several ways to mark patterns. For a first project, the tracing wheel and tracing paper or tracing carbon is the easiest to use.

Choose tracing paper of a colour very close to the colour of the fabric so that you can see the marking on the wrong side of the fabric, but it will not show through the right side.

Remove a few pins and place the tracing paper under the part to be marked with the waxy side toward the wrong side of the fabric. Hold a ruler close beside the line to be marked and roll the tracing wheel directly over the mark on the pattern.

Following Pattern Directions

Now it's time to move your pattern pieces and instruction sheet to the sewing machine. Thread your machine and take a moment to review your machine and how it works. Find the section of the instruction sheet titled “Sewing Information”

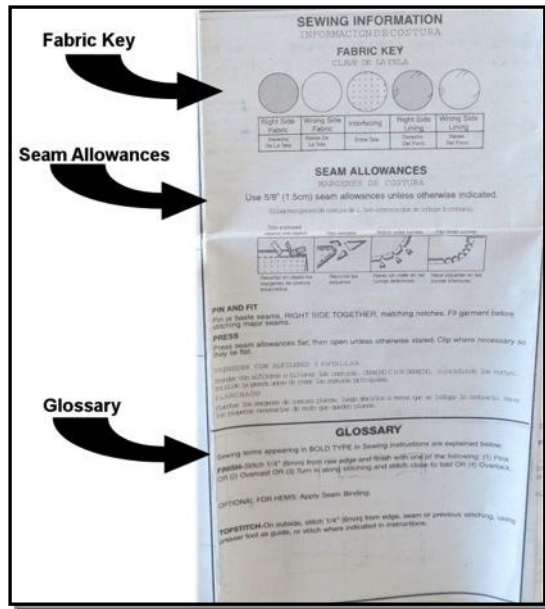


Figure 66 - Sewing information

This section tells you the seam allowance you will be using for your pyjama pants and has a glossary, which explains the meaning of some of the terms used in the directions. This section also has a fabric key, which explains which side of the fabric is shown in the diagrams. Find the instructions for pyjama pants on the sheet and read over the steps. If there is something you don't understand, ask an experienced sewer for help.

Make It: Drawstring shorts or pants

Follow the directions on the instruction sheet to complete your pyjama pants.

Drawstring Pants

MATERIALS

- Drawstring pants pattern or template
- Fabric and sewing shears
- Clear tape
- 2 yards (1.8 meters) fabric, such as lightweight seersucker
- Iron
- Sewing machine
- Machine needles and coordinating thread
- Pins
- 1 yard (0.9 meter) twill tape
- Large safety pin

STEPS

STEP 1

Print pattern template, tape pieces together with clear tape, and cut out. Wash, dry, and press the fabric. Cut out the pattern, following the lines for desired size. Fold the fabric, right sides facing, so that the fold is along the length of the fabric (selvages touching). Place the pattern pieces on the fabric and cut out.

STEP 2

Place the 2 front pieces together, right sides facing, and pin along the crotch seam; sew them together with a 1/2-inch (13-millimeter) seam allowance, stopping 2 1/2 inches (centimeters) from the top. Press open the seam allowance and finish the edges with a zigzag stitch. Repeat with the left and right back-pant pieces, but sew all the way to the top.

STEP 3

Place the front and back pieces together, right sides facing; pin and sew the sides together with a 1/2-inch (13-millimeter) seam allowance. Press open the seams, finish the edges with a zigzag stitch, and press them open again.

STEP 4

Pin the front and back inseams together; sew with a 1/2-inch (13-millimeter) seam. Press open the seam allowance, finish the edges with a zigzag stitch, and press them open again.

STEP 5

With the pants still inside out, create a channel around the waistband for a drawstring: Fold and press the top edge down 1/2 inch (13 millimeters), then fold and press again 1 inch (2.5 centimeters), and edge-stitch 1/8 inch (3 millimeters) from the double-fold's lower edge, making sure to stitch back and forth several times at the opening. Attach a safety pin to one end of the twill tape, and feed the tape through the channel.

STEP 6

To hem the pants, put them on. Mark the hem you'd like, then make a mark 1 inch (2.5 centimeters) below this initial mark. Cut away any fabric below the lower mark. Make a double hem: Fold edge over 1/2 inch (13 millimeters) again. Press, pin, and edge-stitch.

SOURCE: The Martha Stewart Show, May 2010

3. Fit and Fabric - Intermediate (*Core*)

You've got the basics of sewing covered and now it's time to learn some specialized techniques involved in sewing. In this section you will learn:



- What to look for when determining if a garment fits correctly
- How to do some simple seam alterations
- Where to find information on altering a pattern
- About fibres, fabrics and finishes
- About interfacing
- About different types of seams and when they are used

How to determine if a garment is the right fit

A big benefit of knowing how to sew is that you can make and alter clothes to fit your body type. It is important to know how to tell if a garment fits well in order to make the correct alterations to your patterns and clothing. Here are some things to look for when determining if your garment fits well:

Seam lines - should follow the structural lines of the body

- Vertical seams fall perpendicular to the floor
- Horizontal seams run smoothly over the body curves, parallel to the floor;
- Centre front and back seams are in the middle of the body;
- Side seams fall straight, dividing the body;
- Ease - allows the wearer to move freely without any wrinkling or pulling of the garment;

Necklines

- A jewel neckline will lie at the base of the neck with no pulls or wrinkles in the bodice.
- In order for a collar to fit well, the neckline must fit correctly.
- Low necklines should fit close to the body without gaping;

Armholes and Shoulders

- The armhole seam for a regular set-in sleeve forms a smooth curve over the end of the shoulder to a point about halfway down the front and back where the arm joins the body. The lowest point of the seam should be about 2.5cm (1") below the armpit. The armhole seam should not droop down over the shoulder except in garments so designed.
- The shoulder seam should be a straight line on top of the shoulder, extending from the neckline to the top of the arm, unless specially designed to come forward. The underarm seam extends in a straight line from the centre of the armpit down toward the floor and generally divides the body in half;

Bust

- Bodice darts should point to the fullest part of the bust, ending 1.3 - 2.5cm (1/2 - 1") from the point. Underarm dart should be on a level with the fullest part of the bust;

Sleeves

- Sleeve caps should look round and smooth with no puckers.

- A gathered sleeve should have its fullness evenly distributed so that the arm does not touch the sleeve cap in the gathered area.
- The positioning of elbow darts depends on the number of darts to be used. A single dart is placed at the middle of the elbow. If there are two darts, the elbow is centred between them.
- Sleeves should be comfortable – not too snug and without excess fabric to cause wrinkling.
- A long sleeve should end at the beginning of the wrist bone;

Skirts and Pants

- The waistband should fit the natural waistline and should be snug enough to hold the skirt or pants in position.
- Hip darts point toward the fullest part of the body and come to an end above the hipline. The size and number of darts depend on the amount of fabric that has to be distributed smoothly.
- On skirt or pant fronts, the fullness created by tucks or gathers should be distributed smoothly. On skirt or pant fronts, the fullness created by tucks or gathers should be distributed smoothly and directed toward the fullest part of the body.
- Pleats should lie smooth, hang evenly at the hem and should not pull open.
- Skirt hemlines should run parallel to the floor unless designed to do otherwise (e.g. handkerchief hem)

Tips on Fitting

Wear the same type of undergarments that you will wear with the style of your garment and shoes with the proper heel height. Always fit with the garment right side out as there are often differences between the measurements of both sides of the body; changes are transferred to the wrong side of the garment after fitting. Wear the garment and stand in front of a full-length mirror to analyze the fit. Begin at the top of the garment and work your way down; the fit at the top affects the fit lower down. Avoid over fitting, which is fitting too snugly and taking out too much ease. Generally a large body type looks slimmer in a loose fit while a slender figure looks better in a trim fit.

Simple seam alterations

To adjust areas where garment is strained, open basted seams or darts and pin a new seam line, allowing for more ease. If an area is loose, pin out excess fabric. Smooth wrinkles in direction needed to correct the fit. Open seam affected and adjust seam line.

After you have completed the fitting, transfer the pin-fitted lines to the wrong side of the garment by hand basting or with chalk. If the lines need straightening, correct them and machine-baste changed darts of seams. Try on the garment again to make sure that it is balanced and that no further fitting adjustments are necessary. Complete all final stitching and remove basting. Record all changes for future reference.

Altering a pattern

As you know from shopping for ready-made clothes, it is difficult to find clothing that fits each part of our body perfectly since they are made to a specific set of industry standard measurements. Sewing patterns are also based on a set of standard measurements; however a sewing pattern can be altered before you even begin to sew in order to make the finished garment fit you perfectly. There are so many different kinds of alterations that can be made to patterns that we cannot possibly fit them in this manual. Some examples of common fitting problems are broad shoulders, high or small bust, large waist, rounded shoulders and taller or shorter than average. A good sewing reference guide can assist you with pattern alterations. There is some very good information on line as well and

here are a few links to get you started. Kwik Sew has a Fit Guide on their website (http://kwiksew.mccall.com/filebin/pdf/Kwik%20Sew/FitBrochures/KWIKSEW_Fit_Guide.pdf) that explains the steps in basic pattern altering. Sewing School from A Fashionable Stitch (<http://www.afashionablestitch.com/sewing-school/>) has lots of advice on many sewing topics including adjusting patterns. A collection of links about altering patterns can also be found at About.com (<http://sewing.about.com/od/alterationfitting/tp/Sewing-Pattern-Alteration-And-Fitting-Articles.htm>)

It may also be helpful to sew a trial garment to ensure a good fit especially if:

- The pattern has unfamiliar or complicated details or techniques that you are new to you.
- The fabric to be sewn is expensive or fragile.
- You have doubt as to the suitability of the style for your body type.

Inexpensive fabric can be used, but it should simulate the weight and drape of the final fabric. The centre front, centre back and positioning of the buttonholes should be marked on the right side of the trial garment. Facings and the top collar section can be eliminated in the cutting. Make any known alterations to the pattern before cutting the fabric. Further adjustments will become evident as you fit the trial garment. This information should be applied when cutting out the pattern from the final fabric.



4. Fibres, Fabrics and Finishes – Intermediate (*Supplementary*)

A good, knowledgeable sewer recognizes different fibres, fabrics and finishes. Understanding how to sew with diverse types of fabrics will make a difference in your finished project. There are so many fabrics available and choosing a fabric can sometimes be very confusing. Therefore it is important to have some basic knowledge of fabrics and fibres in order to make wise selections.

Fibres

Fibres are twisted together to form yarn and this yarn is woven or knit or pressed into the fabric we use. Fibres can be natural or man-made. Natural fibres come from plants and animals; synthetic fibres are made from chemicals and materials such as wood, glass and coal.

Fabrics

There are three main types of fabric structures; woven, knits and non-wovens. Wovens consist of yarns interlaced at right angles; knits are formed by the interlooping of yarns; non-wovens are fibres that are neither knit nor woven but have been pressed into shape. Fabrics can be made strong by weaving, knitting, or by pressing the fabrics into a non-woven form. There is no end to the number of fabrics that are produced and it would be impossible for us to cover every fabric available on the market.

More details on fibres and fabrics can be found in the “4-H Sewing Project: Fabric Care and Use Guide” and on line at Fabrics.net.

5. Interfacing – Intermediate (Core)



Interfacing is a third layer of fabric used between the garment fabric and a facing. Interfacing is used to provide more support and body to a particular part of a garment such as cuffs, collars and under buttonholes. Many garments call for interfacing and therefore it is important that you learn to handle interfacings properly. Garments that pull, pucker or sag are often the results of a poorly applied interfacing.

Why do we interface? Interfacing is used:

- To give strength
- For shape retention
- To add crispness
- To give body
- To add stiffness
- To add warmth

Where do we interface? Interfacing is commonly used:

- In jackets and coats
- Around button holes
- In collars
- In style features such as a bell-shaped skirt
- Around sleeve edges and jacket or coat hems
- In belts

Different types of interfacings

Interfacings can be nonwoven (e.g. Pellon), woven, or knit. Because nonwoven interfacings do not have a grain, they can be placed in any direction for cutting. Woven and knit interfacings should be cut along the grain line of the pattern piece.

Interfacing can be fusible or sew-in (also called stitch-in). Fusible interfacings have an adhesive on one side, which melts with the heat of an iron to form a bond with the outer fabric. Heat and pressure are required for the interfacing to bond. These types of interfacings eliminate the need for basting or temporary stitching in clothing construction though fusible interfacing does tend to pull away from the outer fabric after a while.

The kind of interfacing you would choose would depend on:

- The fabric you are using - interfacing should be lighter in weight than the fabric with which it is to be used. A sheer blouse would require a net of organdy, whereas a wool coating would be best with a hair canvas or heavier type of interfacing.
- The pattern design - details as mandarin collars need a stiff interfacing to hold them upright, but a rolled collar would be best with an interfacing, which gives support but not stiffness.
- The manner of cleaning to be used - a wash and wear garment must have a wash and wear interfacing.
- The colour of the fabric - although interfacing is usually hidden, it is best to select a colour that matches, or is somewhat lighter in colour than the fabric.

Stitching or Fusing the Interfacing

If using a stitch-on interfacing, the interfacing must be stitched to the garment so that it is smooth and as flat as possible. To avoid puckering, the interfacing should be basted into position for stitching. Fusible interfacing does not need to be stitched on as it is held in place when fused to the fabric by heat and pressure from the iron. Use an iron setting, which will not harm either the fibre content of the fabric or the interfacing. The interfacing should be pressed smoothly to the fabric - there should be no wrinkles in fabric or interfacing. When using fusible interfacings make sure they are attached to the side of the collar, waistband, etc. that will not show in the finished project.

As fusible interfacings age and are repeatedly laundered, they tend to bubble and may eventually separate from the fabric.

Darts in Interfacing

If a dart is required in an interfacing, the following method should be used to reduce bulk:

- Cut along the centre line of the dart to 6mm (1/4") beyond the point.
- Lap the cut edges so that the stitching lines meet and pin into position.
- If you're using stitch-on interfacing, stitch along the stitching line and stitch back and forth over the end of the dart.
- Trim the lapped edges to 6 mm (1/4"). If you are using fusible interfacing, simply fuse the lapped edges together.

Trimming interfacing

Interfacing that is enclosed in collars, cuffs, etc., or used in any corner that has to be turned should have the corners trimmed off before any stitching or fusing is done. This will make the corner easier to turn out and will give a sharp point.

Grading seams

When three layers of fabric are used in an enclosed seam, each layer should be trimmed to a different width to reduce bulk. The seam allowance next to the outside of the fabric should be left the longest.

You can find more information about interfacing at Sewing.org.

Different Types of seams

Most seams are sewn by machine and are 1.5 cm (5/8") in width. A seam is generally made by placing two layers of fabric together at their edges.

What we'll learn in this section

In this section we will learn

- About finishing seams
- About different types of seam finishes and when they are used

Finishing seams

All woven fabrics should be finished in some manner to keep them from fraying. It may not be necessary to finish seam edges of knits, as the knit construction is relatively resistant to unravelling. When serging, the seam edge is automatically finished as you serge. The most common seam finish used while machine sewing is the machine zigzag stitch. Fabrics can also be pinked with pinking shears and then stitched with a straight stitch next to the pinked edge.

Different types of seam finishes and their uses

Turned under or clean finish seam allowance

- A turned under seam allowance, also known as a clean finish seam, looks very neat and finished on the inside of a garment. It is good for lightweight and medium weight fabrics and prevents the edges from fraying.



Figure 67: Turned under seam allowance.

Credit: <http://sewaholic.net/seam-finishes-turned-and-stitched/>

How to make a turned under seam allowance:

1. Sew the seam as directed by your pattern.
2. Turn under each side of the seam allowance 6mm (1/4") and press.
3. Stitch in place 3mm (1/8") from the folded edge down on each side of your seam allowance.

The flat felled seam

- A flat-felled seam is made by putting one edge of fabric inside a folded edge of fabric and then topstitched. A flat-felled seam keeps the seam allowances flat and provides extra strength at the seam. It is commonly used in blue jeans, shirts, pyjamas and outdoor gear such as tents and backpacks.

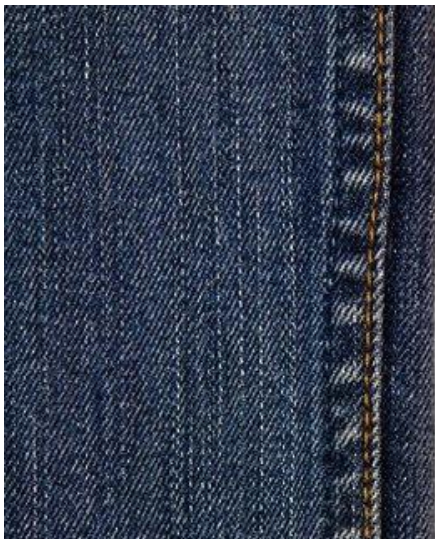


Figure 69 - Flat-felled seam on jeans. Credit: http://www.craftfoxes.com/how_tos/sewing-flat-fell-seams

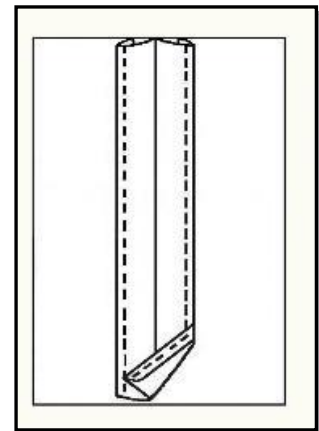


Figure 68 - Turned under or clean finish seam allowance.

Credit: www.sewingsupport.com/sewing-how-to/sewingsupport-articles/seam-finishes/clean-finished.html

How to sew a flat felled seam:

1. Pin, baste and stitch wrong sides together, taking full seam allowance.
2. Press seams open, then press both seam allowances in desired direction: side seams toward back, shoulder yoke seam toward waistline, armhole seam toward waistline.
3. Trim off seam allowance on the underside to 3 to 6 mm (approximately 1/8 – 1/4”).
4. Turn in other edge to make finished seam about 9 mm (3/8”) wide.
5. Stitch flat to garment, close to folded edge.

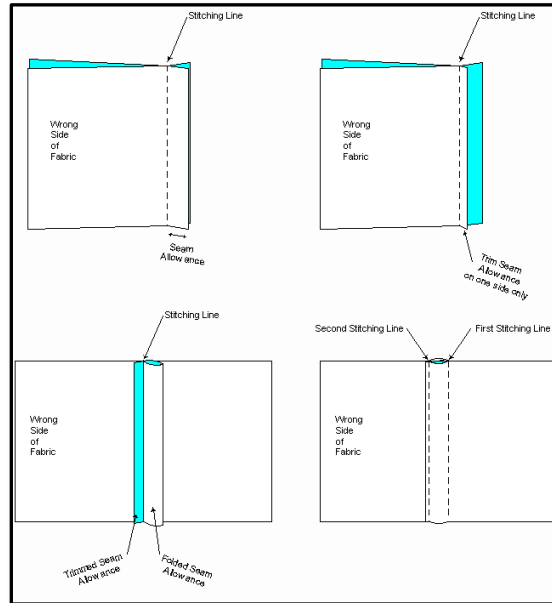


Figure 70: How to make a flat felled seam. Credit: http://www.diceyhome.free-online.co.uk/KatePages/Learning/Seams/seam_types.htm

The French seam

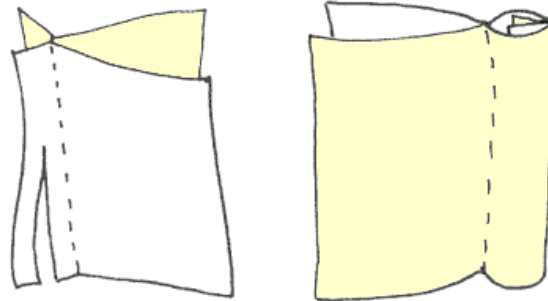
- A French seam is used for extra strength provided by double stitching when a flat finish is not necessary. This seam works well for fabrics that ravel, frequently laundered garments and sheer material (e.g. for undergarments and sheer blouses and dresses). It is not suitable for pyjamas because it is not as comfortable as the flat-felled seam; however, if a very sheer pyjama material is chosen, French seams can be used.



Figure 71: French seam. Credit: <http://www.threadsmagazine.com/item/3702/seam-finishes-for-silks>

How to sew a French seam:

1. Pin wrong sides of fabric together;
2. Stitch in a 9 mm (1/4") seam;
3. Trim close to stitching line
4. Press seam open and turn fabric along the seam line so right sides are facing
5. Sew along the folded edge
6. Press seam to one side.



Step 1: Sew wrong sides together and trim seam allowance.

Step 2: Turn so right sides are facing and stitch close to the seam.

Figure 72: How to sew a French seam. Credit: <http://www.sewsweetness.com/2011/09/french-seams.html>

Serged seams

- Serged seams are used for most knit fabrics that are not too bulky. They are best on loose-fitting garments where seams don't need to be pressed open or lay flat and when you are sure the seams won't need any altering. Serged seams can also be used if a wide seam allowance is not needed for a zipper or pocket.

Grading Seams

If seams are lying one on the other (ex. armhole facing and neckline) the seams should be graded. Grading refers to trimming seam allowances to varying thickness (leaving the widest seam allowance closest to the outer side of the fabric). This is done on seam allowances so that a ridge will not form on the outside of a garment when pressed. Seams that are curved will also need to be clipped to make them lie flat.



6. Construction Zone – Intermediate (*Supplementary*)

What we'll learn in this section

You've learned how to make buttonholes, put in a zipper and how to finish seams as well as learning about different types of fabrics and their uses. Now it's time to put all that you've learned into practice. In order to try out a different type of fabric, your first project will be mittens from fleece. A blouse or shirt is next and will involve making buttonholes and finishing seam allowances. The final project is a skirt or pair of pants with a zipper.

Make It: Fleece mittens

You can find a pattern of your choice at the fabric store or you can find a pattern on line. A pattern for mitts that can be made for any size can be found at Barlow Scientific (<http://www.barlowsscientific.com/technotes/home/mittens.htm>). This link - <http://www.ikatbag.com/2010/10/mittens-and-theyre-theoretically.html> - has mittens for kids sized 2 to 6

When shopping for a pattern to make your first blouse or shirt and skirt or pants look at the instructions carefully to be sure you understand the terms. You may be learning some new techniques when you sew these types of garment such as darts, understitching, and set- in sleeves.

Darts are used to fit a garment or can be used as a decoration. To stitch a dart, crease along the centre line of the dart, right sides together. Match stitching lines and pin. Stitch from the wide end to the point of the dart, along the stitching line. At the point, clip thread ends to about 5 cm (2") and tie a knot close to the end of the dart or backstitch at the point of the dart. Do not tie the knot so tightly that the dart puckers. A well-made dart is stitched smoothly from the side end, tapering gradually to a sharp point.

After stitching, horizontal darts, such as bust darts, should be pressed down toward the hem. Vertical darts such as waistline or shoulder darts are pressed toward the centre back or centre front.

Understitching is a row of machine stitches done on the right side of the facing and parallel to the seam line. That prevents the edge of a facing from rolling to the right side of the garment and gives a sharp edge wherever a facing is applied (ex. Neckline, armhole, front opening of a garment). Understitching is also used on any curved area such as the edge of a curved collar. To understitch, open out facing and seam allowances away from the garment and place the right side of the facing under the presser foot. Stitch as close to the seam line as possible, with a stitch length of 5 to 7 stitches per cm (12 to 16 stitches per inch).

A **set-in sleeve** should fit smoothly into the armhole with no tucks or puckering. Grain line is important in a sleeve to make it fits right and feels comfortable. The crosswise grain in the sleeve cap should be parallel to the floor. The lengthwise grain should be at right angles to the floor when your arm is held at your side. Fullness is distributed evenly and no gathers or puckers should appear in the sleeve cap. The highest part of the sleeve cap meets the shoulder seam of the garment and the seam is double stitched in the underarm area. To learn how to set in a sleeve, follow your pattern or refer to a sewing book.

The pattern instructions will include the directions on these techniques as well other terms that may be unfamiliar. If you still aren't clear on how to do some of these skills, ask an experienced sewer or consult a sewing reference book or on-line sites such as Sewing.org (<http://www.sewing.org/html/guidelines.html>), Kwik Sew (<http://kwiksew.mccall.com/technical-articles-pages-3508.php>) and Craft and Fabric Links.com (<http://www.craftandfabriclinks.com/sewingbook/sewbook.html>).

CLOTHING TLC

CLOTHING TLC - Sample Meeting Agenda

Welcome, Call to Order & Pledge		5 min
Roll Call		5 min
Parliamentary Procedure Minutes & Business		10 min
Topic Information Discussion	How to repair, mend and make minor alterations to your clothing	30 min
Activity Related to Topic	Sewing Green	30 min
Activity Related to Topic	Have members repair or make alterations to a piece of clothing of their choice (communicated at previous meeting)	30 min
Wrap up, Adjournment & Social Time!		10 min
Take Home Activity	Fashion File	



1. Clothing Care – Introductory (*Supplementary*)

Whether you sew or buy your clothing it is important to know how to care for your wardrobe. It is not difficult to take care of your clothing and the time spent to learn and use these guidelines will save money and time in the long run.

What we'll learn in this section

In this section we will learn about:

- General care of clothing and accessories
- Clothing storage
- Laundering basics

General Clothing Care

The following are a few guidelines for tender, loving care of your clothes.

- Dry rain-dampened clothes before returning to closet.
- Hang clothes up immediately after you take them off. Fold sweaters carefully and place in drawers or on a shelf.
- Combination skirt/shirt hangers or multiple skirt hangers will save closet space.
- Padded or wooden hangers will help retain the shape of garments.
- Remove stains promptly to prevent them from becoming set.
- Avoid perspiration stains by using an antiperspirant.
- Mend clothes regularly to prevent drooping hems and loss of buttons.
- Store clean, out-of-season garments in dust proof, waterproof and moth-proof containers.
- Wash washables needed and take non-washables to the dry-cleaners.
- Save labels from new garments and follow laundering instructions carefully.
- Wear a protective covering when applying makeup or cooking.

Care of Accessories

The most expensive accessories that are bought would be the shoes that we wear. To ensure long life of footwear, it is important to know something about caring for your shoes.

General Care of Footwear

- Untie laces and loosen before removing shoes from your foot. Use a shoe horn instead of tramping on the backs of your shoe when putting them on.
- Use boot trees or stuff boots with crumpled paper to retain their shape.
- Don't let shoes lie around on the floor of a closet. Use a shoe rack or a shoe bag.
- Wear footwear that is appropriate for the weather. Treat leather boots with a water protectant and re-apply on a regular basis.
- Dry damp suede and leather shoes slowly. Remove mud and dirt from leather shoes as soon as possible to prevent damage. Mud and dirt is easier to remove from running shoes once the shoes are dry. Brush dirt away using a shoe brush.
- The surface of leather footwear is protected by shoe polish. Shoes and boots will stay in good condition and last longer if they are kept polished.

- Restore the nap on suede footwear by brushing with a soft brush – an old toothbrush works really well.

Cleaning Leather/Suede Shoes

- Cover work area with newspaper and gather shoes, damp cloth, shoe brush, polish and soft cloth.
- Undo buckles or remove laces.
- Remove heavy soil with a damp cloth; remove soil on suede with a brush.
- Apply polish following the directions on the container.
- Polish with brush followed by soft cloth.
- Hold suede shoes over a steaming kettle to bring up the nap.
- Allow shoes to air dry.

Laundering Basics

Learning to wash and dry your clothes the right way doesn't take long. You need to know a few basics and practice using what you learn.

In order to obtain the best possible results, care must be taken to prepare the clothes for the washer and suitable laundry products and methods must be used. It is important to know the cleaning instructions for each item of clothing. Clothing labels with care instructions are important to read and follow. Care labels also indicate if ironing is needed and the iron setting that you should use. Keep special care directions or tags in a large envelope where you can easily find them. For clothes that are hand-sewn, record the fabric, fibre content and care requirements in a file card box that you can easily refer to.

To begin washing your clothes, they must be carefully sorted. Any fabrics which have stains should be treated individually before putting them into the washer, since hot, or even warm, soapy water or the heat of the dryer will set most stains. Clothes with rips, tears or holes should be mended, zippers and snaps should be closed and pockets should be emptied. Delicate items may be placed in a mesh bag or pillow case or washed by hand.

Pre-treat any articles that have heavily soiled areas. To pre-treat clothing, rub soap or synthetic detergent on the area using a brush, sponge or even your fingers using just enough water to moisten the area. Some washers may have a setting for soaking heavily soiled clothing.

Separate items into loads:

- Place all white or light-coloured clothing in one pile. These clothes can be washed in warm water.
- Place all darker coloured clothes in another pile. Sometimes colour from darker or coloured clothes, particularly when new, will run into the wash water and cause white clothes to look dull and greyish if washed in the same water.
- All delicate items, such as lingerie and most undergarments need to be separated into a pile. These items take less time to clean but require special care and may even need to be washed by hand. Your washing machine may have a wash-cycle for delicate garments.
- Place all very heavy clothes in another pile. These are clothes that will take longer to clean and need to be washed separately from lighter weight clothes.

Water and Temperature

Soft water produces the best results in laundering. When soap is added to hard water, a scum or curd forms deposits on the fabrics being washed and produces a dull gray colour.

Coloured clothes require a lower temperature than whites in order to prevent colours from running and clothes from fading. Rinse water is usually cooler than wash water.

Detergents

The amount of detergent you use will depend on the type of soil and the amount of soil. However, no matter what type of washer or washing product used, if there are too many suds the clothes cannot be agitated properly to get the dirt and the soap rinsed out. A lot of detergent is difficult to remove and that can be harder on your clothes than if you left them dirty.

There are many kinds of soaps and synthetic detergents. In selecting one, it is necessary to consider the type of water, washing equipment, fabric and amount of soil on your clothing. Always follow the directions on the package carefully.

Phosphate-free detergents have no harmful ingredients that contribute to contaminating the environment. Detergents may also come with bleach added that is “safe for all fabrics” and this added bleach improves general cleaning as well as stain removal.

Rinses/Fabric Softener

Fabric rinses and softeners produce a softer garment and greatly control the static electricity that makes clothes cling after washing and drying. Fabric softeners also reduce absorbency, so your synthetic pants may not be as comfortable in hot weather, and your bath towels won't be as thirsty. Fabric softeners can be added to the rinse water in the washer which is useful for clothing that you plan to air-dry or can be in the form of a softener sheet that you put directly in the dryer with your clothes.

Stain Removal

If stains on clothing are washed and dried too many times they will probably not be removable because hot water from the washer and heat from the dryer or iron will set stains. It is important to remove stains as soon as possible before they are allowed to set.

The first important thing to do is to identify the stain. This can be done by observing:

- Colour – the red colouring of a lipstick stain; the brown colouring of an iodine stain.
- Form – ink will penetrate right into the fabric while paint will build up on the surface.
- Odour – may identify perfume or medicinal stains.
- Location – perspiration stains in the underarm areas of a suit or shirt.
- Feel – glue and adhesives are sticky; egg is stiff.

Stain identification may also be accomplished by taking the item to the dry-cleaners and asking for assistance.

If you cannot identify the stain, soak the garment in cold water and rub the stain to remove it. Always work from the underside of the stain to avoid driving the stain through the fabric. Remove as much of a built-up stain as possible by scraping, before applying any spotting fluid.

Spot the stain by placing a pad of clean, soft, white cloth under the stain and rub gently with cheesecloth dampened with spot remover. Use light strokes and work with the grain of the fabric. Do not wet the garment, but try to dissolve the spot by rubbing. Change the pad each time remover is used. If the garment is dirty, this will leave a ring. To avoid rings, rub in every direction from the

spot, lessening the pressure and amount of rubbing as one gets further from the centre. Use this same method for cleaning neckbands. When using any stain remover on coloured clothes, experiment on a seam or an inconspicuous spot first.

Follow the directions on the container of the stain remover. Too much may damage or discolour fabric. There are five major kinds of stain removers:

1. Absorbents – Include such things as cornstarch, cornmeal, powder, chalk or talc. These should be spread on the stain before it dries. If the stain has already dried, wet the stained area and apply the absorbent. Remove the powder by brushing it off as it absorbs the stain.
2. Detergents – Soap and synthetic detergents will remove many non-greasy stains and some greasy stains.
3. Solvents – Dry-cleaning fluid and water are examples of solvents. Be sure to test the solvent in an inconspicuous area of the fabric before use.
4. Chemical Stain Removers - These includes bleach, blueing, vinegar, iodine (for removing silver nitrate), oxalic acid (for removing rust and metallic stains) and sodium thiosulfate (for removing iodine and chlorine).
5. Bleaches – there are two types:
 - Oxygen Bleach – is very mild and safe to use on all fibres, whether coloured or white. It should be used regularly as it is intended to prevent fabrics from becoming grey and dull rather than to restore whiteness and brightness.
 - Chlorine Bleach – is very strong and must be used cautiously. It is used on white cottons, linens and some synthetics, but synthetics may yellow if chlorine bleach is used on them.

Never use chlorine bleach:

- On silk, wool, rayon, acetate, delicate fibres, spandex and coloured items.
- On resin-treated fabrics such as permanent press. The chlorine bleach may cause the fabric to yellow.
- In areas where there is a lot of iron in the water or a rust condition in the pipes as it will cause yellowing.

Reducing bleaches are used to remove dyes, hard-to-remove stains from white goods and the yellow discolouration from some finishes. Examples include Rit Colour Remover and Tintex Colour Remover.

Enzyme Containing Cleaners remove stains such as blood, grass, chocolate, lipstick, perspiration, grey, milk, eggs and body soil.

Care Labelling

Care labels tell you how to clean an item (i.e. washing/drying/dry-cleaning) and what things to avoid (chlorine bleach perhaps).

Care labels usually have instructions in the form of symbols in order to overcome the language barrier that may exist between different countries.

The Canadian care labelling system was updated in 2003 in order to match the systems used in the rest of North America and in most of Europe. The same five symbols are used but instead of the symbols being coloured, most are now black and white.

The five basic symbols are:

1. Washtub – represents laundering and cleaning.
2. Triangle – represents bleaching.
3. Square – represents drying.
4. Hand iron – represents ironing or pressing.
5. Circle – represents dry-cleaning.

This link to the Canadian Consumer Handbook ([http://www.ic.gc.ca/eic/site/oca-bc.nsf/vwapj/Apparel%20Care%20Symbols_eng.pdf/\\$FILE/Apparel%20Care%20Symbols_eng.pdf](http://www.ic.gc.ca/eic/site/oca-bc.nsf/vwapj/Apparel%20Care%20Symbols_eng.pdf/$FILE/Apparel%20Care%20Symbols_eng.pdf)) has the details about the symbols on clothing labels.

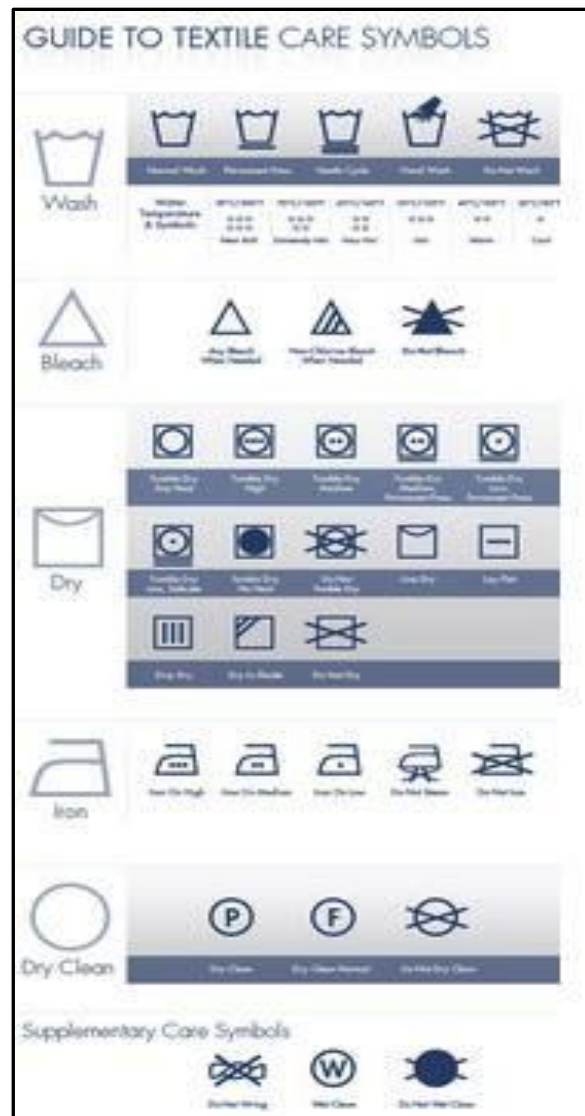


Figure 73: Clothing care symbols. Credit: <http://www.sears.ca/content/resource-centre/buying-guides/textile-care-symbols>

Clothing Storage

There are many items you can use for storing your clothing and accessories. Here are a few ideas:

- Clothes Hangers - may be made from metal, wool or plastic or a combination of these three materials. They may be padded so that a garment will not wrinkle as readily or they can be left unpadded. Wooden/metal hangers are usually more durable than plastic or plain wire ones. Special skirt and pant hangers, which permit several skirts or several pairs of pants to be hung on the same hanger, are also available. Hangers of this type that do not require the garment to be folded while hanging up prevent creases from forming.
- Closet Organizers – an organized closet makes things easier to find and makes your closet will be less crowded which leaves clothing neat. Special closet organizers such as clothes hooks, accessory boxes and laundry bags can be used to organize your closet.
- Shoe Racks and Shoe Bags – will keep your shoes much neater than just sitting on the floor. Shoe bags are usually made from a sturdy plastic or canvas and generally hold up to twelve pairs of shoes. They may be attached to the inside of a closet door or the closet itself. Shoe racks are made of metal or plastic and may sit on the floor or be hung from the inside of the closet door.

Closet and Drawer Organization

One of the biggest problems in people's closets and dressers is overcrowding. Many people never discard a garment after it's gone out of style or is too small. Discarding damaged clothing or recycling clothing that no longer fits avoids overcrowding your closet. The first step to closet and drawer organization is to empty them and put the clothes into three piles:

1. Clothes that you still like and that still fit.
2. Clothes that must be discarded.
3. Clothes that can be recycled.

Recycle or discard anything you have not worn for a year. Give it to your sister or brother or have your friends over and tell them to bring any good clothing they no longer want and have a clothes swap.

After you've sorted out your clothing, organize your storage space with hangars, shoe racks, boxes, bags and hooks. Put the things you wear most in the easily accessible places and if possible store any seasonable garments out of the closet.

Use cut up corrugated boxes or heavy cardboard to make dividers to partition drawers. Cover them with wrapping paper or left over wallpaper if desired.



2. Buying and Maintaining Your Clothing – Intermediate (Supplementary)

Very few people make all their own clothes and of those that do, most buy accessories or items to complement their garments. That is why it is important to know how to shop wisely.

What we'll learn in this section

In this section we will learn

- How to make good choices when purchasing clothing
- How to mend and repair clothing

Being a good clothing consumer

Any clothing you buy should fit well. It should look good and feel comfortable. If a garment is too tight or too sloppy, chances are you won't wear it often and it will just sit in your dresser drawer or closet.

Versatility is important as well. Will you be able to wear the new pair of pants with the clothes you already have or are the pants a style or color that won't coordinate with the rest of your wardrobe?

Look at the quality of the garment you wish to buy. Is it constructed with good quality workmanship? Is the fabric colourfast and able to withstand repeated washing and drying without shrinking or showing undue wear?

Here are some tips on buying clothing and accessories and being an informed and considerate consumer.

When buying clothing:

- Ask permission to try on the clothing. Be careful to avoid getting makeup on clothes you pull over your head and take off shoes before stepping into clothes.
- Think about your body shape and consider if the garment emphasizes good features while camouflaging ones that you consider to be less desirable
- Does the clothing fit and is it comfortable? Even if you do like a garment, it isn't worth the money if it doesn't fit properly or it isn't comfortable.
- Can you afford the garment and does it fit in with what you already have or will it be a waste of money because you have nothing to wear with it?
- Don't force clothes on if they seem too tight. Remember that all companies do not agree on the measurements of a size 10 or a medium.
- Hang clothes back on hangers as you found them as soon as you have finished trying them on unless you are going to purchase them.
- Take advantage of sales but don't buy things on sale you're not going to wear!
- Check the fabric content and care labeling on your garment. If the label says "dry-clean only," will you be willing to spend the extra money required to care for it? If the fibre content is 100% rayon are you willing to spend extra time ironing it?
- Could you make the article more cheaply or would it not be worth the time and effort? Also consider self-satisfaction. Would it be more satisfying to make it rather than buy it? Would you have the time to make the garment?
- Make sure the merchandise is returnable. Many sale items aren't. Be sure you've kept your sales receipt as proof of purchase. Some stores will take returns without a receipt, but they'll

often refund the sale price, which is not so great if you didn't buy the item on sale or they will only give a store credit.

- Be careful of impulse buying. How often have you bought something you didn't really want? Was it just because you wanted to spend money? Or was it because you were feeling blue and thought buying something would make you feel better? Below are some do's and don'ts of shopping and how to deal with the problem of impulse buying:
- Don't take large sums of money (or a credit card) with you on your shopping trip unless you have given a lot of thought to your purchase.
- If you have to buy something, do buy something small but useful/versatile.
- Do analyze your feelings. Are you feeling sorry for yourself today? Find something else to do – you'll feel better and you won't be stuck with clothes you don't want.
- Do go shopping with someone whose taste you respect. Avoid shopping with other people who tend to buy on impulse.
- Don't be taken in by eye-catching displays. Ask yourself, "Is this what I really came here for?"
- Do make a list of purchases and stick with it.
- Don't buy merchandise before you know all the conditions of sale.
- Don't buy any clothing without trying it on first. It may look good on the rack, but may not suit you.
- Do plan your purchases. Decide ahead of time exactly what you want and how much you can afford to pay.

Now that you know most of the ins and outs of shopping and how to shop wisely you're ready to hit the stores. Happy shopping!

How to repair, mend and make minor alterations to your clothing

One of the reasons many people learn to sew is so that they can repair their clothing. Knowing a few repair techniques will extend the life of your clothing. Check your clothing regularly for any repairs that might be necessary. Things to check include:

- Seams, particularly underarm and crotch seams
- fasteners (hooks and eyes, snaps, buttons and buttonholes, zippers)
- hems
- decorative features such as lace, trims, epaulets

Mending seams

- Using a zigzag stitch or double stitching along any seams that are showing signs of wear can repair frayed seams.
- A ripped seam can be repaired on the sewing machine or by hand.
- Put the edges of the ripped seam together and pin in place. Begin sewing at least 1.25cm (1/2") before the rip and continue sewing at least 1.25cm (1/2") beyond the rip.
- If stitching by hand, use tiny stitches or a backstitch. Mending with hand stitching is more likely to show than machine stitching, but is usually the only way you can mend things such as stuffed toys.

Wear Areas

- As soon as you notice any areas of wear, reinforce underneath with iron-on patches or decorative outer patches, buttons etc.

Missing/Loose Buttons

- Replace missing buttons and re-sew buttons that are loose.
- When a button is torn off it may leave a hole in the fabric. If this happens, put a patch on the fabric before sewing the button back on. Follow these steps:
 - Cut off any loose threads around the hole.
 - Using fabric that is the same colour as the garment, cut a piece of fabric slightly bigger than the hole to use as a patch.
 - Put the patch between the facing and the outer fabric. Sew the edges of the hole to the patch using small stitches sewn close together.

Loose threads

- Tie the ends of the loose threads into a knot or thread into a needle and make a couple of stitches to ensure threads do not come undone any further.

Repairing Hems

- If a thread in the hem breaks, you will have to re-do at least parts of the hem. If the hem is sewn in by hand, follow these steps:
 - Carefully take out hemming stitches to the closest seam on both sides of the area that needs repairing. Do not cut threads;
 - Put the end of the threads through a needle and take several small stitches at each seam;
 - Pin the hem in place and stitch using the blind stitch or the slipstitch. Use matching thread.
- If a machine hem comes loose, re-hem the loose section overlapping with the original hem 1.25 cm (1/2"). You may need to take out the entire hem and sew it again if the thread and/or stitching does not match.

Patching and Darning

Darning is a method of repairing a hole or tear by which broken yarns are covered by new yarns anchored in the fabric on either side of the tear. Use this type of mending for holes in the toes of socks and stockings, and in plain-weave fabrics in which individual yarns can be clearly seen.

- Mending a tear is a different from darning a small hole. When mending a tear, the yarns in the fabric must be replaced in both the lengthwise and crosswise directions. Study the fabric weave and attempt to duplicate it as closely as possible. Darning stitches that replace broken lengthwise yarns should run parallel to other lengthwise yarns. Likewise, new stitches on the crosswise grain line should be parallel to other crosswise yarns.
- Chain-Stitch Darning - is used for sweaters and other knitted garments, as it reproduces the knitted stitch.
- A tear in a woven fabric can be mended quickly by using a zigzag sewing machine stitch. Cut a piece of fabric the shape of the tear and stitch it underneath the tear for reinforcement. Use a lightweight fabric the same colour as that of the garment. Close the tear by stitching across the torn edges.
- Your machine may have a special darning stitch. Check your instruction book for specific directions for your machine. When darning by machine, the fabric is sometimes moved back

and forth under the needle so the hole is filled with tiny, even stitches. An embroidery hoop is sometimes used to keep fabric taut.

Patching is used for mending a large hole or tear, or with washable fabrics where darning would not be strong enough. Patches can also be decorative.

- Patching is always done on the straight grain, the damaged area being trimmed all around to make a square or rectangular hole following the lines or weave or design.
- Patches may be hemmed, set-in, darned-in, or woven-in. For instructions on how to do each method, consult a good sewing Reference Guide.

Simple alterations to clothing

Simple alterations involve making minor changes to your clothing in order to achieve a better fit.

Adjusting the waist

For women's and girl's skirts and pants, a slight adjustment may be made by setting the button on the waistband over to make the fit tighter or looser. If you need an inch or more adjustment, you may need to remove the waistband from the opening to the nearest seam. This is a more complicated alteration technique. Before you do this, check to be sure the waistband has enough overlap to allow you to increase the waist of the skirt at the seams. After you rip out the seam of the waistband to the nearest side seam(s), you can increase the waist size by making the seam allowance smaller or decrease the waist size by making a larger seam allowance. Sew the waistband back in position after adjusting the seams. Remember to do the same adjustment to both sides.

Men's and boy's pants are somewhat easier to alter at the waist because the waistband often has a seam at the centre back. Try on the pants to see how much you need to increase or decrease the waist. Stitch a new centre back seam through waistband and pants back, tapering to the original seam line several inches below the waist. After you finish stitching, rip out the original seam. If the waist needs to be made larger, take a smaller seam allowance, and if it needs to be smaller, take a larger seam allowance. Jeans and pants with flat-felled or topstitched seams will be difficult to alter.

Changing Darts

If the bust dart is too high or too low for your figure, it can be adjusted slightly. Try on the garment and mark the correct position for the point of the dart. Rip out the dart stitching line and underarm seam where the dart is sewn. Mark a new stitching line with a ruler from the new point to the original outside lines. Stitch a new dart seam and press it down; re-stitch the underarm seam.

Some darts may be too long or too short for your figure. They can be extended or ripped out and tapered to a point. Be sure to try on the garment when you are making adjustments and pin before your stitch.

Tapering Pants

If you prefer pants to be more tapered, you can remove some of the fullness from the lower legs. Try on the pants to determine the amount of fullness you want to remove. If there is a lot of extra fullness, you will need to taper both the inseam and the side seam. Measure the amount to be taken in and mark the new seam line at the hemline of both legs on the wrong side of the fabric. Using a metre stick or yardstick, draw a pencil line on the wrong side of the fabric from the new mark at the hem to the knee on the inseam and to the fullest part of the hip on the side seam. Be sure you measure carefully in order to remove the same amount from each leg.

Adjusting Sleeve Length

You may need to shorten or lengthen sleeves for greater comfort or a better look. To shorten unlined sleeves without a band or cuff, follow these steps:

- Try on the garment and pin a tuck in sleeve to bring it to the right length.
- Measure the tuck to determine the amount to be shortened and press the sleeve hem up this amount. Try on with the hem folded under to be sure the adjustment is correct for both sleeves.
- Trim the hem allowance an even width leaving about 3 cm (1 1/4") allowance for the hem.
- Turn under 6mm (1/4") on light to medium weight fabrics, or finish with seam binding for heavier fabrics.
- Sew the hem in place using an appropriate hemming stitch.

If the sleeve has a band or cuff at the lower edge, the procedure for shortening is more complicated. Follow these steps:

- Remove the band from the sleeve.
- Cut off the bottom of the sleeve the desired amount. (Be sure to allow for the 1.6cm (5/8") seam allowance!)
- Re-stitch the band to the sleeve. If the sleeve has extra fullness you may need to gather the lower edge of the sleeve to fit the band or cuff.

You can lengthen sleeves without a band or cuff if there is a sufficient hem allowance. Follow these steps:

- Unstitch the original hem and press out the crease of the original fold-line.
- Try on the garment and pin the fold-line for the new hem.
- Turn the hem allowance to the wrong side and press. If there is not adequate hem allowance, sew a false hem.
- Sew the hem in place using an appropriate hemming stitch.
- NOTE: You cannot lengthen sleeves with cuffs or bands on the lower edge unless a large seam allowance was used in attaching the band or cuff.

Sleeves in lined jackets or coats are more difficult to adjust. After you try on the jacket and determine the amount you need to remove or add to the sleeve length, turn the jacket sleeve wrong side out through the opening in the seam of the sleeve lining. Sew a new seam where the lining attaches to the sleeve.



3. Colour Coordination and Wardrobe Planning – Advanced (Supplementary)

Each of us has clothing pieces that we reach for over and over. It could be the colour that draws us, the feel of the fabric or the design of the garment. Understanding how those elements work together are important when planning a wardrobe that is comfortable, practical and reflects your personality.

What we'll learn in this section

- Colour, texture and design
- Wardrobe Planning

Making colour, texture and design work for you

Almost no one has a perfect body and each person has body parts they consider to be good points and parts they consider flaws. Colour, texture and design can all be used to your advantage, no matter what your size or shape. These elements can be used to create optical illusions or to camouflage undesirable body proportions. Learning how to use colour, texture and design properly can help you to look your best.

Colour

The colour of a garment is often what first attracts us to a piece of clothing. Understanding colour and how colours work together is an important part of wardrobe planning.

All colours come from mixing the primary colours, red, blue and yellow, in different combinations. Secondary colours, orange, green and purple, are produced by mixing equal parts of primary colours - equal amounts of red and yellow make orange, blue and yellow mixed together create green, and red and blue result in violet or purple. Intermediate colours are obtained by mixing primary and secondary colours. Tertiary colours are formed by mixing a primary and a secondary colour and result in two word names such as yellow-orange and blue-green.



Figure 74: The colour wheel.

Credit: <http://www.homeworkshop.com/2010/04/28/garden-color-schemes-plant-a-palette-in-your-yard/>

Hue, intensity and value are three words often used when describing the properties of a colour. Knowing these terms will help to understand how different colours work together.

Hue

- The word “hue” means the family name of a colour. If you examine the colour wheel, you will find twelve hues. Some of the hues around the wheel are called warm colours and some are called cool colours. Bright reds, yellows and orange -the colours of flames, fire and sunlight - are warm or advancing colours. They usually look and seem warmer, brighter and larger.

Blues, greens and purples-colours of water, trees, grass and mountain shadows - are cool or receding colours. They look calmer and cooler and are generally less conspicuous than warm colours.

Intensity

- Intensity describes the brightness or dullness of colour. For example, the pure bright red on the colour wheel, has the brightest intensity of any red as it has the most colour in it. Adding its complementary colour, the colour opposite to it on the colour wheel, which in this instance is green, lowers the intensity of red making it duller or greyed. This greyed red colour is a tone of red.
- The more of its complementary colour you add to a hue, the greyer the colour will become, until it finally reaches a neutral grey. Equal parts of complementary colours cancel each other out and produce grey.

Value

- Value describes the lightness or darkness of a colour. Adding white to a colour is often referred to tinting it and will make the original hue lighter. Adding black shades a colour and will make it darker.

By changing the value as well as the intensity of a hue, you can create literally hundreds of different tints, tones and shades of colour.

Choosing your best colours

There are a number of ways to make colour work for your unique skin tone and hair colour and even your body type. Here are some ways you can use colour to work for your best advantage:

- Choose colours which enhance your complexion - skin with a blue undertone looks best against cool colours and skin with a yellow tone will look best with warm colours.
- Use a repetition of colour to play up a good feature. For example, a blue-eyed person wearing a blue sweater, or a dark brunette in a black dress.
- Use colour contrast to emphasize a good feature. This is done by selecting the complement of the colour we wish to emphasize. For example, the blue-eyed person could choose a shade of light orange to highlight their eyes.
- Choose colours that reflect your personality. Vivacious people often prefer colour of brighter intensity.
- Choose colours that best flatter your body type. Colour can create illusions by making things appear larger or smaller.
- In general, to look larger or draw attention to a figure or part of it choose warm colours with light values, bright colours and whites
- The rules of thumb to make a figure or part of it look smaller or to de-emphasize body contours choose cool colours with dark values and dull intensities.
- Choose colours that suit the weather conditions, season, and purpose of the garment.

What can you do about colours that you like but are not very complimentary?

- By experimenting with different tints, shades and tones, you may discover a hue you thought you couldn't wear. People with swallow or olive-tone skin often complain that they can't wear yellow. This would likely be true of bright yellows, which emphasize the skin colour; however, a soft dull gold may suit them.

- Wear a complimentary colour next to your face and you may find it possible to wear something in another colour that is not best suited for you. For example, by using a white collar, beads or scarf, light is reflected back to the face and a colour like black, which tends to drain colour from the face, can be worn as the main part of the garment.
- Select one dominant colour and use other colours in combination in smaller and unequal amounts. Use bright intensities in small amounts as accents.

Texture

The texture of a fabric affects how it fits and how it drapes on the body. Here are some things to consider when looking at the texture of a garment:

- Nubby, brushed or pile surfaces appear to enlarge the body frame.
- Shiny or glazed fabrics like satin reflect light and outline curves and bulges, thus emphasizing size.
- Very stiff, crisp fabrics by-pass curves and thus appear to enlarge the figure.
- Knitted and mesh fabrics fit smoothly and tend to cling, thus outlining the body.
- Smooth, soft, lightweight textures such as wool crepe have a slenderizing effect.
- Textures that are eye-catching will call attention to a feature or increase apparent size.

Design

An important term to understand when discussing design is line.

Lines in clothing are created by seams, hems and trimming details. Lines form the boundaries of forms and shapes; they divide large areas into smaller areas; they give direction and movement and they create illusions. Lines can lead the eye to points you wish to emphasize (e.g. a trim waistline) or away from undesirable feature (e.g. large hips).

The outline of the body is called the silhouette. The silhouette in clothing is formed by structural lines. Fashion silhouettes change from time to time from full, rounded lines to slim body-hugging lines and everything in between.

Vertical lines can create the illusion of height when used correctly. However vertical lines that are too far apart, too broad or too vivid may widen the figure.


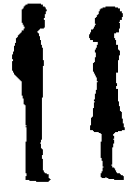



Horizontal lines tend to cut height and add width depending on the position of the line.


Diagonal lines can work to either increase or decrease height and to increase or decrease width depending on their angle and how you use them. An illusion of more height will be created if the diagonal line runs from shoulder to hem. An illusion of more width will be created if the line runs from one side to the other.

Curved lines tend to soften the lines of the figure and are particularly flattering for the angular figure. Curved lines such as rounded lapels and pockets, scalloped edges and full skirts have a more feminine look than straight lines.

Emphasis is the dominance or the concentration of interest in one area of a garment that prevails as a centre of attention and is usually the most eye-catching element of the design. Using the principle of emphasis it is possible to create a flattering illusion by stressing the part of the body that you wish to emphasize and minimize the less attractive parts of the body. Even the simplest patterns show emphasis somewhere. It is important that you are able to recognize where emphasis has been used and whether or not it will flatter you.

The following chart gives a general description of which style of clothing and accessories best fit each body type:

Figure Type:	Select Outfits that:	
Short		Add Height: Vertical Lines Plain Colours Small Prints and Plaids Narrow Belts of self-fabric or same colour Simple, unaltered silhouettes
Short and Slender		Add Height and Fullness at the same time: Vertical lines Belts of contrasting colour Pockets Soft, full sleeves Frilly collars Gently flared skirts and dirndl skirts
Short and Full		Add height and slenderize at the same time: Plain colours or small prints Jacket length between waist and hipline Contrasting collars to emphasize face and neck Simple necklines (such as V-necks) Vertical lines and princess lines Semi -fitted silhouette
Tall		Balance height with horizontal emphasis: Separates Long jacket lengths Contrasting colours and large plaids Bulky fabrics Large Pockets and wide belts
Tall and Willowy		Balance Height and add width and curve: Horizontal details Large plaids Wide belts Turtleneck collars and soft scarves

	Long, full sleeves Soft, rounded silhouette
Tall and Full 	De-emphasize size and add accent height: Unbroken vertical lines V-necks Long sleeves Contrasting collars to emphasize face and neck Easy Fitting silhouette

Hairstyles, Necklines and Glasses to Suit Your Face Shape

An oval face is the easiest shape to work with as most any neckline, hairstyle and glass frame is flattering but choosing the right necklines, hairstyles and glasses frames will flatter any face shape and can create the illusion of an oval face. If you want to create a certain face shape, you do not want to emphasize the undesirable features. Here are some suggestions for flattering your shape:

- Hairstyles – To give the impression that your shape is oval, add fullness where the effect of width on your face is desired and straight or plain lines where width is not desirable.
- Necklines – Should vary from your face shape
- Glasses - If you want to de-emphasize the squareness of your face, avoid square frames and choose some that have more curved lines. Other points to consider when buying glasses:
 - If you can afford only one pair of glasses, choose a basic colour and design, or a colour and design that you can wear with the clothes and colours that you wear most often.
 - Ensure that your eyes are in the centre of the frames?
 - Check the width of the frames. Are they as wide as the widest part of your face?
 - If you cannot see well with your glasses off, have someone whose taste you respect help you pick out frames or wear contact lenses while choosing new glasses.
 - Consider how durable your frames should be and how long you will wear the glasses before you will replace them.
 - Consider comfort and fit. Do the glasses feel good? Do they press on your temples? Do they slide off your nose?

Wardrobe Planning

The ideal wardrobe need not be large, but it should provide appropriate outfits for all daily activities. Here are some suggestions on how to plan your wardrobe:

- List your activities - start to plan your wardrobe by listing on paper the different activities that you are involved in regularly. You might ask yourself these questions:
- What is my occupation now? Will it change in the near future?

- Most of you are students now. Will you be looking for a job in the summer or in the next year? What sort of job will you be looking for? What type of clothing will you need for this job?
- Do you wish to follow current fashions? Or are you someone who likes to be “different?”
- What are my activities in school? Outside of school? At home?
- Are there regular weekly/monthly/annual events for which I need special clothing (e.g. weekly tennis lessons or a local annual festival)?
- What are my plans for the coming year?
- Take inventory - Sort through your clothes in your closet and drawers. Try each item on and analyze it. Decide what you like or dislike about each garment or accessory. As you go through your clothes, sort them into the following groups:
 - Wearable - can be worn as they are.
 - Soon to be wearable - are still suitable, but need repairs or alterations before wearing.
 - No longer wearable - any garments that are too small, worn out or clothes you no longer like or need.
- Decide what is missing from your wardrobe - After sorting through your existing clothing you will be able to list the clothing pieces that are missing from your wardrobe, either because the pieces you have are no longer suitable or you are lacking clothing appropriate for your lifestyle.
- When adding to your wardrobe, it is wise to consider buying clothing in a design that will last rather than fads that will go out of style quickly.
- Build your wardrobe around a basic colour that you won't tire of and that goes well with everything in your wardrobe. Begin with the largest item in your wardrobe (e.g. a winter coat) as the backbone of your wardrobe and build around it.
- Budget for Your Needs - After you've decided what you need and when you need it, you'll have to budget for it. Decide how much each article costs and when you can afford to buy it.

Choosing Accessories

Some accessories are useful and practical such as a purse or belt, while others such as a scarf or a piece of jewellery simply accent or complement you and your clothing. Keep your wardrobe in mind and know which pieces of clothing you would like to accessorize when shopping for accessories. Decide ahead of time what colour of accessories work best with your clothes and which size best suits your body type. Large, chunky accessories tend to look better on a tall, large person, whereas small and simple accessories suit someone who is petite.