

# Needlecrafts



Name: \_\_\_\_\_

Club: \_\_\_\_\_

Age as of 01/01: \_\_\_\_\_

# Needlecrafts

## Table of Contents

Introduction _____	1
Planning Your Project _____	2
Helpful Tips & Goals _____	3
Crochet _____	4
Cross Stitch _____	8
Embroidery _____	12
Knitting _____	18
Needle Felting _____	22
Rug Making _____	27

## **Introduction**

This book is intended to help 4-H members explore the productive, exciting and entertaining area of needlecrafts. The activities and explanations contained in this book are meant to give insight into what is involved in a wide variety of needlecrafts. Needlecrafts are not limited to those covered in this book, so feel free to try anything that interests you.

The descriptions are brief and the pictures are few in this book by necessity. Additional references will be required in order to complete a project. As you explore, you will find that there is an abundance of information available from friends and relatives, libraries, the internet, television, and stores. In fact, you may find that people are eager to share what they have and to help you learn a needlecraft that they enjoy.

Everyone learns in a different way, so consider a variety of methods such as having someone show you personally, watching a video, or looking at the pictures in a book. It will be helpful for beginners to make a couple of practice projects to get the hang of a particular technique. It will not be hard to find a simple practice project, such as a trivet or potholder

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4/09

**References:** Available upon request

## Planning Your Project

### Activities – All Projects

Please select and complete at least 5 of the following activities. Write the date completed in the square for each project year.

	Date Completed	Activity
1.		Go to your local library and look up your chosen craft. Check out a book or video.
2.		Surf the internet for ideas and resources. Print out any helpful information or free patterns you find.
3.		Visit a local shop that features supplies for your craft. Take notes on what they have in stock. Sign up for their mailing list or get a copy of their newsletter if they have one.
4.		Spend time with a friend or relative who is familiar with your chosen craft. See what they are working on or have made.
5.		Attend a craft show or sewing exposition. See what ready made items or supplies the vendors are offering. Check out any collections or shows on display.
6.		Visit other county or state fairs. See what items others have entered.
7.		Take a class at a local shop, library, or school.
8.		Attend a lecture concerning one of the above mentioned crafts.
9.		Visit a museum or exhibit featuring handcrafts.
10.		Compare the cost, variety, and quality of materials at discount stores vs. specialty stores vs. online stores.
11.		Demonstrate your craft to your 4-H club or another small group.
12.		Teach someone else how to do your craft.
13.		Make a list of possible projects you would like to try.
14.		Make a sketch of an original project design.
15.		If your project requires use of a sewing, felting, or embroidery machine, read your machine's instruction manual.
16.		Take part in a community service project, such as donating needlecraft items to a charity, bazaar, auction, or hospital.
17.		Enter something you have made in a school or community art show.
18.		Do some research and find out if there are any guilds or clubs for needlecrafts meeting in your area.
19.		Make something to give as a gift.
20.		Participate in a sewing circle or open sewing night at a place such as a church, community center, or shop.
21.		Watch a television program or internet video on your chosen craft. Take notes.
22.		Look up a color wheel on the internet, at the library, or in an art or paint department. Study how the colors go together and plan your color scheme.

## Helpful Tips & Goals

### Compile and place in a folder or binder the following items.

*The pattern (or a photocopy) for your project.*

#### ***An Outline***

Outline the steps you will take to complete your project, such as choosing a pattern, shopping for supplies, and progress points for the actual crafting of the item you are making. Include target dates to complete each step which will help to keep you on schedule.

#### ***Itemized List of Supplies***

Check your pattern and reference materials for what you will need. Make a list of tools and supplies, dividing it into two columns: 'On hand' and 'Need to Purchase/Borrow'.

#### ***Cost Estimate***

Save receipts for anything that you purchase. Tally up what you have spent, dividing the expenses into two columns: 'Tools/Equipment' (things you will use again, such as a thimble or scissors) and 'Supplies' (items used up in making the project, such as fabric or yarn).

#### ***Reference Materials***

Copy or print out any information you find helpful, such as a DMC color chart for embroidery or a yarn weight chart or list of pattern abbreviations for knitting or crochet.

#### ***Wrap Up Questions (copy and answer)***

1. How long did it take to complete your project?
2. What was the purpose for doing this particular project?  
(ex. Decorate your room, made as a gift, to wear to school...)
3. Are you pleased with your completed project? Why or why not?
4. What did you enjoy about making this project?
5. What did you not enjoy about making this project?
6. What did you learn while making this project?
7. Do you plan to continue exploring this particular handcraft?
8. What other needlecrafts would you like to explore or learn more about?



## Crochet

### Background

Crochet first became popular in the 1800's. From the pioneers who made shawls, mufflers, and petticoats to keep themselves warm, to wealthy ladies who occupied their time making doilies to decorate their homes, crochet was enjoyed by women of all walks of life.

The word "crochet" comes from the French *croc*, which means "a hook". Like knitting, crochet forms one continuous length of yarn into a looped fabric. By using a variety of needle sizes and yarn types, you can create the thickest of afghans or the laciest shawl.

Unlike knitting, which uses two or more needles onto which a number of stitches are cast, crochet uses only one hook on which a single stitch is formed. The work will not unravel for the reason, which makes it very portable while you are working on a project.

### Checklist of Supplies

#### hooks

Crochet hooks come in many shapes, sizes, and materials. Aluminum and steel are the most common. Avoid the inexpensive plastic hooks, as they may have rough edges that will snag on your yarn. The stitch and the yarn type will determine which hook you should use. Generally, the coarser the yarn, the larger the hook needed. Follow the recommendations in your pattern for best results. At right is a chart showing standard sizes.

Crochet Hook Sizes			
Aluminum		Steel	
Size	mm	Size	mm
B	2.25	00	3.50
C	2.75	0	3.25
D	3.25	1	2.75
E	3.50	2	2.25
F	3.75	3	2.10
G	4.25	4	2.00
H	5.00	5	1.90
I	5.50	6	1.80
J	6.00	7	1.65
K	6.50	8	1.50
N	9.00	9	1.40
P	10.00	10	1.30
		11	1.10
		12	1.00
		13	0.85
		14	0.75

#### yarn

Yarn is made up of several strands of fiber twisted together. The number of strands is referred to as the ply. The ply should not be confused with the weight, as a thicker yarn may have fewer strands than a thinner one. Yarns are available in a number of different fiber contents: synthetic (polyester, nylon, acrylic), animal (angora, alpaca, silk, cashmere, mohair, wool), or plant (cotton, rayon, linen). Most yarns are now labeled with a number indicating the weight of the yarn. See the chart below.

Standard Yarn Weight System							
Yarn Weight	0 lace	1 super fine	2 fine	3 light	4 medium	5 bulky	6 super bulky
Yarn Type	Fingering 10-count crochet thread	Sock, Fingering, Baby	Sport, Baby	DK, Light Worsted	Worsted, Afghan, Aran	Chunky, Craft, Rug	Bulky, Roving

## **notions**

A tape measure, ruler or gauge may come in handy for checking the number of stitches per inch, as well as checking for size. Straight pins, safety pins, a yarn needle, and a pair of scissors are also necessary.

### ***Terms to Define***

Slipknot	Chain stitch	Worsted	Fastening off
Increase	Decrease	Gauge	Filet crochet
Blocking	Butterfly	Intarsia	Ply

### ***Getting Started***

The Craft Yarn Council of America has come up with a system for labeling hooks, needles, yarns, and books. Consistent labeling is intended to make choosing patterns and supplies much simpler. Use the icons found on most patterns to find one that is appropriate for your skill level: beginner, easy, intermediate, or experienced.

To select a yarn, follow the recommendations given on your pattern. Yarns have labels that provide all the information that you will need to know, such as the type of yarn it is, the amount and/or yardage in the ball or skein, gauge, fiber content and care instructions. Many labels also include free patterns, which are printed on the inside.

Most patterns are written using abbreviations. Patterns will often include a key explaining these abbreviations, but you can also find a list in a 'how to' book or on the internet.

It is easy to learn crochet stitches because they are all made in the same way, with their height or length determined by the number of times the yarn is wrapped around the hook. The stitches have a flatter appearance on the front than the back. When worked in rows and turned, you will be seeing the back of one row and the front of the next, giving your project more texture. If worked from only one side, the front will be smooth and the back more bumpy.

### ***Basic Skills***

**Holding the hook:** There are two methods for holding the crochet hook. The first is the pencil position, with the hook end down and the barrel resting on the fleshy part of your hand between your index finger and thumb, as if you were writing. The second is the knife position, with the hook end extended and the blunt end against the palm of your hand, as if you were buttering bread with a knife. Use whichever method feels comfortable to you.

**Chain stitch:** The chain stitch is used to form the foundation for the first row, to make spaces between stitches, for bars in openwork, and for turning at the beginning of rows. It should be worked loosely and evenly so that the hook can enter the loops easily to form the first row. Wrap the yarn around the hook and tie a slip knot. Now bring the yarn over the hook from back to front and grab it with hook. Then draw the hooked yarn through the slip knot and onto the hook. This makes one chain stitch. Repeat according to your pattern to make your foundation row.

**Single crochet:** This is a simple, compact stitch. It forms a firm, smooth surface. Holding the chain in the left hand, insert the hook into the second chain from the hook. Wrap the yarn from behind the hook, over the top and to the front of the hook. Pull the yarn toward you

through the chain (2 loops on the hook). With yarn around the hook again, pull it through the two loops on the hook for a single crochet. To make the next stitch, insert the hook into the next chain stitch.

Half double crochet: A heavy, tight stitch, the half-double crochet (hdc) is appropriate for projects which will get hard use, such as slippers, jackets, and mittens. Yarn over, hook into the 3rd chain from the hook on the foundation chain. Yarn over, pull through the chain to form 3 loops on the hook. Yarn over, pull through all 3 loops. At the end of the row, chain 2 and turn. The first stitch on the 2nd row is worked into the first stitch.

Double crochet: This stitch should be the same gauge as single crochet, but twice as high. It is formed by a yarn over BEFORE placing the hook in the stitch. Holding the foundation chain in the desired position, yarn over and insert the hook into the 4th chain from the hook. Yarn over (yo) and pull through the chain. You should have 3 loops (lps) on the hook. Yarn over, pull through 2 loops. Yarn over, pull through 2 loops, and one double crochet (dc) has been made.

Triple crochet: Three times as high as single crochet, this stitch forms a looser texture. Yarn over twice, then insert the hook in the fifth chain from the hook on the foundation chain, making 4 loops on the hook. Yarn over and draw through 2 loops, yarn over and draw through 2 loops again. Yarn over and draw through the last 2 loops. You have completed the first two triple crochet stitches, as the turning chain counts as the first stitch. Work a triple crochet into each stitch across the row.

Double triple crochet: This extremely long stitch is commonly used in fancy stitch patterns, but is not generally used to make a whole piece. Yarn over three times, then insert the hook in the sixth chain from the hook on the foundation chain. Yarn over and draw it through the chain loop only, leaving 5 loops on the hook. Yarn over and draw the yarn through 2 loops. Repeat 3 more times. Chain 5 at the turn, which counts as stitch one in the next row.

Increasing: There are times when you need to widen your work as you go, or increase, by adding stitches. This can be done at the beginning of a row, at the end of a row, or anywhere in between as called for in your pattern by working twice into the same stitch.

Decreasing: Narrowing your work as you go is called decreasing. It also may be done at the beginning, end, or middle of a row as called for in your pattern. This can easily be done by skipping a stitch and picking up the next, but this method may leave undesirable open spaces in your work. For that reason, you may work two stitches at once instead.

For single and half double crochet, insert the hook in the next stitch, yarn over and pull the yarn through. Instead of completing the single crochet, insert the hook into the next stitch, yarn over and pull through for 3 loops on the hook. Yarn over and pull the yarn through all 3 loops. One decrease (dec) is made.

For double crochet, Work the first double crochet until only 2 loops are on the hook. Yarn over, place the hook in the next stitch, yarn over, pull through 2 loops (3 loops on hook). Yarn over, pull the yarn through all 3 loops for a completed decrease.

Joining a new yarn: When you finish a ball of yarn and need to start a new one, add at the end of the rows so joining is not visible. This method should also be used at the end of a row when changing colors. Just before you pick up for the last time to make the last stitch with the old color, drop the old yarn and pick up the new yarn. Draw the new yarn through to complete the old stitch. The working loop is now ready in the new color. The tail of the old yarn should be kept to the wrong side to be buried later or carried along the tops of the next few stitches so that it will be encased as you go.

Fastening off: To end your work, cut the yarn leaving at least a 3" tail. Draw the yarn through the last loop; tighten gently. This will prevent unraveling. Weave in the yarn tail along the edge of your work.

Joining: Where two or more pieces must be joined together, seams can be sewn or joined with a crochet hook. Crochet seams are strong and quick to make. Slip stitch is the most invisible. Place the pieces right sides together. Insert the hook through both edge stitches, yarn over and draw through to complete one slip stitch. Single crochet makes a ridge that can be a feature on the right side. Place the pieces right sides together, and work as for a slip stitch seam, using a single crochet instead of the slip stitch.

### ***Do's and Don'ts***

If you are using more than one yarn in a project, DO check that they share the same care instructions.

Do crochet a sample at least 4 inches square using the weight of yarn, hook size, and stitch pattern given in the instructions. Check the sample for gauge and try a larger or smaller hook if the sample does not match up.

Do thread the yarn between your fingers to provide extra tension. It is important to control the yarn while allowing it to flow easily from hand to hook. The end closest to the ball of yarn should be wrapped around or threaded over your little finger.

If your foundation stitches are too tight, don't try to make them loose by pulling on them. This will only tighten up previously made stitches. Instead, practice flowing the yarn through your fingers and/or use a larger sized hook for your foundation chain.

Do not count the loop currently on the hook, nor the slip knot at the beginning of the foundation chain, as stitches.



## **Cross Stitch**

### ***Background***

Cross-stitch is one of the oldest and simplest embroidery techniques. Traditionally, it has been used to embellish clothing, religious and household items. Cross-stitch is worked on an even-weave fabric, meaning that there is the same number of threads woven per inch in both directions. These fabric threads are counted to place and make each stitch. Cross-stitch designs are color- or symbol-coded and graphed on a gridded background, showing the stitcher which color of thread to use in each square to form the desired pattern. It is simple to work out your own design on graph paper, shading the squares with colored pencils. Because it requires very little equipment and is easy to stop and then pick up where you left off, cross-stitching makes a great take along project.

### ***Checklist of Supplies***

#### **patterns**

Patterns are available either singly or grouped together in books. Each square of the pattern contains a symbol or color representing a single stitch in a particular color. Arrows indicate the center of the pattern in each direction. Bold lines appear every ten stitches to help you count and find your place.

#### **fabrics**

The most common even-weave fabrics are cotton aida, linen, and cotton or rayon plain-weave fabrics. White and cream are the most common, but other colors are available. Plastic canvas, vinyl Aida, and perforated paper are a few of the non-fabric foundation choices.

**Aida cloth** is recommended for beginners and readily available in craft and variety stores. The cotton threads are woven in groups of four, forming visible squares and corner holes. Aida cloth comes in 11-, 14-, 16- and 18-count, which indicates the number of stitches that can be made per inch.

**Plain-weave linen** is made from flax threads which are woven in the traditional over-under method. Since there are no visible corner holes, the stitcher must count the actual threads to see where to place each stitch, making it more suitable for experienced cross-stitchers. The most common linen thread counts are 25, 28, 32, and 36. Unlike Aida cloth, the stitch count for linen will be half of the thread count, as the stitches will be made over two threads. For example, 28-count linen will hold 14 stitches per inch.

**Plastic canvas** and **perforated paper** are both non-raveling, feature larger holes, and are best suited for rigid projects such as ornaments and baskets. Both are sold in sheets approximately 8" x 11".

#### **needles**

Blunt tips and long, narrow eyes make tapestry needles ideal for cross-stitching. The size of the needle should be relative to the thread count of the fabric so that the needle slips easily between the threads without piercing or stretching them. The higher the number, the smaller

the needle is in length and diameter. Tapestry needles range in size from 13 (heavy) to 26 (fine). A size 24 or 26 usually works well on 14-count fabrics.

### **thread and floss**

Embroidery thread is also known as floss. It is available in every color of the rainbow and many different types, such as cotton, silk, flower, rayon, overdyed, and metallic. Six-strand cotton floss, such as DMC brand, is most commonly used. Most patterns will recommend what type of thread and how many strands to use, as well as the type and size of fabric.

### **scissors**

Several types of scissors are used in cross-stitching. A good sharp pair of fabric scissors will be necessary for cutting even-weave fabrics to the proper size for your project. If you are using plastic canvas or paper as your foundation, a pair of craft scissors should be used rather than fabric scissors to cut the right sized piece. A small pair of embroidery scissors will be handy to carry in your sewing bag for cutting lengths of floss and trimming ends.

### **notions**

A tape measure, ruler, a needle threader, and a pair of tweezers may also come in handy. A pencil or temporary fabric marking tool can be used to mark the fabric for placement of the design. Some stitchers like to use a small embroidery hoop to hold the fabric while they stitch.

### ***Terms to Define***

Weft	Warp	Overdyed	Hardanger
Skein	Variiegated	Orts	Tweeding
Aida	Filament	Blanc	Waste canvas

### ***Getting Started***

The first thing you will need to do is check your pattern for the finished size of the project. You will then cut your foundation piece, adding about an inch to the length and width of the finished size. This will allow for trimming and cleaning up any edges that become frayed as you are working the piece. You may find it helpful to apply Fray Check or masking tape to the edges to minimize this.

Some cross stitchers find it easiest to use a hoop to hold the fabric taught while they are stitching. Hoops are made of wood, metal, or plastic, and come in a variety of sizes. For cross stitch and other hand embroidery, choose a hoop between 5 and 10 inches. The smaller the project, the smaller hoop you will need in order to effectively hoop all areas of the design. Extensions made of scrap fabric may be basted to a side to help secure it in the hoop for working near the edge.

Instead of holding fabric in a hoop when doing Cross Stitch Embroidery, some stitchers prefer to hold the fabric "in the hand". The fabric is held taut between the fingers. When stitching in the hand, care must be taken to use the correct tension. If stitches are too loose, the project will look messy. If they are too tight, the fabric may be warped and misshapen.

Many sources will suggest checking your thread for colorfastness or washing it prior to use. This is usually more of a concern with red colored threads. With advanced dye techniques

used today, color bleeding is rarely a problem. If you feel the need to prepare your thread, rinsing it in water with a little white vinegar in it will help set the color.

### ***Basic Skills***

Threading the needle: Cut a strand of the floss to a length of about 24 inches. Fold the length of thread in half. Thread the needle with the two cut ends, leaving the looped end hanging free. When you take your first stitch, put your needle through the end loop on the back side of the fabric to secure the thread. If you are using previously cut thread and cannot double it over, you will leave a tail when making your first stitch and trap the tail under your next stitch. The tail should then be trimmed to about ½" to keep it from pulling out.

Following the pattern: It is often recommended to start working from the center of the design and work your way out to the edge. You may start wherever it is more convenient or logical for you. You may, for instance, want to start with a large section of a single color or an important figure or phrase, and then fill in around it. If it is possible to photocopy your pattern, you can use a highlighter to mark each section as you complete it.

Stitching methods: There are two different stitching techniques commonly used in Cross Stitch Embroidery.

The first, **the "stab" method**, is used by most beginning stitchers. The stab method involves moving the hand back and forth from the front of the fabric to the back of the fabric. The needle is "stabbed" into the front of the fabric, left there, and then pulled through from the other side. Each stitch technique has unique characteristics. The stab method is effective when using a hoop or frame. The stab method of stitching does not distort the fabric. It is easy to make certain that the stitch is placed properly.

The **sewing method** is used by stitchers who prefer to hold the fabric in the hand instead of in a hoop. The stitcher's hand and needle stay on top of the fabric, except when securing floss. The needle scoops under the weave of the fabric. The sewing method is not the best for beginners. It is more difficult to ensure stitch placement, and the fabric can be distorted by the scooping motion. For more experienced stitchers, this stitch technique is preferred for some projects because a hoop is not required. Stitching a project with the sewing method does seem to be a little faster.

Practice stitching cross stitches until you feel comfortable with the stitch. To work a neat row of crossed stitches, the head and base of each stitch should be the same width apart. Half stitches are the basis for the cross stitch. Some designers use half stitches in patterns to soften the look of a background or as shading. For a neat appearance, make the first half stitch always in the same direction (slanting to the left or to the right). With this in mind, you can fill an entire row or section with half stitches, and then go back and add the cross stitches.

Finishing off: When you are done stitching in a particular color, or run out and need to start a new strand, run your needle under stitches of the same color on the back side so that the color doesn't show through. Cut the thread off, leaving a ½" tail.

Backstitching: Backstitching is used to form a line of thread of a different color to the cross stitches that is used for outlining and highlighting. The stitch goes: up one hole; back one hole on top; down; forward two holes below; up a hole beyond the previous one and then back a hole and down to join the previous backstitch, and then repeat. If you are sewing from right to left, each stitch is sewn backwards from left to right.

### ***Do's and Don'ts***

Do roll your threads onto pieces of cardboard or plastic holders and carefully label them with the brand and color number for future reference.

Do be sure to clip the ends of floss close to the threads under which they are secured. If long ends of floss are left on the back of the project, they may be caught up by subsequent stitches and drawn to the front.

Do roll your work rather than folding it if you are using fabric as your foundation. Constant folding in the same spot will leave a visible crease that will mar your finished project.

Don't over tighten your hoop. This could leave what is referred to as hoop burn on your project, where the imprint of the hoop is still visible on the fabric after it is removed from the hoop.



## **Embroidery**

### ***Background***

Embroidery is the decoration of fabrics with stitches worked with thread and a needle. Adding embellishments such as beads and buttons can expand your skills even further. Embroidered items can be used in our day to day life, such as needlepoint cushions, or framed and displayed just for the joy of looking at them. They can be worked with only one stitch, such as cross stitch, or incorporate many different basic embroidery stitches. They can be stitched in bright colored threads or in either red, black or white only. They can be raised from the fabric surface or worked in stitches that rearrange the actual fabric threads. Museums around the world are filled with embroidered items, such as waistcoats, christening gowns, table coverings, and pictures.

You can embroider either on fabric that's already been finished—such as a tablecloth or denim jeans—or on fabric that you must hem yourself. If you're working with unfinished fabric, make sure to finish it with overcasting, zigzag machine-sewing, or pinking so the edges won't fray.

### ***Checklist of Supplies***

#### **fabric**

Unlike knit fabrics, woven fabrics won't stretch or pucker the embroidery design over time or after frequent handling. Woven fabrics therefore are better than knit fabrics for embroidery. Woven fabrics used often in embroidery include canvas, denim, linen, silk, Aida cloth, and many types of woven wool fabrics. Though embroidery tends to work better on woven fabric, you *can* embroider on certain knits, such as jersey (T-shirt fabric). Small designs—especially those that measure just a few square inches—work best with knits. Larger designs, on the other hand, are more likely to cause puckering or distortion in the fabric. If you want to embroider a larger design on a knit, you should use some sort of facing or stabilizing fabric beneath the knit.

Woven fabric is made of vertical and horizontal threads called the warp and the weft, respectively. Warp threads run vertically, while weft threads run horizontally through alternating warp threads. The thread count of a fabric is the number of warp and weft threads per square inch. Fabrics with higher thread counts are generally finer and smoother than fabrics with lower thread counts, which tend to be coarser.

Woven fabric can be plain weave or even weave. Because their warp and weft threads have various thicknesses, plain weave fabrics tend to differ in the number of threads per square inch. The threads are woven in an "over one, under one" pattern. Most woven fabrics fall into this group. Even weave fabrics have warp and weft threads of equal thickness and the same number of threads per inch. For instance, an 18-count means that there are 18 threads to the inch in either direction. Examples of even-weave fabrics are Aida cloth, Hardanger fabric, and needlepoint canvas. Free embroidery can be done using both plain-weave and even-weave fabrics. Counted-thread embroidery can be done using even-weave fabrics only.

## **thread**

There are a few main types of embroidery thread. Embroidery floss, the most common type, is a loosely twisted 6-strand thread that is easily divided into single threads. It is available in various fibers, including cotton, linen, silk, and rayon. Pearl cotton thread is thicker than floss and twisted slightly. It is an especially good thread for beginners since it's resistant to fraying and easier to handle than floss. Flower thread is a fine, non-divisible thread with a high sheen. Matte embroidery cotton is a thick, soft, tightly twisted thread. Crewel yarn is a fine, two-stranded, indivisible thread which is suitable for all sorts of embroidery, including detailed crewel work. There are also many specialty embroidery threads, which offer colors and sheens (such as a metallic shimmer) that traditional threads do not. They're usually made from synthetic fibers, though some are made from silk. All types of embroidery thread are available in craft shops, art supply stores, and online. Thread is sold with a label that identifies its fiber content, length, color number, and manufacturer.

The type of thread to use for a particular project depends on a number of factors, such as the fiber, color, washability, and delicacy. Try to use embroidery thread made from the same material as the fabric on which you're working. If you've already started a project, buy new thread only from the same manufacturer and with the same color number so it matches. If an embroidered item is unlikely to be washed, you can use more delicate threads, such as specialty threads made from rayon. If the item will be laundered, use cotton or other laundry-safe threads. If your design requires fine details or color shading, try divisible threads such as six-stranded floss.

## **embroidery Needles**

Many types of needles are helpful for embroidery, all of which come in a variety of sizes. Different types of needles have different lengths, thicknesses, and eye sizes. These different features make some needles work better than others for certain embroidery tasks. Crewel needles, also called embroidery needles, have sharp points and long, oval eyes. Use them with stranded floss. The number of strands of floss they can handle depends on their size. Chenille needles have sharp points but are thicker and longer than crewel needles and have larger eyes. They can be used with stranded floss but are more often used with thicker or specialty threads. Quilting needles, or betweens, are short with sharp points and short, round eyes. They're used to make very small stitches involving just one or two strands of floss. Tapestry needles are shaped like chenille needles but with blunt tips, and are used primarily for thread-counting embroidery.

Each type of needle comes in a variety of sizes. Needle size is represented by a number. The *larger* the number, the *smaller* the needle. For example, a #8 crewel needle can accommodate only three strands of a six-stranded floss, whereas a larger #3 crewel needle can accommodate all six strands. In general, you should choose the smallest-size needle that can accommodate the thread type and number of strands your project requires. The needle should be slightly thicker than the thread so it opens a clear channel for the stitching. When working with specialty fibers, use a slightly larger needle than you would normally, so the thread isn't strained or compromised by either the eye of the needle or the hole the needle creates in the fabric.

## **additional embroidery tools**

There are a number of additional tools that are helpful when creating embroidery. Some of the tools are common to a variety of crafts, while others are specific to embroidery. Small

scissors are used for neatly clipping the ends of floss in order to minimize fraying. For cutting background fabric to size, use fabric scissors. A tape measure and ruler will be helpful in laying out designs and shaping fabric. A thimble will protect your fingertips while pushing or pulling a needle through fabric. Also helpful are a chalk pencil, a needle threader, and tweezers.

An embroidery frame holds fabric taut, creating a smooth surface on which to embroider. You can move the frame across the fabric as you embroider, making it possible to work on a large-size fabric using only one, modest-sized frame. Frames come in many shapes and sizes, but the most common type is the ring frame, or hoop. A hoop frame consists of two nesting wooden or metal circles. Fabric is stretched between the circles and then anchored in place when the outer circle is tightened around the inner one.

### ***Terms to Define***

Sheen	Matte	Awl	Crewel
Template	Stabilizer	Skein	Herringbone
Overcast	Monogram	Cutwork	Sampler

### ***Getting Started***

Basic embroidery stitches are the building blocks of all needlework whether counted or free style. Free embroidery is a historical style of needlework used in tapestries. It's called "free" because the embroiderer can form irregularly shaped stitches. This type of embroidery includes crewel work. In the other type, counted embroidery, the stitches generally must conform to a grid defined by the fabric. Cross stitch is a type of counted thread embroidery.

Before starting any embroidery project, you must first prepare the fabric by washing and drying it to ensure that it won't shrink. Shrinking tends to cause puckering and distortions. If you plan to embroider a premade item, wash it according to the manufacturer's instructions or as you intend to wash it during its lifetime. Press all fabrics with a hot iron, setting the proper temperature for the fiber content. Ironing makes the fabric flatter and stiffer, which makes it easier to embroider.

Delicate woven fabrics, such as silk, and any stretchy knit fabrics will be easier to embroider if you give them some extra stability. You may use either an iron-on or tear-away stabilizer, which should be easy to find at a fabric or craft shop.

Though you can place a design anywhere on a piece of fabric, you should first consider how easily a thread and needle can be worked in that location. For instance, pockets and sleeves can be tight spaces where it is difficult to get your hand in. Where you decide to put the design determines the right side and wrong side of the work. The decorative side that features the complete design will be the right side. The side on which the knots, thread tails, and backs of the stitches sit will be the wrong side. On some projects, such as embroidery on the cuff of a pair of jeans, the wrong side will be hidden from view. On other projects, such as embroidery on a napkin, the wrong side can be seen simply by flipping the piece over.

The first step in most embroidery projects is to select an embroidery pattern. It will tell you what supplies you need and what steps you need to take in order to make the project. Nearly all embroidery patterns contain information regarding the fabrics, needles, tools, and any other items you may need. Each pattern also explains specific brands, color numbers, and

quantity of thread required to complete the project. A color swatch may also be included so you can match the needed color to the colors of a brand that's not listed.

The stitches used in the pattern are listed to help you understand how to do the necessary stitches before you start the project. Some patterns include time and difficulty estimates to help you schedule the time required to complete the project and assess whether the project is at the right difficulty level for you. Each pattern includes notes about required preparation work and step-by-step instructions for each phase of the project. Some also include templates for the design you are to make.

Before you begin any stitching session, put your fabric into a hoop by laying the smaller ring on a flat surface. Center the design (or the part of the design you want to work on), right side up, over the ring. Place the larger, adjustable ring over the fabric, positioning the screw at the top or bottom. Press down on the outer ring until it's snug against the inner ring. Tighten the screw until the fit is secure and the fabric is stretched evenly and stays taut.

Though you can embroider by stitching freehand, most people prefer to transfer the template to the fabric and work from there. There are several ways to transfer a template. Iron-on transfer sheets are made of a special material that, when ironed face-down on a piece of fabric, transfers the image onto the fabric. Iron-on transfer sheets are sold preprinted or blank for you to print your own design on. Iron-on transfer sheets produce an almost exact likeness of the design onto your fabric. The transferred image can't be erased from the fabric, though so you'll have to stitch very densely or the underlying design will be visible through your embroidery. Transfer mesh is a clear plastic sheet dotted with perforations and sold in a roll. To use transfer mesh, lay the mesh over the design printed on the template. Using a pencil, trace the design onto the transfer mesh, then place the mesh on the right side of the fabric, so the design is where you want it. Trace the design with a washable fabric marker. Carbon paper comes in sheets and in a variety of colors. To use carbon paper, tape the carbon paper face down on the fabric. Tape the pattern to be transferred, right side up, over the carbon paper. Now trace the pattern with a pen, pressing down with constant force. The pressure from the pen will push carbon residue onto the fabric in the form of the traced image. The carbon residue can be brushed away after you've finished the embroidery. You can also draw a design freehand directly onto the background fabric with chalk, pencil, or washable marker.

Embroidery thread is sold wrapped in skeins or spools. Untwist or unwind any thread you plan to use at least a few hours before starting an embroidery project. This gives the floss time to straighten out and ensures smoother results. You can also treat the thread you plan to use with a thread conditioner, a substance that helps prevent fraying and tangling. Thread conditioner is not always necessary, though, especially if you're working with cotton floss or pearl cotton. It's much easier to use thread that's cut to a length of about 20" than it is to use longer thread, which tends to get tangled. If you need less than 20" of thread, you can cut it shorter.

Before you start stitching, you must anchor the thread to the fabric. The method you use to do this depends on whether or not the wrong side of the fabric will be visible. For pieces in which the wrong side is hidden—such as a framed work or a pair of jeans—tie a knot at the end of the working thread. For projects, such as napkins or scarves, in which the wrong side will be visible, you'll need to use a neater knot called a waste knot to anchor your thread. To make a waste knot, make a knot in the end of your thread. Insert the needle through the right side on the fabric about 2" from where you plan to make the first stitch. The needle will now

be on the wrong side of the fabric. Bring the needle to the point where you plan to make your first stitch. You should now have a 2" length of thread along the wrong side of your fabric. Insert your needle through the fabric from the wrong side. Begin working your design, making sure that each time you bring your needle to the wrong side, you cross the active thread over the anchored thread in order to secure it. When you've stitched up close to the knot, cut it off. The tail will be anchored beneath the design.

### ***Basic Skills***

Basically, there are two efficient and orderly ways to do embroidery. What works better depends on the stitches and materials used, and on personal preference. In the hand-sewing method, the needle and your hand are kept on top of the fabric. The needle is inserted into the fabric and brought back to the surface in one movement. Then the thread is pulled through. The same method is used for plain hand sewing. A thimble is usually used on the middle finger to avoid minor injury. In the stab method, the needle is inserted into the fabric at a 90 degree angle, then the thread is pulled through to the underside of the fabric. Then, the needle is again inserted, this time from the underside to the surface; again, the thread is pulled through. A thimble is not usually required to avoid injury with this method, but is sometimes used to make pushing the needle through easier.

Though the number of embroidery stitches may be overwhelming, they are all variations on a few basic stitches. They can be categorized into four groups: Flat stitches, crossed stitches, looped stitches, and knotted stitches.

The flat stitches are perhaps the simplest and easiest to learn. They are all formed with flat, straight stitches of different sizes and may be grouped with other stitches or worked in different directions. The running stitch and backstitch are the foundation for many flat stitches. To make a running stitch, take several small, even stitches at one time. The stitches on the wrong side of the fabric are usually half the size or less of the stitches on the right side. To make a backstitch, take a small backward stitch, and bring the needle through to the right side again in front of the stitch you just made. Take another backward stitch, inserting the needle at the point where the first stitch stops. Keep the length of the stitches even. Other examples of flat stitches are the satin stitch, seed stitch, stem stitch, whipped running stitch, double running stitch, and split stitch.

Basic cross stitch is probably the most popular of all the embroidery stitches. It is quick and easy to do, and can be worked singly or in rows. One stitch fills a small square, so designs can be laid out and stitched in grid form. All of the crossed stitches are formed by crossing one stitch over another at different angles. Other examples of crossed stitches are the long-armed cross stitch, the herringbone stitch, basket stitch, and zigzag stitch.

All the stitches in the looped category are formed from loops that are held in place with small stitches. The chain stitch is the most important of the looped stitches, which can be worked with anything from thick yarn to fine silk thread. To make a basic chain stitch, bring the needle up from underneath at the place for the first stitch. Make a loop of thread and hold it down with your thumb. Insert the needle where it first emerged, and bring the tip out a short distance below this point. Pull the thread up through the loop you have created. Now you are ready to make the next loop. Other examples of looped stitches include the lazy daisy stitch, blanket stitch, checkered chain stitch, open chain stitch, feather stitch, and Cretan stitch.

Knotted stitches are formed by looping the thread around the needle, and then pulling the needle through the loops to form a knot or twist on the surface of the fabric. Knotted stitches are good for adding interesting surface textures to your projects. It is a good idea to practice making these stitches on a scrap of fabric in order to get the thread tension consistent so your knots look even. Examples of knotted stitches are the French knot, bullion knot, scroll stitch, coral stitch, four-legged knot, and knotted chain stitch (link stitch).

There are many, many other types of embroidery which are too numerous to cover here. You may want to explore these on your own. **Couching** is a method of laying one strand of thread on the fabric, and catching it down at intervals with a separate strand of thread. A continuation of couching is **laidwork**, where long threads are laid on the fabric in a grid pattern and secured at the intersections with a separate thread, forming a lattice effect. In **pulled threadwork**, stitches are looped around the fabric threads and pulled tightly to make holes. The combination of stitches and holes creates a lacy pattern. In **drawn threadwork**, some of the threads of the fabric are actually removed, and the remaining threads in the drawn area can then be pulled together in groups to form open patterns. Gathering material into tiny pleats and working over them with embroidery stitches is known as **smocking**. **Crewel work** gets its name from the very fine wool yarn with which it is worked. Traditional nature scenes are formed by basic outline stitches which are filled in with a variety of broader stitches. **Stumpwork** is done by combining padded appliqué with embroidery stitches for an interesting 3-d effect. Other forms you may come across in your study of embroidery methods include, but are not limited to, **needlepoint, needlelace, Hardanger, Richelieu, cutwork, Reticella, and Hollie Point**. Any of these would make a wonderful 2<sup>nd</sup> or 3<sup>rd</sup> year embroidery project after you have mastered some of the basic embroidery techniques.

### ***Do's and Don'ts***

Do keep your threads organized by winding them onto plastic or cardboard cards with the color number and brand written on them, or keep them in plastic bags with the original label in the bag for reference or write the color number and brand on the outside of the bag.

Do buy only thread that's colorfast so the color of the thread won't fade or bleed onto the base fabric. Dabbing it with a wet cotton ball is a way to test the colorfastness.

Do test the needle you plan to use on a piece of fabric. If the needle doesn't pass easily through the fabric, try a smaller one.

Do store needles in a pincushion, a needle book lined with wool or felt, or a needle case. This will keep the needles sharp and clean and make it less likely for them to get lost or accidentally prick you.

Do always remove the fabric from the hoop when you've finished a stitching session. This prevents marks or distortions in the fabric known as hoop burn.

Don't grip the fabric itself when stitching. Instead, hold the embroidery hoop.

Do use a needle threader to making threading the needle easier, especially when using multiple threads.

Don't make your stitches too long, as they will tend to snag and break as the item is used.



## **Knitting**

### ***Background***

It is thought that knitting originated around the 4<sup>th</sup> century in the Middle East. Through the centuries it spread around the world, through Europe, and eventually to North America. Knitting was done by hand until around the 1700's, when knitting machines took over production. Since then, the popularity of hand knitting has waxed and waned with crafters along with the fashions of the day. Each generation takes pleasure in rediscovering the satisfaction of creating hand-knit garments and accessories for themselves and their family. Today, knitters experiment with lots of new patterns and decorative yarns.

Knitting has long been the favorite technique for sweater making because of the detailing and color patterning that is possible, and the supple, drapable fabric the stitches produce. The two basic stitches--knit and purl--can be worked alone or together and form the basis of dozens of designs as well as other stitches.

### ***Checklist of Supplies***

#### **needles**

Knitting needles vary in the shape of the needles, the form of the tips, and their surface finish. They can be made of aluminum, plastic, wood, or bamboo and come in a range of sizes. See the chart below.

Standard Knitting Needle Sizes															
US	0	1	2	3	4	5	6	7	8	9	10	10.5	11	13	15
Metric (mm)	2.00	2.25	2.75	3.25	3.50	3.75	4.00	4.50	5.00	5.50	6.00	6.50	8.00	9.00	10.00

#### **yarns**

Knitting yarns are most often sold in ready-to-use balls and skeins. Some yarns are sold in hanks or cones, which are best wound into balls before use. See the crochet section of this manual for more on yarn types and weights.

#### **notions**

Must have items include a ruler, a small pair of scissors, a crochet hook for picking up dropped stitches, and a blunt-pointed tapestry needle for joining. Other items which will be useful to help you hold or count your stitches or mark your place include bobbins, stitch markers, stitch holders, row counters, and needle stops.

#### ***Terms to Define***

Purl	Hank	Skein	Grafting
Increase	Decrease	Bobble	Gauge
Blocking	Tink	Yarn over	Frogging

#### ***Getting Started***

Knitting requires two needles and a continuous strand of yarn. You begin by making a slip knot on one needle and "casting on" the number of stitches you need for the project. (That's the term for creating the foundation row on one needle.) The basic stitches are created using

both needles, wrapping the yarn over one needle and drawing the wrapped yarn through loops on the other needle.

Circular knitting needles--long, flexible needles with a point on each end--are growing in popularity because they eliminate seams and the need to continually turn your knitting at the end of a row.

Most patterns are written using abbreviations. Patterns will often include a key explaining these abbreviations, but you can also find a list in a 'how to' book or on the internet.

Patterns and books may refer to two methods of knitting. In the first, the English Method, the working yarn is held in the right hand. The English Method uses the right hand more and requires less dexterity of the left hand. Conversely, the Continental Method requires some dexterity of the left hand and is believed by some to be faster. The working yarn is held in the left hand. Either method will produce knitting, so try both and use whichever is most comfortable to you, keeping in mind that both will feel slightly awkward at first. As the majority of people are right handed, we will focus here on the English Method.

### ***Basic Skills***

Casting on: The first step is to make a slip knot to connect the yarn to one of your needles. This will count as your first stitch. Next, you will place the required number of stitches on the needles, which is called casting on. There are many different ways to cast on, and different methods are useful for different kinds of projects. If you are new to knitting, though, there are two main types of cast on that are useful and easy to learn: the knitted cast on and long-tail cast on.

The **wrap cast on** is one of the easiest cast on methods to execute, but it's not the easiest to perform because it is somewhat difficult to keep an even tension when you knit with it. The wrap cast on is one of the few methods that you start without a slip knot on the needle. Still, it is a good choice for beginners because it is quick and easy to cast on this way. It's also a stretchy cast on, making it good for sweaters and socks. You can also use it on lace projects and with other patterns where you don't want the cast on edge to detract attention from the knitting. Also known as: loop cast on, e-wrap cast on, single cast on

**Long tail** is a method of casting on that involves using two ends of the yarn to form the stitches on the needle. It gets its name from the "long tail" you have to pull out of your ball of yarn in order to make the stitches. New knitters often wonder how long their long tail should be. It's an important question, because if your long tail is too short when you start, you'll run out of yarn before all your stitches are made. Many knitters prefer the long-tail method of casting on because, once you get the hang of it, it is quick and easy to make stitches this way. It also makes a relatively stretchy edge, and it's technically the same as a row of knit stitches, so if the first row in your pattern is a knit row, you can skip it. Also known as: double cast on

The most basic type of cast on is known as the **knitted cast on**, and it's a great one to learn because as soon as you know how to do it, you also know how to knit. Each new stitch is formed as a knit stitch and transferred to the left needle.

These stitches should be moderately loose so they can be easily slipped off the needle. They will form one edge of the finished article, usually the bottom. The one-needle method is recommended for beginners.

Knit stitch: The knit stitch forms a flat, vertical loop on the fabric face. The simplest knitted pieces are worked in garter stitch, where every row is knitted. Your finished fabric will look the same on either side. In this method, your right hand makes the stitch – raising the thread, placing it over the needle, and pulling it through the loop. Your left hand propels the knitting forward.

Purl stitch: The purl stitch forms a horizontal semicircle. It can also be used alone, or in combination with knitting stitches. The movements here are opposite those for knit stitch. The Purl stitches tend to be looser than knit ones, so keep your right forefinger, which controls the yarn tension, close to the work to help make the stitches even.

Stockinette stitch: Knitting and purling alternate rows is known as stockinette stitch. This basic and versatile knitting pattern produces work that tends to curl if not blocked. It stretches more widthwise than from top to bottom. The knit side is generally used as the right side. When the purl side is used as the right side, it is called reverse stockinette. Reverse stockinette is often used as a background for cables and other raised patterns.

Increasing: It is often necessary to add stitches, or increase, when you are shaping a garment. There are several methods of producing increases. The yarn-over method is apparent in your work. The bar, raised, and lifted increase methods are called invisible because they are harder to detect in your work.

The **bar method** is frequently used near the edge of the work when shaping garments or when making bobbles, where the resulting small bump will not matter. You knit or purl into the front and back of a stitch to make two stitches.

In the **raised method**, you pick up the horizontal strand between two stitches and knit or purl it to make a new stitch. To make it invisible, you have to work into the back of the strand so that it twists.

The **lifted method** forms a slant, which needs to be paired with another to balance the work. You have to work both left-side and right-side increases from the center. This method is suitable for raglan sleeves. Knit it with a loose tension since this method tends to tighten the work. The increase is made by knitting or purling into the horizontal strand below the next stitch to be worked.

Decreasing: Binding off is the preferred method when three or more stitches have to be decreased, for example, at an underarm. Any of the three methods below can be used if only one or two stitches have to be decreased. All three are visible and pull stitches on a diagonal to the right or left.

Decreasing by **knitting two stitches together** creates a slightly tighter decrease than the slip-stitch method. Knit 2 stitches together through the front of both loops, producing a right slant to be used at the left edge of the work. For the right edge, knit 2 stitches together through the back of both loops to form a left slant.

Decreases to the right are made by **purling two stitches together** through the front of both loops. For a decrease which slants to the left, purl two stitches together through the back of both loops.

The **slip-stitch method** results in a slightly looser decrease than knitting or purling two stitches together. When made on a knit row, it slants from right to left. A similar decrease can be made on a purl row, when it slants from left to right. You simply transfer a stitch from one needle to the other, generally from the left to the right, without knitting or purling it.

Dropped stitches: If a stitch has fallen off the needle one row down, you can retrieve it using your knitting needles. If you don't, it will ravel and form a run. With the knit side facing you, insert a crochet hook through the loop of the dropped stitch, hook the strand of yarn immediately above it, and pull it through the loop on your hook. Continue in this manner until you have used all of the strands of yarn. Slip the stitch onto the left hand needle with the right hand side of the stitch to the front. If you drop a purl stitch, turn your work around and do the same thing, slipping the stitch onto the right hand needle with the right hand side of the stitch to the front. Turn your work again and continue where you left off.

Binding off: All knitting ends with binding off, or the locking of each stitch as you remove it from the needle. Binding off is also used to work buttonholes and pockets and for shaping. Knit 2 stitches. Binding off is usually done on the right side of the work. It is important that you bind off with relaxed stitches to prevent the edge from being distorted by stitches that are too tight. Plain binding off is the most common and easiest method. With the left needle, bring the first stitch over the second stitch and off the needle. Knit the next stitch. Repeat this process until only one stitch remains on the right needle.

Securing yarn end: After binding off, you will have a single stitch left on your needle. Slip this off your needle, take the yarn end and slip it through the last stitch and pull firmly to tighten the loop. Then, using a tapestry needle, weave the secured yarn end into the seam edge to a depth of two to three inches.

### ***Do's and Don'ts***

Do count the slip know as your first stitch.

Do make sure that all of the yarn of one color that you purchase for a project is from the same dye lot, as marked on each skein or ball of yarn. Color variations will show in your project.

Do read all of the pattern instructions before you begin. If there is anything you don't understand, ask for help.

Do pick up dropped stitches with the knit side toward you, as this is easiest.

Don't try to use yarn sold in a hank until you have wound it into a ball. It will be much easier to keep untangled.

# **Needle Felting**

## ***Background***

Felting dates back as far as 6300 BC. This ancient textile fabric is created from wool or other animal fibers such as angora, alpaca or llama that are densely matted together. Wool fibers have scales -- the process of felting causes these scales to grab onto neighboring fibers and interlock. Felting predates spinning, weaving or knitting and for centuries, this non-woven fabric has been used for yurts, blankets, rugs, hats, boots and clothing. Felt has the ability to insulate against heat or cold, and can absorb and hold moisture, and can be cut without fraying. It can also be used to embellish works made in any number of other methods, from knitting to quilting.

The creation of felt using traditional techniques simply requires wool, water, soap and two hands. Wool is laid out in layers with each layer going in a different direction. Hot water and soap is added, then gentle agitation begins. The process of agitation varies depending on the person felting the piece, but the result is the same: the more agitation, the tighter the resulting fabric. For large pieces, or to further felt fibers that have been added to a project, a washing machine may be used to accomplish felting with the wet method.

A dry method was invented using a felting needle to "needle punch" wool into a fabric and allow the creation of felt without soap or water. Felting needles have small, downward barbs that entangle the wool fibers together. It is from this process that industrial felt, like you use in arts and crafts, is made. "Needle felting" is a term for using one or more felting needles by hand to create flat felt or 3-dimensional shapes. Once you learn some basic techniques, needle felting is really quite easy! There are also sewing machines specifically made for needle felting available, as well as needle felting attachments for some machines that take the place of the hand-held needles and accomplish the felting process more quickly.

## ***Checklist of Supplies***

### **wool**

Wool may come in many forms: raw unwashed fleece, washed and even dyed but still in the lock, batting, roving, top, sliver, etc.

The wool should be pulled off in thin layers. It should pull off easily and not feel like you have to use force. If your hands are too close together, the wool will not pull off because the length of the fiber is greater than the distance between your hands, so just move your hand back a bit and it will be easier.

Wool batt is lightly processed fleece - it has been washed and carded. It is rolled off the carding drum and packaged. Batts, or batting as it is also known, are available in large rolls or packaged into precut sizes. They are used inside quilts and comforters and for wet and dry felt making. Wool batting gives a firm, tight felt and works up quickly. However, it may appear dull and pitted, from the poke holes. It does make good filler for 3-dimensional items.

Roving results from a lengthy carding process; the drum keeps circling until the fibers run straight and lay in large wrist thick strands on the carding drum. Roving is easier to handle and dye than batt, so you will find it in many colors. Roving is used to spin yarn - so if you know a spinner find out where they get their roving or see if you can get some odds and ends of roving from them.

Superwash roving has been treated with a process called superwash to make it washable and keep it from shrinking. Spinners like it because they can spin it easily and then when they knit things, the item can be washed easily with no shrinking. However, the superwash process calms down the natural scales on the shafts, which are what make the wool fiber felt well to begin with, making superwashed fibers less suited for felting.

### **felting needles**

The first thing to note about a felting needle is that it is long, barbed and extremely sharp. Therefore care needs to be taken when working to avoid injury. The process of holding and using a felting needle is quite different to using a sewing needle. The felting needle punches through the fabric from top to bottom. The needles get smaller in diameter as the number gets bigger. The most popular sizes for needle felting:

36 gauge – for coarse work

38 gauge – most commonly used, for working quickly

40 gauge – for fine, detail work, finishing – leaves a smooth surface

Because the needles tend to be brittle, it is recommended that you have at least two of each size needle on hand in case you break one. Beginners often break a needle when they are first learning, and it can be helpful to hold and use two of the same size needles at once.

### **darning needles**

These needles are good for tugging on the wool. Most felting needles are broken because they are used to tug the work from one place to another. Use a strong 3”darning needle instead.

### **needle felting foam**

Whether working with a single needle or a needle felt tool, the principle is the same and that is to push or punch the needle through layers of fiber or fabric. This means that it is important to do this on a surface which the needle can sink into. When picking a surface to work on it is important to make sure the whole barbed part of the needle can pass through the work. This ensures that the maximum quantity of fibers is dragged through the layers. Special needle felting pads can be purchased, but most needle felters use polystyrene blocks, upholstery foam or compressed foam.

If you are not careful, your felting pad can end up getting felted into the work. Therefore, avoid wads of fabric, old cushions or anything fibrous. When working on unfamiliar surfaces, keep pulling the work up to check that the work is not getting felted to the work base by mistake.

### **handles/holders**

Some people find the skinny needle tops difficult to hold and make handles out of corks. For large jobs one can buy multi-needle handles. You can hold the needles by hand if you wish, but a felting needle tool is very handy. A skewer is also helpful for holding projects in place and helps avoid jabbed fingers.

### ***Terms to Define***

Roving  
Carding  
Angora

Sliver  
Batt  
Barbs

Superwash  
Marino

Romney  
Gauge

## ***Getting Started***

Many things can be made by starting with some basic shapes, such as: rolls or tubes, balls, folds and cones.

A good first project for both getting the feel of the needle, the fiber and developing your needle style is making a ball. Pinch a bit of fiber into a wad, needle it some, then add more fiber. Once you get a core started, you may wrap it with strands of fiber like you would wind a ball of yarn. This allows you to increase the size more quickly. Keep alternating fiber addition and needling until the ball is the size you desire.

Needle pokes do not need to be hard, and only need to go in 1/4 inch to 1/2 inch into the piece you are felting - just enough to have the barbs tangle and agitate the fibers.

Effective needle pokes go in and out at the same angle, with no J hooks or twisty movement. This "straight needle use" will give the best results and put less strain on the needle -- hence longer lasting needles and less breakage.

The fiber will felt in the direction of the poke. If pokes are repeated in one place, a cavity or depression will develop; if pokes are repeated up and down a line a valley or indentation along the line will occur; random light pokes all over the surface will produce a drawing-in and overall tightening. If there are hills on the ball surface, poke about on the hill until it is reduced to the same height as the rest of the ball surface.

Your first few felting projects should consist of items such as scarves, purses, or pin cushions, which are not intended to be worn on the body. As your felting skills progress, you can be adventurous and use an educated guess to adjust the size and gauge of your project to allow for shrinkage without ruining your felting project. This can easily be accomplished by using a larger needle or hook when creating a felting project. The finished felting project will be several sizes smaller, thicker and firmer.

## ***Basic Skills***

**Felting With Your Washing Machine:** Your project needs to be completely finished before washing. Any embroidery stitching and finishing must be complete, as well as adding any closures or zippers.

Once you have made your desired article, place it inside a zippered mesh bag with very small openings or a sealed pillowcase to prevent loose fibers from plugging up your washing machine's pump and to prevent your project from being damaged by the agitator. Smaller items can even be sucked into the drainage hose and cause considerable damage to your washing machine. You may want to check on your machine part way through the cycle and remove any loose fibers floating in the tub. If felting a small item like baby clothing or mittens, you should place another larger item in the bag as well to prevent losing your project with the draining water.

Set your machine's option to wash in hot water and rinse with cold. You will need to add a tablespoon of gentle detergent that is suitable for wool items and a fabric softener if you desire.

**Hand Felting:** There are two methods of felting yarn by hand, a wet method and a dry method. The wet method begins by layering a batt or roving of wool by very gently pulling the fibers apart and placing them on a large flat surface like a cookie sheet with the fibers all facing the same direction and alternating the direction of the layers. One layer runs horizontally, the next vertically, then horizontally until you have at least four layers. The more layers you lay down, the thicker your project will be.

The next step is to add very hot water mixed with a small amount of hand soap or dish detergent. Slowly wet your wool and apply pressure to wet areas with your hand, using firm pressure. Fold over any frayed fibers into the edges and press them back into the project to create a more even edge. As your soapy water cools, you will need to drain it from your tray and add more hot water while applying pressure. This can become a little messy so plan accordingly. Continue applying firm pressure and keep the hot water flowing until you feel the wool becoming more solid. Next, you will need an uneven surface like a washing board or bubble wrap. By rubbing your project against the uneven surface, you help speed the felting of the yarn by agitating the fibers, similar to what happens in the washing machine. While agitating your wool, you can begin to shape and size your project as the felting process continues.

Once your project appears to be fully felted, you can gently rinse it with cold water for several minutes. Handling the material very carefully, roll it up in a towel and apply firm pressure to squeeze out any remaining fluid. Wringing out your project would be disastrous! Once any excess water is removed, unfold your project and lay it flat to dry.

### **Dry Felting By Hand**

Dry felting is achieved by using un-spun wool fibers stretched over a mold, like a piece of Styrofoam or foam rubber. The fibers are then fused together by repeatedly plucking a barbed needle through the fibers to merge the layers into one. Be very careful with your felting needle as it is very sharp and covered with small barbs that can quickly tear up your fingers if you are not careful. Hand felting with a needle is not a craft that can be done while watching television or other distracting activities. The hand felting method is tedious for some as it takes some time to complete.

### **embellishing:**

When using the hand felting method, you can create interesting projects by layering different colors of wool. Unusual textures can be achieved by mixing wools and other fibers as the wool will shrink and the non wool fibers will distort giving an unusual surface texture. The layers of fabrics and fibers become permanently bonded, so be certain of your design before starting. Fibers from the top layers get pushed through the bottom layer, adding an interesting texture. You can add other colors of felt to a felt "sheet" you have created by felting small pieces of wool on top of your sheet. A cookie cutter is a great tool for getting the outline of a simple design. Place pinches of wool inside the cookie cutter and felt it as you did the "sheet". You could also trace or draw your own design lightly onto the felt. When you are ready to add embellishments (a felted flower for instance) to the "right side" of your felt, do not poke the needles through from the back or the base-color felt will appear on the front side of your flower. Further felt layers together by putting the finished piece into a washing machine on a hot wash.

### ***Do's and Don'ts***

Do find a quiet work space where you can focus and remain attentive while felting. Not paying attention or being bumped can lead to an accident.

Do store felting needles with care and out of reach of young children. Sticking them in a wool ball or a closed box or canister is safest.

Don't twist your felting needle or hit it on a solid object. Felting needles are fairly brittle and tend to break easily.

Don't purchase superwash roving for your project. It has been treated with a process that makes it wash well but felt poorly.

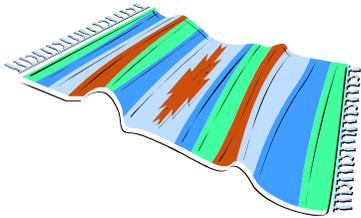
Do use a foam pad beneath your work so you don't break the needle or injure yourself.

Don't attempt to felt synthetic fibers, as they are smooth and continuous and will not attach to each other as natural fibers will.

Do keep fingers out of the way. The needles are very sharp AND barbed.

Do make neat edges by deciding which side of your felt is the "right side" and turning the edges under then felting along the edges.

Do be sure to turn the wool over every so often to make sure that it has not become attached to the felting pad.



## **Rug Making**

### **Background**

A braided rug was a staple in early, Colonial American culture. Settlers would use scraps of clothing and other excess materials to make a floor covering that would provide warmth and protection for a home's inhabitants and guests.

Today, braided rugs have lost none of their popularity. They are decorative, long-lasting and add both warmth and color to any room. "Rugs", no matter which method they are formed with, may serve many different purposes, such as trivets, placemats, table runners, and chair pads.

There are many different ways of making a handmade rug. These methods can be done with the help of some basic implements and your creativity. A handmade rug can be fulfilling to make and is usually made to certain specifications which are coordinated with the area where you intend to place the rug. A handmade rug is something that you can be proud of making because the effort you have spent making it will be seen as it is used in your home.

### **Checklist of Supplies**

#### **fabric**

The most important of the supplies is a variety of leftover scrap material. Materials vary a great deal depending, of course, on the purpose for which the completed piece is intended. Indeed, making rugs is a very good way to use up extra fabric or to recycle old clothes and household goods such as sheets and blankets. The scraps can be of any type and any pattern. When cut into narrow strips and formed into a rug, the actual pattern on the fabric will be barely discernible and only the colors will actually be seen. The only requirement is that the scraps must measure at least one and a half inches wide; up to two and a half inches for thinner goods. Wider scraps should be cut or torn into strips and set aside for easy use. For those who don't have many scraps, check with area thrift stores before purchasing new fabric. Often, scraps are donated and can be bought for very little cash.

#### **backing fabrics**

For punch-hook or hand-hook rugs, you should use burlap, a closely woven fabric made from jute, as a foundation. Evenweave cotton/linen-mix fabrics are also popular for backing, though more expensive than burlap. Latch-hook rugs require a canvas, which has 3 to 5 mesh holes per inch.

#### **thread**

If you are making your rug out of individual strips or braids which will be sewn together, you will also need thread in either a clear nylon or a color to match the general mood of the fabrics. Carpet thread or a thin cording will last the longest.

#### **needles**

You will need a thick, sturdy needle with a large eye in order to sew your strips or braids together. A curved upholstery needle works best, but any thick needle, such as a tapestry or chenille needle (size 20 or 22), will work. If you are merely going between the braided sections, rather than piercing them with the needle, you should use a flat, blunt-tipped lacing needle instead. Rugs or mats made of thinner fabrics may be sewn together using a sewing

machine, though some models may not be able to go through thick or heavy fabrics. A zigzag or overcast stitch may be used.

### **hooks**

The hand hook, the traditional tool for making fabric rugs, is like a crochet hook with a wooden handle. The punch hook is also used for hooked rugs. It has a hollow shaft through which yarn is threaded. The latch hook has a hinged bar for knotting loops of yarn onto canvas.

### **yarn**

Rug yarn is a heavy 4- to 6-ply yarn suitable for hand-hook, punch-hook, and latch-hook rugs. It is usually available in balls or hanks. Two or more strands of Rya yarn may also be used, twisted together. Rug yarns may also be found in precut packages, though they are more expensive than cutting your own.

### **notions**

Scissors will be needed for cutting and trimming. A bias tape maker may be used to turn under the raw edges for any type of rug made from fabric strips. They come in different sizes based on the width of the finished strip. Markers or pens may be desired for marking designs or patterns on the rug backing. A densely woven cloth tape called rug binding may be used to bind raw edges.

### ***Terms to Define***

Bodkin	Binding	Lacing	Shirring
Needlepunch	Thrums	Proddy	Rya
Shag	Backing	Canvas	Burlap

### ***Getting Started***

The first task necessary before braiding or any of the other methods can commence is to prepare the strips of fabric. Make sure you have cut all fabric into strips of the desired width. If you are going to braid, sew each strip together end-to-end with right sides facing until you have three long strips. The strips may also be connected by cutting a small slit in the end of the two strips and pulling the tail of the top strip up through the holes to form a sort of knot. This method is quicker, but does leave a little lump which may show, making it more suitable for crocheted or hand woven rugs. The longer the strips, the larger the rug will be, and vice versa. Also, wider strips will result in a thicker rug.

If you are worried about frays along the cut ends, spray the strips with a spray adhesive or Fraycheck. In the event that neither of these are available to you, clear fingernail polish will also work when applied to the edges; however, this method takes a great deal of time and patience. It's perfectly okay to braid the strips with no treatment. The frays that eventually evidence themselves add character to the rug and add more of a country flair to the finished work.

For a smooth look, both edges are evenly turned under and then the strip is folded lengthwise in the middle. By this means no raw edges are in evidence. Some workers like to iron the strips, thinking the folds stay in place better; others, especially when using heavier worsted material, advocate cutting the strips narrower and simply turning the edges under, omitting the middle fold. In this way their right side of the braid--and the mat-- is kept free from any

appearance of frayed or raw edges. If the strips are prepared as directed the rug or mat is reversible. By a little experimenting one can readily determine the method best suited to her requirements and material.

If you would like a design in your punch-hook or latch-hook rug, you can draw it out free-hand on the backing fabric with a waterproof marking pen. If you are making a punch-hook rug, remember that you will be working the design on the wrong side of the backing, which is where you should mark your pattern as a mirror image of how it will look on the front.

The edges of a backing must be strengthened to prevent fraying while the rug is being worked. For a hand-hook or punch-hook rug, cut the woven backing to size, allowing an extra 4 inches around the edges so that it can be secured to a frame. Turn a ½" hem around each edge and stitch it or tape it down. For a latch-hook rug, cut the canvas to size, leaving a 1- to 2-inch hem allowance around the edges. Turn the hems to the back of the canvas and secure them by working the first knots through both layers of canvas.

When making a round or oval rug, extra material must be added on the curved parts to make the rug lie flat. These are referred to as "round turns" in a braided rug, and "increases" in crocheted or hand woven rugs. To make an oval rug, start with a length of straight braid in the center and then coil the remaining braid around it in a spiral. The length of straight braid that starts off the spiral depends on the size of the finished rug. The length of braid equals the difference between the length and width of the finished rug.

## **Basic Skills**

### **Crochet**

This is one of the most popular ways to make a throw or a runner for the table. Crocheting your very own handmade rug can open the faucets of creativity in your mind. There are many different designs and color combinations for throw rugs which are hand made. A handmade rug for the express purpose of being a throw for a table (smaller) or a sofa (bigger) can be fun to make. Check your resources for a pattern for a crocheted rug or mat.

### **Braided Rug**

Braided area rugs can be constructed in a variety of different ways including a banded braid construction, cloth braid construction, flat braid construction and yarn braid construction. Banded braid constructions boast wide bands of either solid colored or variegated braids made from predetermined patterns to offer an appealing, thick look. A cloth braid construction is indicative of a time when outgrown clothing was cut into strips and then hand braided into a floor covering. A flat braid construction is a common construction as it's one of the easier and more classic methods. Simply intertwine three ropes of fabric and/or yarn, and you'll have yourself a braided rug. A yarn braid construction evolves from yarn in its initial state to a uniquely finished area rug.

Tie your three strips together. Place something heavy on the tied end (or have someone hold it for you) to make braiding easier. Begin braiding using the method most familiar to you. You can remove the heavy object (or release your helper from holding on to the other end) when you feel you've braided enough to prevent the tied end from twisting as you go.

When you have all your strips braided, sew the loose ends together. Carefully coil the braid on the floor, starting from the center and working your way outward. For a circular rug, simply coil in a circle, starting with a very small coil. For an oval, lay approximately one foot of braided strips along the floor. Holding the strip down firmly, begin the coil around the one foot braid.

Start sewing the rows of coil to each other, keeping all stitches on the top side of the rug. There are different ways of doing the sewing; the old-time method of joining the edges was by means of small over-and-over stitches or ball-stitch--taking first into one edge, then the other. Another method uses twine or carpet thread and a bodkin or blunt needle of sufficient size to take the thread; pass through every other loop on both edges, not catching into the braid itself. To make the joining extra strong go over it a second time, taking into the loops missed before. This method makes the work the same on both sides.

It is easier to sew these rugs as they are braided; not only are they rather heavy to handle, but the rows of each color must be even, and it is difficult to determine just how much of the braid is necessary to reach a certain point. While sewing, it is better to place the rug flat on a table or other smooth surface. Completed, the rug should lie flat and smooth. Feel free to experiment with other shapes until you find the one that suits you best. Once secured tightly, fasten off.

### **Latch-Hook**

Handmade rugs made with this technique are really beautiful to behold. This method to making a rug is actually very simple with the use of an implement which is called the latch hook. This wooden and metal implement is used to push the yarn into a sack-like base and then hooked on to the other side and knotted. There are no limits to the sizes, colors and shapes that you can make with this handmade rug method. A slight variation to the latch hook method is the rag rug method. Both similarly use extra or leftover fabric and yarn which are cut to similar proportions but the rag rug fabrics are just pushed through the sacklike base and then knotted.

### **Hand-Hook**

The hand-hooked rug usually has a short, looped pile instead of a thick, cut pile. Beautiful designs can be achieved with this method, as opposed to the traditional striped look of a braided or woven rug. Hand-hooked rugs are worked by pulling loops of a continuous strip of fabric or yarn through the backing fabric, which is usually a light-weight mesh instead of a heavy canvas backing. The loops stay in place because they are tightly packed together. Thin strips of fabric work best, as hand hooks tend to split the strands of yarn or fabric when they are pulled through the backing. The width of the strips will depend on the type of fabric used and the type of effect you want to achieve. When creating a specific design, outline the shapes first and then fill in the areas. Leave one or 2 threads of backing between each row of loops. Start and finish each strip by pulling the end of the strip up to the right side of the work, where it can be trimmed so it doesn't show above the loops.

### **Punch-Hook**

This method is similar to hand-hooking except that punch-hooking is done from the back side of the fabric and the loop is pushed through to the right side. If you are marking a pattern on the backing fabric, remember that it will appear opposite on the front side.

## **Woven**

Toothbrush rugs are another fun and easy way to make rugs. A large plastic or wooden needle, roughly shaped like the handle of a toothbrush with a hole in the end and a gently pointed tip, is used to weave fabric strips into an attractive pattern. Check your local shops or the internet for a pattern. Many different shapes can be made following the pattern instructions.

## **Corded**

Another method of rug making involves encasing cording or clothesline rope in fabric. This can be done by first sewing a long narrow tube with right sides together, turning it right side out, and then pulling the cording through the tube. The encased tubes are then coiled into the desired shape and sewn together. An easier method is to use clothesline wrapped with fabric strips. The fabric should be cut or torn into  $\frac{3}{4}$ " strips, which you will wrap around the clothesline in a spiral fashion. The ends of the strips should be secured with a dab of glue from a glue stick. The pieces can be sewn together by hand, as for braided rugs, or sewn by machine with a zigzag or overcast stitch.

## **Finishing Up**

If you wish to add a non-slip surface to your finished rug, you have several options. The two simplest (and cheapest) ways are paint and rubber backing. By adding designs with Puff Paint (found in the craft aisle of your local department store), you create a unique surface that will grip most vinyl and hardwood floors. Just be sure the paint is completely dry before placing the rug on the floor, or your rug may actually stick. An alternative method would be to buy some of the rubber backing used in sinks, cabinets, and counters. Use liquid Super Glue to adhere the rubber to the rug or just lay it on the floor under the rug.

## ***Do's and Don'ts***

Do lay your rug on a flat surface when connecting the braids or coils. The rug will not lay flat if not sewn together that way.

Do turn under the raw edges of your fabric strips if you prefer a smooth look with no threads sticking out.

Do keep some of your spare yarn or fabric for future repairs. Remember, people will be walking on it!

Do roll your rug, pile side in, to store it. Folding will cause creases which will damage the rug over time.

## THE 4-H PLEDGE

I pledge  
My Head to clearer thinking,  
My Heart to greater loyalty,  
My Hands to larger service.  
And My Health to better living,  
For My Club, My Community,  
My Country, and My World.

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