Before sewing machines, people made all their clothes and home furnishings by hand. Most of us don’t have to do that now, but garments still need buttons and hems, and mending.

Other sewing projects can be done by hand, too. You may want to sew a school letter on a garment or sew a patch in a special place. Don’t forget all the decorative stitches you can make by hand!

**You will learn to:**
- Sew on buttons and shanks
- Repair rips and tears
- Do decorative stitches
- Overcast seams
- Hem

You’ll also learn about the types of needles, thread, and stitches and when to use them. And much, much more!

**You will need:**
- Package of assorted hand sewing needles
- Threads of various types and weights
- Scissors and thread snips
- Fabric
- Pins
- Measuring tape and a gauge
- Thimble
- Notions: button, hook and eye, patch, etc.
- A well-lit work area
- Parent or leader to help you

**Sew!**
Choose one or more of these items:
- Sampler with a variety of hand stitches and/or patches
- Activity book with a variety of hand stitches and fasteners
- Decorative stitches on a purchased, sewn, or knitted garment
- Other hand-stitched garment or accessory

PENNSTATE
College of Agricultural Sciences Cooperative Extension
Set Up Your Work Area

Before you start, think about your work area. You’ll need good light, a comfortable chair, and a clean table to work on. Be sure your hands and nails are clean, too.

If you haven’t hand stitched before, you may want to try using a sewing card or a sewing block first, just to get the hang of it.

Let's Talk About...

Thimbles
Thimbles come in many shapes and sizes for various types of sewing. They are designed to protect your fingers as you push the needle through the fabric. Choose one that fits snugly without cutting off your circulation!

A thimble is usually worn on the third finger of your right hand (if you are right handed) or the third finger of your left hand (if you are left handed). Some people use thimbles on both hands or several thimbles on the same hand to protect their fingers.

Thimbles take a little practice to use. Don’t give up on them!

Needles
Needles come in all sizes and are used for different tasks.
In choosing a needle, the rule is to choose one by the length that matches the stitch you’ll be making.

A quilting needle, for example, is very short because the ideal in quilting is to have 8 stitches to an inch. By contrast, a running stitch is very long, and you’ll need a longer needle in a larger size. Choosing the right length of needle for the job will make your sewing task easier.

Also choose the needle that works best with your fabric. Use a fine one for delicate fabrics and a thicker one for loosely woven or heavier fabrics.

Some packages of needles contain needles all the same size; others contain a range of sizes or types. You’ll also find packaged needles specifically for cross-stitching, quilting, embroidery, upholstery, darning, and beading.
Thread

Just as there are many kinds of needles and thimbles, there are many types of thread. Use the type that matches the fiber content of your fabric and its use.

- Rayon thread is smooth and shiny. It works well for topstitching and for use with stretchy fabrics.
- Cotton-wrapped polyester is a common thread for general use, as is mercerized cotton thread.
- Quilting thread is a bit heavier than most threads.
- Embroidery floss comes in brightly colored yarns for embroidery and duplicate stitching work.
- There are buttonhole and upholstery threads, basting threads that dissolve in water, and nylon threads that are nearly invisible.

The best way to tell whether you’re getting a good-quality thread is to look at two spools of thread with the same content. The bargain brand often gives off lint and seems uneven. Lower-quality threads also tend to tangle and break.

A great way to strengthen and reduce tangling in thread is to apply beeswax. The wax smooths out the thread and helps it glide through the fabric more evenly. It’s better not to use beeswax on embroidery floss or yarn.

For most projects, you’ll need to use a single thread. To thread your needle, find the end of the thread on the spool. Use a pair of scissors to cut the thread past the point where it is damaged. A diagonal cut will make it easier to thread. Send the thread through the eye of the needle.

A needle threader can be helpful if the needle eye is very small. Once the thread is through the eye, pull it so that you have a total of about 18 inches on the needle. If your thread is too long, it will tangle.

Clip the thread coming off the spool shorter than the thread that has gone through the needle, and fasten the long end.

Now you’re ready to sew! Try these stitches and the activities that follow.

Types of Handwork

Look in the library for references on how to do other types of handwork. On a separate sheet of paper, write a short description of five or more of these:

- quilting
- embroidery
- trapunto
- cross stitch
- latch hook
- needlepoint
- hair pin lace
- tatting

Can you think of others?
Fasteners

Fasteners hold two pieces of a garment together. Some fasteners overlap, while others just meet.

**Snaps**

Snaps are used to hold two pieces of fabric together where there is little strain. Like hooks and eyes, they come in different sizes for different weights of fabric. They also come in different colors (silver for light fabrics and black for dark ones).

Sew the ball part of the snap on the overlap first. Using a double thread, anchor the snap in place by taking two tiny stitches. Bring the thread up through one of the holes and use the overhand stitch to sew it onto the fabric.

Slip the needle between the fabric layers to each of the other holes and fill each space. Anchor the thread. Check the right side of the waistband to be sure your stitches don’t show through.

Secure the socket section of the snap onto the underlap using the same method.

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**Hooks and Eyes**

Hooks and eyes come in several sizes and are used for high-stress areas like waistbands. Dark fasteners are used with dark fabrics, and metal-colored or white fasteners are used with light fabrics.

Small hooks and eyes should be used on lightweight fabrics for low-stress areas. Large ones are for skirts, pants, and shorts. Bulky, heavy fabrics need larger hooks and eyes.

The type of eye you will use depends on the type of opening. The straight “bar” eye is probably the easiest to use.

Attach the hook to the upper side of a waistband, placing it slightly back from the edge. Using a double thread, anchor the thread on the reverse side with tiny stitches. Bring the thread up through a loop and take the thread over the loop. Take a small stitch down under the loop and come up through the middle, being sure the stitches do not show on the right side. This is called an **overhand stitch**. Keep your stitches close together as you stitch around the loop. You can also use a blanket stitch.

Just slip the needle between the fabric layers and make a loop. Repeat. Place the eye so that the waistband edges are in a straight line and connect properly with the hook. Attach the eye in the same manner as the hook.
Learn to sew on a button

Here's how:

1. Use a single or double thread in a contrasting color or a shade darker than the fabric background color.

2. Tie a small knot in the end of the thread or carefully make a couple of stitches in the fabric where the button is going to fasten to the fabric.

3. Draw the thread through the holes in the button, one at a time, placing a pin (for lightweight fabrics) or toothpick (for heavier fabrics) across the top of the button to hold the thread for the shank.

4. Stitch until the button is secure.

5. Pull out the pin or toothpick so that the button is loosely attached to the fabric.

6. Wind thread from the needle tightly around the threads under the button to form a strong shank. Bring the needle and thread through to the wrong side of the garment.

7. Make several stitches in the same place or tie a knot and cut away the excess thread.

Practice sewing on buttons by repairing your own garments; or decorate hats, baskets, or tennis shoes. Usually a button is sewn so that the threads are parallel to the floor, but you can make a button look decorative by sewing threads in different directions. Some garments have different buttons of the same size down the front. You can experiment with button covers, too.
Hand Stitches

Running Stitch
A running stitch is used for basting, easing, tucking, gathering, quilting, and sewing seams that will not be under a great deal of strain. The simplest stitch of all is done by taking small, straight, even stitches 1/4 to 1/16 inch long.

Seam Finish
An overcasting stitch is used for finishing the raw edge of a seam or a hem. Stitch diagonally across the raw edge of the fabric. Practice spacing your stitches evenly.

Backstitch
Backstitching is used to repair machine-stitched seams and to fasten thread ends tightly. Start with one small running stitch. Your needle will come out a small distance past the place where your stitch appears to end on the underside of the fabric. Send the needle an equal distance past the place it came out and bring it out through the fabric. Repeat the process over and over again. The stitches on the underside will be twice as long as those on the top side.

A backstitch tack is used to securely fasten facings, belt loops, and pant cuffs. Sew a small number of back stitches close together in a seam allowance or other place that doesn’t show on the outside of the garment.

Blanket Stitch
Use a blanket stitch for making belt loops, thread loops, hand-worked buttonholes, and eyes for hook and eye closures. You can also use this stitch to decorate an edge of a project or when a bar tack is needed. Hold the fabric edge toward you. Point your needle through the right side of the fabric and come up over the thread as you pull it securely.
Blind Stitch
Use a blind stitch for hemming and holding facings in place. A blind stitch prevents puckering caused by pulled threads. Fold the hem or facing back about 1/2 inch, catching only one or two threads. Sew a stitch in the garment, then stitch diagonally above it in the facing or hem, forming a zigzag effect. Leave the stitches loose to allow for movement.

Catch Stitch
Use a catch stitch when you want to attach two fabrics together and allow some ease in the material. It’s a good stitch for hemming stretch knits and attaching interfacings. Working from left to right, take a small horizontal stitch in a single layer of fabric near the edge. Take another horizontal stitch diagonally to the right and just over the edge on the other layer of material. A criss-cross pattern will form between stitches.

Slip Stitch
Use a slip stitch for attaching a folded or rolled edge to another piece of material. Hems and pockets often call for a slip stitch because it is nearly invisible. Insert the needle through the inside of the fold. As the needle exits the fold, pick up a few threads of the fabric. Run the needle back into the fold for about 1/4 inch before picking up a few more threads.

Whip Stitch
A whip stitch is used for attaching hems and for turning under an edge. Take a small stitch in the fabric and bring the needle diagonally up through the garment and the folded or bound edge. Repeat around the hem until complete. Secure the hemming with a tack stitch.
Cross-Stitch
Cross-stitching is often used for decoration, but you can also use it to hold layers of material together, on a facing edge or the center pleat of a lined jacket. Make a number of evenly spaced horizontal stitches about 1/4 to 3/8 inch wide. This will form a diagonal pattern. Then reverse your stitches and go back, turning the slashes into X’s.

Cross-Stitch Tack
The cross-stitch tack, used for keeping facings in place, is done like this: Take one horizontal stitch, catching only the facing and seam allowance, then reverse and make the stitch into an X. Remember to catch only the inside of the garment. Go over this X a number of times to be secure.

Chain Stitch
A chain stitch is used for thread loops, eyes, and carriers. For this stitch you need a double thread. Fasten the thread with a number of overlapping stitches on the underside of the fabric. Take a short stitch to form a loop on the right side. Use your thumb and fingers to reach through and catch the thread to form a new loop. Pull the new loop through the first loop and tighten, forming a knot at the base of the thread chain. Attach the chain to the fabric with a series of small stitches on the wrong side of the fabric.

Try these activities
Now that you have mastered these stitches, try these activities:
- Help someone by basting or overcasting a seam.
- Repair several garments that have worn-out seams.
- Secure a facing, belt loop, or pants cuff by making a backstitch tack.
Once you have the skills for repairing items, practice at home by helping with repairs.
Stitch by Stitch Project Record

I made it!
Name ____________________________
Address __________________________

It’s...
What I made for my project

__________________________
__________________________
__________________________
__________________________

Age as of January 1 ______

Club ________________________

Leader’s signature ______________________

What I shared with others (show and tell, helping other members, community service)

__________________________
__________________________
__________________________
__________________________
__________________________

Be a cost counter...
Keep track of all your sales slips and add it all up

Fabric ........................................................................

Pattern ....................................................................

Notions ....................................................................

Tax ...........................................................................

TOTAL .....................................................................

Cost of similar garment ...........................................

SAVINGS ....................................................................

What I learned in this project

__________________________
__________________________
__________________________
__________________________
__________________________

4-H Textile Science
Beginner Project
Show and Tell
Share something you’ve learned in this project. Show how to do one of the following, or present an idea of your own:
- Sew on a button
- Sew on a patch
- Sew a hem
- Make a blanket-stitch edging
- Make a cross-stitch clover
- Duplicate stitch a sweater
- Mend!
- Use a thimble
- Thread a needle

Want to Know More?
Many craft books and magazines containing information about stitching are available in your library or local bookstore. Check PENpages at your county extension office for other ideas. There may be resource people in the community who can help you for little cost, or you may want to join a church, community, or needlework guild.

Exhibits and Fashion Revue
Ask your leader about exhibiting your project. Garments to be exhibited should include a hand-stitched fabric label near the inside hem of the garment. The label should be printed with your name, age, 4-H club, and county.

This project was not designed to be modeled at a fashion revue. But have your leader check guidelines at the county, regional, and state levels.

Taking the Project Again
You may want to take this project for more than one year. If so, choose something that will help you develop skills you haven’t learned before.

<table>
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<th>Name</th>
<th>Kelly Tarre</th>
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<tbody>
<tr>
<td>Age</td>
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