

Sewing Equipment



Oregon 4-H Clothing Construction Fact Sheets: Basic Skills—Level 1

4-H 320-11 • October 2014

When sewing, it's important to have the right tools for a task, and to know how to use the tools properly. You will need basic tools for measuring, cutting, marking, pressing, and sewing. Additional sewing aids can make sewing simpler and more successful. This guide describes common sewing tools and aids for you to consider.

What do you need?

Beginners should start with the basics and add pieces as needed. Before you buy more equipment, ask yourself:

- How much will you use it?
- Can a different method or piece of equipment be substituted?
- Do you have storage space?
- Can you afford to buy the item, or could you borrow it?

Basic sewing tools:

These items are marked with an asterisk (*) on the following pages.

- Tape measure
- Seam gauge
- Shears
- Scissors
- Seam ripper
- Marking tool
- Iron (with dry and steam options)
- Ironing board
- Needles (sharps)
- Pins (general or plastic head)
- Pin holder (magnetic holder or fabric cushion)
- Thread
- Sewing machine
(See *Sewing Machines and Sergers* fact sheet, 4-H 320-15)

Where should you keep your equipment?

It is good practice to store all of your sewing tools in one place and always return each tool to that place when you are finished with it. This routine will make it easier to find the tools you want when you need them. It will also keep the tools in good condition. Choose a place that works for you, such as a basket, a heavy cardboard box, a drawer in a desk or cabinet, or a special sewing case.



Tools for measuring

Taking measurements properly and correctly is very important. Your finished product will not look or fit as well if your measurements are not accurate. You will need a hard-edged device for measuring on flat surfaces and a flexible device for measuring your body.

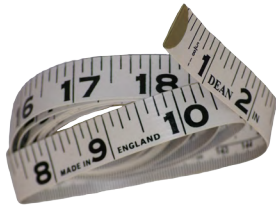


Figure 1. Tape measure.

***Tape measures** (figure 1) should be made of fiberglass, plastic, or treated fabric with metal ends to maintain accuracy. Many tape measures show inches on one side and centimeters on the other. The numbers on each side begin at opposite ends.

*A **seam gauge** (figure 2) is a small measuring device with an adjustable indicator used to check seam widths, hem widths, and other small measuring tasks.



Figure 2. Seam gauge.

A **hem gauge** (figure 3) has straight and curved edges and lines for various hem widths. It can help you turn and press the hemline more quickly. It is also useful for adjusting pattern lengths.



Figure 3. Hem gauge.

A **yardstick or meter stick** (figure 4) is used to measure and mark long, straight lines. The edge should be smooth and straight.

Transparent plastic rulers (figure 5) are used for precision measuring, marking, and pattern alteration. They are available in several sizes and styles.

Curved rulers (figure 6) are used for pattern alteration and as guides for the tracing wheel when marking.

Triangular rulers, L-squares, and T-squares (figure 7) are useful for checking straight yarn direction or grain and pattern layouts, and for finding true bias.

A **skirt marker** is used to locate and mark a hemline parallel to the floor.



Figure 4. Yardstick.

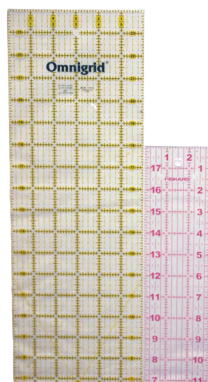


Figure 5. Transparent plastic rulers.



Figure 6. Curved ruler.

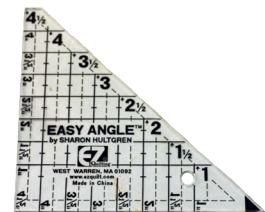


Figure 7. Triangular ruler.

Tools for cutting

Scissors and shears are used to cut fabrics, clip threads, and trim seams. Both shears and scissors should be sharp and should open and close easily in your hand. Always close shears and scissors when you are not using them. Be careful not to drop them, which may cause nicks in the blades. Wipe blades often to remove lint and prevent rust. Use your shears and scissors only for sewing; this will keep the blades sharp longer.

Cutting wheels or rotary cutters can be used to cut out patterns and fabrics in sewing and strips and squares in quilting. Use these tools under adult supervision, or when you have more sewing experience and practice. Use a cutting mat or board when you use cutting wheels or rotary cutters.

***Shears** (figure 8) have shaped handles that provide leverage when cutting and longer, stronger blades than scissors. Shears have one handle larger than the other. Special left-handed shears are available. Some shears have bent handles, which keeps fabric flat on the table's surface when you cut out a pattern.

***Trimming scissors** (figure 9) are used for light cutting, trimming and hand-sewing. Both handles are the same size. Trimming scissors have narrow, tapering blades with sharp points or one sharp and one rounded point.

Pinking shears (figure 10) and scalloping shears may be used to finish seams of firmly woven or non-raveling fabrics, and for decorative cutting. They are too inaccurate to use for cutting out patterns and fabric.

Embroidery scissors (figure 11) are short, delicate scissors used for fine needlework.

A **cutting wheel or rotary cutter** (figure 12) is used to cut out patterns and fabric. It has a replaceable disc blade and retractable blade protector. Be sure to use a protective, self-healing cutting board under the area being cut.

Cutting boards (figure 13) of lightweight cardboard or self-healing material with 1-inch markings are used for pinning, cutting, and pattern alteration.

Thread clippers (figure 14) are used to rip out seams or clip threads while you are working. Hold clippers in the palm of your hand with your fourth finger through the ring. The blade clips as you squeeze with your palm.

*A **seam ripper** (figure 15) is a pen-like device with a handle and curved blade with a sharp point. It is used to remove unwanted stitches or stitching mistakes. Cut every second or third stitch on a flat seam. Be careful to cut threads of stitches only, not threads of fabric.



Figure 12. Cutting wheels (rotary cutters).

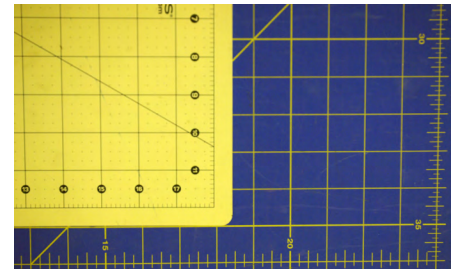


Figure 13. Cutting boards.



Figure 14. Thread clippers.



Figure 15. Seam ripper.



Figure 8. Shears.



Figure 10. Pinking shears.



Figure 9. Trimming scissors.



Figure 11. Embroidery scissors.



Figure 16. Cold-water-soluble markers.



Figure 17. Air-erasable marker.



Figure 18. Marking pencil.



Figure 19. Tailor's chalk.



Figure 20. Chalk wheel marker.



Figure 21. Dressmaker carbon.



Figure 22. Tracing wheel.



Figure 25. Press cloth.



Figure 26. Tailor's ham (pressing ham).



Figure 27. Seam roll.



Figure 28. Press mitt.

Tools for marking

Cold-water-soluble markers (figure 16) have a specialized marking ink that can be removed with cold water. Hot water and some laundry products may set the mark or make a permanent stain.

Air-erasable markers (figure 17) fade within 48 hours.

***Marking pencils** (figure 18) are similar to tailor's chalk.

Tailor's chalk (figure 19) may have a clay or wax base. Test on a fabric sample to be sure it is removable and does not stain.

A **chalk wheel marker** (figure 20) dispenses a fine line of chalk. Markers are available in several shapes. Several colors of chalk are available, so you can select a color that will show on light or dark fabric.

Dressmaker carbon (figure 21) is used to transfer markings from the pattern to the wrong side of the fabric. Select a color that will barely show. Test the carbon on a fabric scrap to be sure you can see and remove the marks.

Tracing wheels (figure 22) press the dressmaker carbon to the fabric. There are three kinds of wheels: the needlepoint wheel for heavy fabrics and patternmaking, the sawtooth wheel for medium-weight fabrics, and the smooth wheel for lightweight and delicate fabrics.

Tools for pressing

Pressing is important at all stages in the sewing process. It is good practice to press each line of stitching as it is completed. This will help sewing projects look their best.

*An **iron with dry and steam options** (figure 23) is needed to press a variety of fabrics. Follow the owner's manual for instructions on use and care—especially care.

***Ironing boards** (figure 24) should have a smooth, wrinkle-free cover and enough padding to prevent shine at the edges of seams.

A **press cloth** (figure 25) protects fabrics and prevents a shine. It can be used when pressing at dry or steam settings. Types of press cloths include cheesecloth, muslin, drill or heavy cotton, and smooth wool. Cheesecloth is used with lightweight fabrics, muslin with medium-weight fabrics, drill or heavy cotton with heavy fabrics, and wool with wool or textured fabrics. The cheesecloth or muslin may be dampened to provide moisture. Damp and dry press cloths may be used in various combinations.

A **tailor's ham or pressing ham** (figure 26) is a firm cushion used for pressing shaped or curved areas.

A **seam roll** (figure 27) is a narrow cylinder used for pressing seams. It prevents seam edges from shining through and forming ridges. A rolling pin or rolled magazine covered with fabric or a towel works as a substitute.

A **press mitt** (figure 28) is a padded, glove-like cushion used as a pressing surface for small, curved garment areas. It is especially useful for rounded sleeve caps.

Figure 23. Iron. Figure 24. Ironing board.

A **point presser** (figure 29) is made of hardwood and may or may not be padded. It is used as a support when pressing collars; lapels; and narrow, awkward areas.

A **sleeve board** is shaped like a miniature ironing board. It is narrow enough to put inside a sleeve or small, hard-to-reach area.

A **clapper or pounder** (figure 30) is a rounded, wooden block with flat surfaces used to obtain sharp creases in heavy, wool fabrics.

A **steamer** creates steam at a lower temperature than an iron. It is used on napped and delicate fabrics.

Tools for sewing

Hand-sewing needles

Hand-sewing needles come in a wide range of types and sizes. Select a needle appropriate for your fabric, thread, and type of stitch. The larger the number, the finer the needle.

Fabrics of close, fine yarns require fine needles that do not leave holes or damage the fabric. Heavy fabrics require sturdy needles with large eyes to accommodate heavy thread. The eye of the needle should be large enough for the thread, but not so large that the thread won't fill the needle hole in the fabric.

***Sharps** (figure 31) are average-length, general-purpose needles with round eyes.

Milliner's needles (figure 31) are long needles with round eyes used for basting.

Betweens (figure 31) are short needles with round eyes.

Embroidery or crewel needles (figure 32) are average length with long, slender eyes.

Calyx-eyed needles (figure 32) have an eye open at the top for quick threading.

Darners (figure 32) are long needles with long eyes used for mending.

Needlecraft needles (figure 33) are specialized for arts and crafts such as tapestry (needlepoint), beading (sequin and beadwork), and chenille (heavy embroidery).

Ballpoint needles (figure 34) have a rounded point used for knit and woven, textured, filament yarn fabrics.

Beeswax (figure 35) is used to strengthen thread and prevent it from tangling. A cake of beeswax comes in a grooved, plastic holder. Replacement cakes are available.

Needle threaders (figure 36) have a flexible wire eye used to pull a thread through the eye.

Thimbles (figure 37) protect your second finger as you push a needle through fabric. Thimbles are available in a range of sizes to give a snug fit. Both plastic and metal thimbles should be well indented to prevent the needle from slipping.

Bobbins (figure 38) hold the bottom thread in your sewing machine. See the machine's instruction manual for the type of bobbin to use.



Figure 29.
Point presser.



Figure 30. Clapper
(pounder).

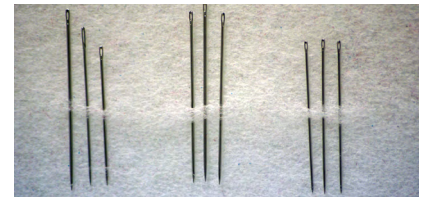


Figure 31. (left to right) Sharps,
milliner's needles, between.

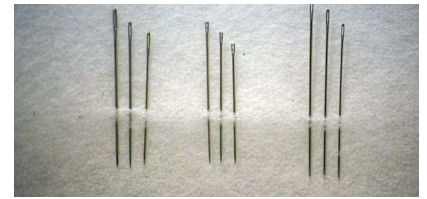


Figure 32. (left to right) Embroidery
needles, calyx-eyed needles, darners.

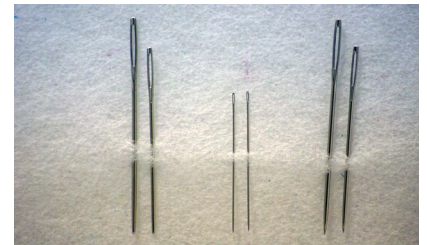


Figure 33. Needlecraft needles (left to
right): tapestry, beading, chenille.

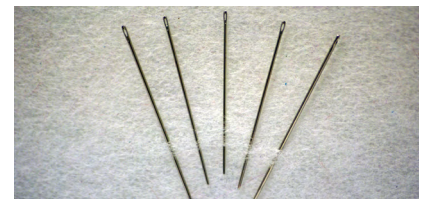


Figure 34. Ballpoint needles.



Figure 35. Beeswax.



Figure 36.
Needle threaders.



Figure 37. Thimble.



Figure 38. Bobbins.

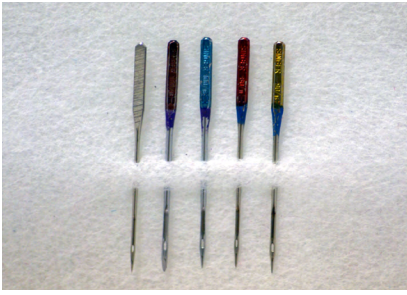


Figure 39. Machine needles (left to right): microtex and sharp, leather, denim (jeans), universal, and ballpoint and stretch.

Machine needles

Sewing machine needles come in a wide range of types and sizes. Select a needle appropriate for your fabric, thread, and purpose.

Needle size

When selecting the needle size, follow this general guideline: the lower the number, the finer the needle and the smaller the eye of the needle.

There will be two numbers on the needle package. The first is the American numbering system, and the second is the European numbering system. In the American system, numbers range from 8 to 19, with 8 being a fine, thin needle and 19 being a thick, heavy needle. Most, but not all, companies will list American first.

Needle type

The universal needle will work well for most woven fabrics, knits, and synthetics. The ballpoint needle works best for fine to medium-weight knits. Sharps are good for silks and microfibers.

Leather needles have a chisel point and should be used only for genuine leather. Jean (denim) needles have a strong, sharp point for denim, canvas, and other tightly woven fabrics. The metallic needle is good for topstitching or embellishing with specialty threads because it has a larger eye to prevent the thread from fraying and breaking. Figure 39 shows various types of machine needles.

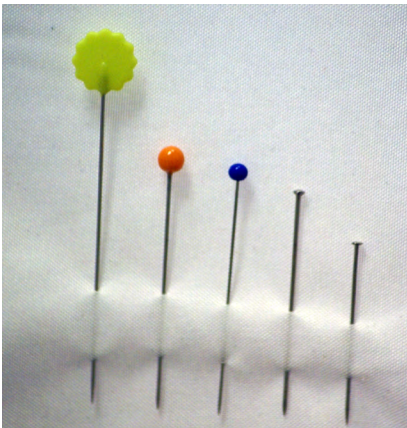


Figure 40. Pins (left to right): flat, ballpoint, glass- or plastic-head, dressmaker, and silk.

Pins

Pins should be fine, sharp, and rustproof to prevent damage to fabrics. Pins are available in several lengths and thicknesses. A pin's size refers to the length of the pin, based on sixteenths of an inch. For example, a size-8 pin is $\frac{8}{16}$ (or $\frac{1}{2}$) inch long.

Extra-fine pins are used for delicate fabrics. Long, thick pins are used for heavy materials. Pins come with three types of heads: the flat or standard head for general use; the glass or plastic colored ball, which is easier to see and handle; and the "T," which is used for heavy pile and loose-knit fabrics. Figure 40 shows various types of pins.

Flat-head pins are extra long with a flat, plastic head. They are designed for general use and are easy to see and find.

Ballpoint pins have a rounded point for use on knit or woven, textured, filament yarn fabrics.

***Glass- or plastic-head pins** are medium length, easy to see and find, and suitable for general use.

Dressmaker pins are of medium diameter and suitable for general use.

Silk pins are fine, thin, and extra sharp, with a tapered point.

***Pincushions** prevent pins from spilling and keep them convenient to your work. Large, round pincushions (figure 41) hold an ample supply of pins. Some round pincushions have an emery bag attached to use for sharpening and removing rust from pins and needles.

A **wrist pincushion** (figure 42) is a variation of the pincushion and is the most convenient way to keep pins handy.

Magnetic pincushions (figure 43) provide easy access to pins and keep pins in place. There are also magnetized pin dispensers. Do not attach these to computerized sewing machines.

Thread

Thread for sewing needs to be strong, durable, and stretchy. When selecting the color of thread to use, take a piece of your fabric to the store to compare. Thread looks slightly darker on the spool than it will when you sew with it, so always choose a slightly darker color than the fabric.

***All-purpose thread** (figure 44) is made of cotton-covered polyester or 100% polyester.

Heavy-duty polyester thread (figure 45) is a very strong thread used for heavyweight fabrics.

Metallic thread (figure 46) is used for decorative stitching by hand or machine.

Specialty threads (figure 47) exist for a variety of purposes such as sewing with denim or when the thread needs to be transparent.

Embroidery thread is used for decorative handwork. Mercerized cotton is special thread suitable for machine embroidery.

Buttonhole twist is typically a silk thread used for topstitching, hand-worked buttonholes, decorative hand-sewing, and sewing buttons.

Fusible thread is a polyester thread coated with a fusible that forms a bond when pressed. It is useful for positioning pockets, facings, and appliques. It is used in the bobbin or serger lower looper.



Figure 41. Pincushion.



Figure 42. Wrist pincushion.



Figure 43. Magnetic pincushion.



Figure 44. All-purpose thread.



Figure 45. Heavy-duty polyester thread.



Figure 46. Metallic thread.



Figure 47. Specialty thread.



Figure 48. Bodkin.

Special tools

Some pieces of equipment are very handy for specialized tasks. Consider how frequently you will use them before investing in these sewing aids.

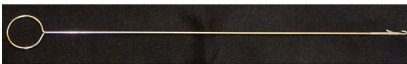


Figure 49. Loop turner.

A **bodkin** (figure 48) is a large, blunt needle with a long eye used for inserting elastic or cord through a casing.



Figure 50. Point turner.

A **loop turner** (figure 49) is either a long, slender tool with a latch and hook at the end or a series of tubes with a wire hook. It is used to turn bias binding and insert cording.

Tweezers are used to get hold of tiny thread ends such as tailor's tacks and bastings.



Figure 51. Eyelet punch.

A **point turner** (figure 50) is a specialized tool for turning corners right side out, giving a neat, sharp point. The curved, beveled end can also be used to temporarily press open seams.

An **eyelet punch** (figure 51) and no-sew snap pliers may be separate items or may be interchangeable within one tool. The eyelet punch inserts metal reinforcements for belts. The no-sew snap pliers attach the pronged rings to socket-and-ball fasteners.



Figure 52. Weights.

Seam sealants are used to prevent raw edges from fraying. Test sealants on fabric scraps before using.

Weights (figure 52) are used to hold patterns in place for cutting or marking.



Figure 53. Pocket curve template.

A **pocket curve template** (figure 53) is a metal tool with four different corner shapes plus a clip which holds the seam allowance as you form and shape the pocket, by pressing with your finger or an iron.

References

Zieman, N. (1991). *Let's Sew! A Beginner's Sewing Guide*. Beaver Dam, WI: Nancy's Notions.

Reader's Digest. (2005). *Complete Guide to Sewing*. (2005). Pleasantville, NY: The Reader's Digest Association.

By Pamela Rose, 4-H Youth Development specialist, family and consumer science and expressive arts, Oregon State University.

Photos by Pamela Rose, © Oregon State University.

This publication is based on and replaces OSU Extension publication 4-H 92111, *Sewing Equipment: 4-H Clothing, Skill Level 1*, by Ardis W. Koester, Extension textiles and clothing specialist emeritus; and Barbara J. Sawyer, Extension specialist emeritus, 4-H Youth Development; both of Oregon State University.

Trade-name products and services are mentioned as illustrations only. This does not mean that the Oregon State University Extension Service either endorses these products and services or intends to discriminate against products and services not mentioned.

© 2014 Oregon State University.

Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties. Oregon State University Extension Service offers educational programs, activities, and materials without discrimination based on age, color, disability, gender identity or expression, genetic information, marital status, national origin, race, religion, sex, sexual orientation, or veteran's status. Oregon State University Extension Service is an Equal Opportunity Employer.

Published October 2014.