Sew Exciting Introduction and Montana Curriculum Requirements

Member Project Guide – This project is designed for youth who want to learn to sew, no experience is necessary, just a desire to learn. Being able to sew opens a new way to express creativity and create sewn objects for family, friends and yourself. Sew Exciting is designed to be completed in one year. There are 5 sewing projects featured in this curriculum and you need to complete 3 of those to complete the year.

This project features the following Life Skills:

It fosters a positive self-concept as youth complete successful sewing projects and are able to share what they have made with other people.

They will learn decision making as they choose projects from the curriculum and choose the materials they are going to use, creating a unique product.

In sewing there are many opportunities for community service through sewing including rice bags for local hospitals and nursing homes, bibs for young mothers, bathrobes for nursing homes, etc.

Notes to Project Helper:

You have been asked to be a project leader for a 4-H youth who is learning a new skill. What a wonderful opportunity to pass on your love of sewing and help youth create and carry out a project plan. Your job is to help youth with activities they have selected and provide guidance and gentle feedback on what they have done well and where there is room for improvement. It is your role as a project helper to encourage, guide and assist the 4-H member.

The 4-H Experiential Learning Model provides the framework for this curriculum and reflects the design of the original Bioscience Montana project (http://eu.montana.edu/bioscience/).

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Sewing is a fun and creative hobby to enjoy throughout life. Once you have mastered the basics of sewing it is possible to make and even design your own clothing and accessories. You can make items to decorate a room or make fun and unique gifts for friends and family.

In Level 1, learn:

1. Basic sewing tools and their uses.
2. The parts of the sewing machine.
3. How to thread a sewing machine.
4. How to wind a bobbin.
5. How to sew straight and curved lines and how to pivot.
7. Pressing and ironing.
8. Various seam finishes.

**Basic Tools for your Sewing Kit**

**Marking Tools** – Chalk, pens or pencils made especially to mark fabric temporarily.

**Needles** – Pointed at one end with an eye for the thread at the other end. They come in assorted sizes. The lower the number, the larger the needle.

**Pin Cushion or Pin Magnet** – A place to store pins when they are not being used. A pin magnet makes it easy to pick up spilled pins.

**Pins** – Used to keep pieces of fabric together. They are easiest to use if they are at least 1 ¼ - 1 ½ inches long.

**Safety Pins** – Handy to hold items together and for moving elastic through a casing.

**Scissors** – A small pair of sharp scissors for clipping threads.

**Seam Ripper** – A small tool used to take out stitches.

**Sewing Gauge** – A small 6-inch ruler that has an adjustable marker guide used to measure a seam, hem, or other item.

**Sewing machine needles** – A sewing machine needle is a specialized needle for use in a sewing machine. A sewing machine needle consists of: shank - clamped by the sewing machine’s needle holder; shoulder - where the thick shank tapers down to the shaft.

**Shears** – Shears are used for cutting fabric and should NEVER be used to cut paper. They usually have bent handles which make it easier to cut fabric on hard surfaces.

**Tape Measure** – A long flexible ruler. They are the most useful when they are at least 60 inches long and have numbers on both sides.

**Other Equipment**

**Iron** – Used to press seams open or to the side and keep fabric neat.

**Ironing Board** – A padded surface to iron on.

**Press Cloth** – Helps prevent iron shine and is always used when applying fusible interfacing.

Keep tools together so they are easy to find when you are ready to sew. A sewing box is a great way to keep tools organized. In Level 1, we will make a sewing kit that will hold basic supplies.
Parts of the Sewing Machine

A sewing machine is a great tool to make sewing quick, fun and easy, especially when compared to hand sewing. Learn the parts of the machine to ensure sewing success. Note: Some machines may not have all parts listed, or may have more parts than are listed*.

**Bobbin** – Holds the thread in the inside of the machine. It supplies the bottom thread of a stitch.

**Bobbin Case** – Holds the bobbin and allows the bobbin to turn and form a stitch. It also provides bobbin thread tension.

**Bobbin Winder** – Holds the bobbin while thread is wound from the spool of thread to the bobbin.

**Feed Dogs** – Hold the fabric tight against the presser foot and move the fabric along while sewing to help it pass through the sewing machine.

*Feed Dog Control Knob* – Lowers and raises the feed dogs.

**Foot Control** – Controls how fast the machine sews.

**Hand wheel** – Controls movement of the take-up lever and needles. It can be controlled by hand or power but must always be turned toward you.

**Needle** – Carries the thread and pierces the fabric.

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Photos: Sara Adlington
**Throat Plate** – The metal plate with openings that fit around the feed dogs. The needle goes through it to catch the bobbin thread and it usually has a seam guide on it.

**Power Switch** – Turns a sewing machine off and on.

**Presser Foot** – Holds fabric in place while sewing. It must be down whenever sewing.

**Presser Foot Lever** – Lifts and lowers presser foot.

**Reverse Lever** – Allows the machine to sew backwards.

**Spool Pin** – Holds the spool of thread in place.

**Stitch Length Control** – Sets length of the stitch.

**Stitch Pattern Control** – Shows which pattern the machine will sew.

**Stitch Width Control** – Sets the width for the zigzag stitch.

**Tension Control** – Limits the tightness of the upper thread.

**Thread Cutter** – A place to cut thread without scissors.

**Thread Guides** – Holds thread in place on the sewing machine between the spool of thread and the needle.

**Thread Take-Up Lever** – Pulls thread from the spool. Moves up and down with the needle.

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**Where Is The Part?**

**Directions**

Photocopy or replicate the labels below, and then cut them out. Using tape, attach each label to the correct part on your sewing machine.
Threading the Machine and Bobbin

The diagram below shows the basic threading pattern. Each model may be a little different. Have someone who is familiar with the machine show you how to thread it.

Practice threading the machine a few times, after a while you will not even have to think about it – the threading will just come naturally. Some machines have arrows to help thread the machine correctly.
Winding a bobbin

Winding a bobbin can vary depending on the machine, but the steps below apply to most machines. Check the machine manual for instructions to wind a bobbin on your machine.

1. Loosen the hand wheel to disengage the needle.
2. Pull the thread from the main spool and wind it around the bobbin thread guide. Take an empty bobbin and guide the end of the thread up and out of the hole found on the top of the bobbin. Snap the bobbin in place on the bobbin winder while holding the top thread.
3. While holding the thread end, gently step on the foot control to wind the bobbin. Once it has filled the bobbin enough to securely wind, cut off (as short as you can) the thread you were holding, then continue winding.
4. Many machines automatically stop when the bobbin is full.
5. Cut the thread and remove the bobbin from the bobbin winder. Tighten the hand wheel to re-engage.

Your machine will have either a drop in bobbin or a bobbin case. Check the sewing machine manual to see how to put a bobbin in your machine.

Drawing Up The Bobbin Thread

1. Pull the needle thread behind the needle and hold on to it.
2. Turn the hand wheel toward you so that the needle goes down once and comes back up.
3. Gently pull the thread you held onto and a loop will come up; that is the bobbin thread.
4. Pull both threads until they are at 4 - 6 inches long, then pull threads under the presser foot and to the back of the machine.
5. A machine is much less likely to come unthreaded with a long tail of threads under the presser foot and behind the machine.

Rules for Using the Sewing Machine

1. Before sewing, pull threads UNDER and BACK behind the presser foot about 4-6 inches.
2. The hand wheel ALWAYS turns toward you, even when stitching in reverse.
3. Keep fingers several stitches away from the stitching line; keep them flat on the machine on both sides of the presser foot.

4. The presser foot must always be in the down position when sewing.

5. Do not force or pull the fabric. The feed dogs will feed fabric through automatically.

6. Use the thread cutter to cut the threads close to fabric or trim threads with a small scissors.

7. Take pins out as you sew – do not sew over pins.

8. Maintain a slow, even speed with the foot pedal.

9. Watch the seam guide, not the needle, to produce a straight sewing line.

10. When stopping in the middle of a line of sewing, put the needle down into the fabric to prevent thread loops and to anchor the fabric.

11. Keep the bulk of the fabric to the left of the needle when sewing to better see the seam guide on the needle plate.

Steps to Begin Sewing on the Sewing Machine

1. Before starting, make sure to have the small scissors, pins and fabric near the machine.

2. Raise the take-up lever and needle to their highest point using the hand wheel (always move the hand wheel toward you). Make sure to use thread tails that are at least 4 inches long. This will keep the thread from pulling out of the needle.

3. Make sure the upper thread and the bobbin thread are pulled back behind the presser foot. This will keep them from getting tangled in the bobbin case.

4. Place the fabric under the presser foot, with the bulk of the fabric to the left of the machine. Lower the presser foot.

5. At the beginning and end of a seam, use a backstitch to secure the stitches so the seam does not pull out.

6. To begin, place fabric under the presser foot and lower the needle into the fabric about a half-inch from the edge of the fabric. Stitch in reverse until reaching the edge of the fabric and then proceed forward until reaching the end of the seam. Press the reverse button for 4 – 6 stitches (back-stitching) and then sew again to the end of the fabric.

7. When finished stitching, turn the hand wheel toward you until the take-up lever is at the highest point.

8. Pull the fabric out the back of the machine for 4-5 inches and clip the threads close to the fabric.

Read all directions before starting a project.

Stitching Corners

Once you have mastered straight lines, you are ready to sew corners. To turn corners you will need to learn to “pivot.”

1. To turn a corner, first stitch to within a seam’s width of the corner, stop, put the needle down through the fabric by turning the hand wheel toward you and then lift the presser foot.

2. Turn the fabric 90 degrees so that the presser foot lines up with the next stitching line. Lower the presser foot and sew to within a seam’s width of the next corner.

3. Continue the process above for each corner:
   • Stop
   • Put the needle down
   • Lift the presser foot
   • Turn the fabric
   • Presser foot down
   • Continue sewing

TIP: Measure where the next seam needs to be, and mark it with a pencil or a pin for the correct seam width.
Lines
You will have more fun using the sewing machine if you learn to control how fast you sew. Sewing on paper practice sheets will prepare you to sew on fabric. Here is how:
1. Take all the thread out of the sewing machine.
2. Put the needle down on the end of one line and lower the Presser Foot.
3. Slowly press down on the foot pedal to start the machine sewing. You will learn just how much to press to get a smooth, even speed. Try to keep the needle going down right onto the line. Do the same on all lines.

When you sew on fabric, you won’t have lines to follow. You will have to look at a “guide” and not the needle. To practice this:
Place the right edge of your Presser Foot right next to a line. Try to stitch an even distance from each line. Your Presser Foot is the “guide.”
Quilters often use seams that are ¼ inch wide. To practice this, try stitching exactly ¼ inch from all edges of this practice page.
Remember that the machine will feed the fabric and you only need to guide the fabric to the left or right under the needle. Pushing the fabric or holding it back can cause the needle to bend or break.
Corners

This page will help you practice sewing straight lines and making square corners.

1. Start at one end of the line.
2. When you come to a corner, put the needle down exactly on the corner.
3. Lift the presser foot, and turn the sheet of paper so the line is straight in front of you. Put presser foot back down and sew.
4. Do the same thing at each corner.
5. Now, use the edge of the pressure foot as a guide and stitch an even distance from the line. Turn each corner the same way you did as when stitching on the line.
6. Now stitch exactly \( \frac{1}{4} \) inch from the edge of all four edges of this page.
Spirals

Slow down for this practice sheet.

1. Stitch on the spiral line. Try to keep the needle on the line.

2. Then stitch an even distance from the line just like on the other pages.

3. Then stitch exactly $\frac{1}{4}$ inch from all 4 edges of this page.
Choosing Fabric for Sewing

Things to think about when selecting fabric:

1. For the first few projects, solid fabric and overall prints are the best choices. Plaids and stripes should be matched, which is more difficult and usually requires more fabric.
2. Border prints are beautiful but not a good choice for beginning projects.
3. Woven cotton or polyester-cotton blend fabrics are the best choices for beginning sewing projects. They lie flat and smooth, do not usually ravel easily and are not too stretchy or tightly woven.

When purchasing fabric, make sure to examine the end of the bolt for important information including:

• Fiber content
• Fabric width – usually 41-44 inches
• Cost
• Care Instructions

There are a few fabric vocabulary words to know before selecting fabric.

Bias – is the stretchiest part of the fabric, and is the crossgrain (45 degrees) direction to the warp and weft threads.

Crosswise grain (weft) – Crosswise grain has threads that run across the fabric from one selvage to the other. Crosswise threads stretch more than lengthwise threads.

Knit fabric – made of one or more threads that form interlocking loops.

Lengthwise grain (warp) – Lengthwise grain has threads that run in the same direction as the selvages. Lengthwise threads are usually stronger and heavier than crosswise threads.

Selvage – The tightly-woven edge running in the lengthwise direction of the fabric. Typically the selvage edge does not ravel.

Woven Fabric – is made of lengthwise and crosswise threads.

Preparing Fabric for Sewing

1. Prewash fabric according to the care instructions on the end of the bolt before cutting out a project. If any shrinkage is going to occur, you want it to happen before cutting. Once dry, press the fabric.
2. Now straighten the fabric so that both grainlines are straight and the edges of fabric match.
3. To straighten woven fabric, cut through one side of the selvage about 1” and pull the fabric to tear across entire width of fabric.
4. Fold fabric in half so that selvages are together and check to see if the grainline is straight. The lengthwise grain should be parallel to the selvage edge and the crosswise threads should be perpendicular.
5. If the fabric edges are uneven, pull the fabric on the bias the length of the fabric until the fabric lays flat. Some fabric may remain about half-inch off, but that is not a problem. The fold should lay flat on the table.

**Pressing versus Ironing**

To have a great finished product when sewing, pressing is just as important as sewing! Sew and then press, sew and press, sew and press!

**Ironing** – Is the motion of moving the iron back and forth in a gliding motion. Ironing is what we do to clothing to get wrinkles out.

**Pressing** – Is a lifting up and down motion – no gliding and it is the only way to use the iron when sewing, because it does not stretch the fabric.

Steps to Pressing:

- Use a steam iron.
- Choose the correct temperature setting for the fabric. It is always a good idea to test the iron on a small piece of fabric first.
- Usually it is best to press on the wrong side of the fabric.
- Avoid pressing over pins because they will leave marks, and you can even melt the heads of pins.
- First press the seam flat, it sets the stitches and makes it easier to press the seam open.
- Now spread the fabric to press the seam open and watch out so your fingers don’t get burned!

**Remember to always rest an iron on the heel!**

**Seam Finishes**

Seam finishes are used to prevent seams or fabric edges from raveling. There are 4 acceptable seam finishes in 4-H. They are:

**Serged Overlock Stitch** – Serge fabric edge with an overlock stitch.

**Zigzag Stitch**

– Zigzag close to the raw edge. The lighter the weight of the fabric, the smaller the stitch should be. Once the seam is sewn and pressed, either zigzag the raw edges together or separately.

**Edge Stitch** – Machine stitch ¼ inch from the raw edge. Once the seam is sewn and pressed, edge stitch the raw edges together or stitch them separately.

**Turn and stitch** – Turn the raw edge of the fabric under ¼ inch, press it and then sew.

A seam only has to be finished if it will be exposed once the entire project is complete.

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**Checklist to Begin Sewing**

- Do you have the right color thread?
- Is the bobbin filled with the right color of thread?
- Are the top thread and bobbin threaded correctly?
- Are the correct sides of fabric facing each other?
- Are the edges pinned together?
- Do you know where to start and stop sewing?
- Do you know how wide the seam allowance should be?
- Is the presser foot down?
- Remember to backstitch at the beginning and end of the seam.
- Remove pins as you sew.
Rice Bag (no-turn project)

Supplies:
- 2 – 12 inch squares of fleece
- 4-5 cups of rice (not Minute Rice)

1. Put pieces of fleece together and pin all the way around leaving 2 inches unpinned on the middle of one side. Sew the two pieces of fleece together using a ½ inch seam allowance and pivoting at the corners, leaving the 2-inch space unsewn. Make sure to backstitch at the beginning and end of the seams. Cut all loose threads.

Using a funnel with the end inserted into the 2-inch open space, fill the bag with 4 to 5 cups of rice. Pin the opening and carefully take the rice bag to the sewing machine and sew closed the 2-inch opening, back stitching at both ends.

2. The bag can either be heated in the microwave for 2 – 2 1/2 minutes or put in the freezer and used as an ice pack. If using as an ice pack, store it in the freezer in a large plastic zipper bag so that it does not absorb moisture or freezer odors.
Pot Holder

Supplies:
- 2 – 8" squares of cotton fabric, they can be matching or different
- 2 – 8" squares of cotton batting

1. Place the two pieces of batting together on a flat surface. Place one piece of the fabric on top of the batting with the right side of the fabric facing up. Place the second piece of fabric on top of the first with the WRONG side up. You now have a 4-layer sandwich. Pin all the way around leaving a 3-inch spot unpinned in the middle of one side. Using a ½ inch seam allowance, sew all the way around the potholder (except for the 3 inches left open), pivoting at the corners. Back stitch at the beginning and end of the seams. It will be easier to sew on the fabric side of the fabric/batting sandwich.

2. Trim the corners of the potholder to reduce bulk. Turn the potholder right side out through the opening left on the side. Push out the corners using a knitting needle or point turner. Be careful not to poke a hole in the fabric. Iron the potholder flat, making sure the seam allowances on the open side of the potholder are tucked in. Sew the opening closed, sewing very close to the edge and back stitching at both ends.
Reversible Headband

Supplies:

- 2 scraps of coordinating fabric at least 4 x 15 inches
- ½ inch wide elastic 6-9 inches long, depending on head size

Cut out each fabric using the dimensions for a pattern piece below: 15” long, and 4” wide at center, tapering to 2.5” at ends.


2. Sew a ¼ inch seam on each side, leaving the ends open. Press seams and turn tube right side out – this step is easier with a pair of tweezers. Press again.

3. Insert elastic into one end of the headband (raw edges have already been pressed up ¼ inch) and sew across the end making sure to catch the elastic, back stitch at both ends. Fit the other end of the elastic into the other end of the headband and adjust the elastic to fit. Sew across the end, catching the elastic and back stitching at either end.

4. Topstitch around the whole headband if desired.
Sewing Tool Kit

Supplies:

• One brightly colored hand towel
• Matching thread
• 12 inches of 1/4 -inch elastic
• 3 yards of narrow ribbon

You will learn how to:

• Measure, using a ruler or a seam gauge.
• Mark with chalk or a marking pencil.
• Pin items together for accurate stitching.
• Backstitch.
• Sew elastic.

1. On the long edge of the towel, turn up 7” and pin it in place with 3 pins. For a smaller towel you may need to fold up less than 7”.

2. Sew the two thicknesses of towel together (see A) using the right edge of the presser foot as a seam guide, backstitching at the top and bottom. To backstitch, place needle in the fabric 1/2” from the edge, and lower the presser foot. Press the backstitch lever or button to reverse stitching, sewing backwards to the edge. Release the backstitch lever and complete the seam. At the end of the seam, sew to the edge, then press the backstitch lever or button and sew back 1/2”. Raise the needle and the presser foot. Clip the thread close to the fabric. Sew the other two towel edges together using the same steps, but begin at the bottom this time.

3. Measure the size of various sewing tools such as scissors, measuring tape, seam gauge, pin boxes, etc. Mark the desired number and size of the pockets with a marking pen and ruler; make at least six (6) pockets. Pin them in place. Stitch on the marked lines from top to bottom, backstitching at each end (see B).

4. Attach elastic on the left side of the towel, 3 - 4” from the hemmed edge. To do this, mark a line with chalk as a guide for the elastic. Divide the line into 1 1/2” sections, using a ruler and pins. Turn the end of the elastic under 1/2” on one end. Use a pencil to mark the elastic at 2” intervals, creating 5-7 loops. Starting at the top, stitch across the turned under end of the elastic three times (see C). Continue matching elastic to the pins on the towel, stitching across the elastic three times.

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*A. Sew the Two Thicknesses Together*

*B. Stitching the Pockets*
At the bottom cut off excess elastic, turn under as with the top end, and stitch across the turned-under end of the elastic three times. Clip the threads close to the towel.

5. To anchor scissors, sew two 12” ribbon ties 1” above the scissors pocket edge to keep the scissors in place. Do this by folding the ribbon in half, creasing with your thumbnail. Pin it in place and sew across the crease three times (see C).

6. On the outside, sew through the middle of 1-yard lengths of ribbon as you did with the scissors’ ribbon tie. The ribbon ties should be located on the ribbing of the towel on the opposite end from the spools (see D). Be sure to sew the tie over a pocket seam so as not to sew your pocket shut.

7. Insert your sewing tools (see E) and roll the towel from the spool end. Tie the ribbons to secure the sewing kit.

Other bright Ideas:
- Use a kitchen towel to make the sewing kit.
- Use a larger towel to make a kit large enough for knitting needles and yarn.
- Make a “Kids’ Travel Kit” by placing snacks, games, colored pencils and small toys in the pockets.
- Make larger pockets for packing jewelry, make-up or lingerie.

8. Make another type of kit for persons who must use walkers. Because their hands are busy with the walker, they have no way to carry personal items. Fold one end (on the short edge) of the towel up to make a pocket 7-8” deep. Design pockets for holding a wallet/change purse, glasses, small books or TV control. On the opposite end, sew hook and loop tape so the kit can be anchored over the walker (see F).
Butcher's Apron

Supplies:
- 1 yard fabric
- Matching thread
- Pattern (dimensions below, left)
- Cut 2 strips - 18” long and 3” wide
- Cut one strip 16” long and 3” wide
- Cut one Apron front

1. On the diagonal cuts/sides of the apron front, press the edge ¼ inch to the wrong side of the fabric, turn another ¼ inch and press and pin. Sew the two diagonal sides as close to the inside edge as possible. Do the same thing to both of the straight sides of the apron and sew them. Now turn the hem up ¼ inch, press. Turn up another ¼ inch, press, pin and sew as close to the outside edge as possible.

2. Turn and press the top edge one inch and then turn it another inch, press, pin and sew as close to the bottom edge as possible.

For the neck strap:
3. Press in each short end of the neck strap ¼ inch to the wrong side of the fabric. Fold the strap in half lengthwise and press, open the strip and then fold the sides in to meet in the middle and press again. Sew around the strap close to the edges, pivoting at the corners.

For the waist ties:
4. Press in one short end of each tie ¼ inch to the wrong side of the fabric.

Fold each strip in half lengthwise and press, open the strip and then fold the sides in to meet in the middle and press again. Sew around the strap close to the edges, pivoting at the corners.

Attaching the neck strap:
5. Pin the neck strap on the left corner of the top of the apron, with the end of the strap even with the hem edge. Do the same thing to both of the straight sides of the apron and sew them. Now turn the hem up ¼ inch, press. Turn up another ¼ inch, press, pin and sew as close to the outside edge as possible.

Attaching ties:
6. Pin the unfinished end of a tie to the apron on each side. Sew across the end of each tie on the right side of the apron, use the previous stitching as a guide. Then sew across the tie close to the edge.
Practice Corners (duplicate)
See page 9.