

The Thread Goes Where?

(Lesson Plan for Threading a Sewing Machine)

Relevant Subject: Family & Consumer Sciences (Other)
Grade level lesson is designed for: 6th grade
Topic of the lesson: Threading a sewing machine



Lesson Plan: The Thread Goes Where?

Objectives: Students will be able to identify relevant parts of the sewing machine and use them to thread the machine.

Family & Consumer Sciences National Standards:

16.4.5 Demonstrate basic skills for producing and altering textile products and apparel.

Equipment and Supplies

- Computer with internet connection and LCD projector
- Document camera with connection to TV, interactive white board or other projection device
- Sewing machines and their accessories
- Thread, bobbins, fabric, shears
- Student note page: Sewing Machine Parts & Functions
- Music CD with selected beat tempo

Introduction:

1. How does a sewing machine sew?
2. To see how a sewing machine forms stitches, go to the “How Stuff Works” website. Watch the animation about how sewing machines make “lock stitches”.
<http://home.howstuffworks.com/sewing-machine1.htm>

Lesson:

1. Complete the Guided Experiments for Learning Sewing Machine Parts and Functions. (See Appendix)
2. Discuss safety precautions as the experiments progress.
3. Demonstrate how to thread the sewing machine.
4. Have students thread their machines and sew a stitching sample.

Summary/Review

1. Have students use the document projector to identify sewing machine parts and functions.
2. Have students demonstrate threading the sewing machine.

How a document camera is used in the lesson/demonstration:

Demonstrating the machine threading process to 24 brand new sewers is a challenging task. In a traditional classroom demonstration, students jockey for position in the attempt to see what you're doing. Having a document camera gives everyone a bird's eye view!

In this lesson, the document camera is used as a live-action camera. As the class completes the guided experiments, the teacher can zoom in on specific machine parts. Students can then easily locate that piece on their own machines.

For teaching students the threading process, a document camera is worth its weight in gold! Each and every student has a prime position for observing the demonstration and participating with their own machine as the lesson progresses. The document camera helps accommodate for questions and clarification of specific parts and/or threading flow.

Middle school students love to be on camera. Using a document camera gives them the perfect chance to show what they have learned in a unit summary and/or review.

Other technologies used with, or in conjunction with a document camera:

- Computer with internet connection and LCD projector
- Document camera and connection to TV, interactive white board or other projection device
- Electronic sewing machine

Guided Experiments for Learning Sewing Machine Parts and Functions

Hand Wheel

1. Find the large white wheel on the right side of your sewing machine. (Use document cameras to show it, and then have students locate it on their own machine.)
2. Turn the wheel toward you and watch to see what moves?
3. What do you notice? (Needle and take-up lever go up and down.)
4. This wheel is called a hand wheel. You turn it with your hand to control the position of the needle or make individual stitches.
5. To work correctly, the hand wheel must be turned toward you.

Cords

1. Find the electrical cords connected to your machine.
2. One connects the machine to the electrical outlet. Since this machine runs on electricity, what safety precautions will need to be remembered? Check the cord to be sure it is securely plugged into the outlet and the machine.
3. The second cord connects to the pedal. Why would it be important to know that it's the one that connects to your machine? (So you don't accidentally sew your neighbor's finger.) Be sure this cord is all the way plugged into your machine. Then put the pedal on the floor. The skinny side should go toward you, like a car's gas pedal.

Needle

1. Other than electricity, how else might a person get hurt on a sewing machine? (the needle) What could be done to prevent that from happening?
2. Watch the needle position as you turn the hand wheel. (Use the document camera to show it.) Position the needle all the way up, then all the way down.
3. Why does the sewing machine need a needle to sew?

Power Switch

1. Find the on/off switch below the hand wheel and turn it on.
2. What happens when you switch it on? (The light goes on and the machine resets all the settings to make regular stitches.)

Foot Control

1. The pedal on the floor is called a foot control. Put your heel on the floor and the toe of your foot on the foot control. Now gently push the pedal.
2. Controlling the speed of the sewing machine is a little bit like a car. If you go too fast, it's hard to keep control. This time see if you can get the machine to go slow.
3. You'll have an easier time sewing if you go about this fast (clap a beat or use music with a selected beat tempo). Clap this with me so you'll remember the speed. Now try it with your machine. Aim for a slow steady pace. (Give students a couple minutes to practice)
4. What part controls the speed of the machine? (foot control)

Presser Foot Experiments

1. (Have each student get out a sheet of notebook paper to sew on.) For the first row of stitching, use your hand wheel to put your needle down into a line. For this experiment, don't touch your machine or your paper. Sit on your hands if you need to. Use the foot control to stitch this line. What happened? (It just jumps around or the paper drops out) It didn't work very well, did it?
2. For our next line we're going to add another machine part. It looks like silver skis. (Use document camera to show the presser foot and the presser foot lifter on the back of the machine.) One precaution to remember with the presser foot lifter is to hold it tightly. It's spring-loaded, so once it starts going, it falls the rest of the way. Practice raising and lowering the presser foot lifter without letting it drop.
3. Now let's stitch a second line of stitching. Put your needle down into a new line. This time, lower the presser foot lifter onto the paper. Hold on tight so it doesn't fall. We're still not going to use our hands. Stitch this line, and then stop. Did that work better? How many got a perfectly straight line? (Usually it curves off the line.)
4. For our third line, we're going to add "operator control"—that's you! Your job will be to steer it straight. Using just a light, fingertip touch, guide the paper so it goes straight down the line. How does that compare to your other lines? Stitch another line and go as straight as you can.
5. Now let's go back to our note page and add what we've learned. (What does the presser foot look like? What does it do for the stitching? On the info-display panel of the machine, what presser foot does it say we should be using? Should the presser foot be up or down when we sew?)

Stitch Length Regulator

1. For the next experiments, we're going to compare some settings on your machine. Find a line on your paper that you haven't stitched on yet. Label it with a "4". (Model this using the document camera.) Find the info-display panel and notice on the left end is a number 2.5. We'll be changing the button right below the 2.5. Will you need to use (+) or (-) to get to 4.0? Change that on your machine, put your needle down into the line and lower your presser foot. Then stitch the line.
2. Our first lines were already set to stitch at 2.5, so find one of those to label. What differences do you notice between 2.5 and 4.0?
3. Now label a "1" on another line and change your machine to that setting. What would you predict is going to happen? (Stitches will be closer together.) These are metric stitch lengths, which tell how long each stitch is going to be.
4. (Discuss and complete the note page as related to Stitch Length.)

FIX Stitching

1. To fasten stitches so they don't come undone we'll be using a FIX stitch. When you push in the FIX button, what do you notice on the info-display? (A stop sign flashes.)
2. Watch this quick demonstration and see what happens with the FIX button activated. (Use the document camera to demonstrate how to FIX stitch to fasten the stitching. It can be used in place of backstitching on our machines.)
3. (Complete the note page related to FIX stitching.)

Stitching Corners and Curves

1. When you're sewing your project sometimes you'll want to turn corners or make curved lines. On a sewing machine you'll pivot to do that.
2. It works the same way as pivoting in basketball! Would somebody demonstrate how to make a pivot when you play basketball? (Have them stand and demonstrate.)
3. On the sewing machine we have the needle be the foot that stays stationary. The presser foot will be the one we can move.
4. The needle should be down in the paper, and it will hold the spot. Then lift up the presser foot and turn the paper the new direction. Finally, put the presser foot back down. (Using the document camera, demonstrate how to pivot on the machine.)
5. Curves are done in a similar fashion, only you'll make lots of little pivots to get a smooth curve.
6. (Show a close-up of the holes on the back of the paper and discuss what the stitching for good corners and curves will look like.)
7. (Students will complete a paper-stitching page to practice machine control. It includes straight lines, corners, and curves.)

Threading the Machine

Use the document camera to demonstrate machine threading the top and the bobbin case of the sewing machine.

1. Have students follow along the threading path with a finger as you demonstrate.
2. Have them thread their machine as they follow along a second demonstration.
3. Threading the bobbin is a bit more complicated. Have them find the logo on the bobbin and draw it on their note page. (The side with the logo is the top of the bobbin.)
4. Demonstrate the bobbin threading, then have the students draw the path of the bobbin thread on their note page.
5. As you demonstrate a second time, have students thread the bobbin case on their own machines.

Stitching Sample

Students will be responsible for completing a fabric-stitching sample. Using the document camera, demonstrate how to complete the stitching sample. It will include:

- a) a straight line
- b) FIX stitching
- c) a square corner.

Name _____
 Table _____ Period _____



Sewing Machine Notes Parts & Functions

1. Turn the _____ toward you to position the needle or make stitches one at a time.

2. Presser foot

Looks like: _____ Used for: _____ Info display: _____

3. When sewing, the presser foot will need to be _____!

4. The speed of the sewing machine is controlled by the _____.
 It's a bit like driving a car! You will have more control if you go slow!

5. Stitch length

Info display: _____

_____ baste
 _____ normal
 _____ reinforce

6. FIX Stitching

Use for: _____ Info display: _____

7. Paper stitching: How did you do? (Staple your pages behind this page)

	I need Practice!	Looks ok	Like an Expert!
a. straight lines	*- - - - * - - - - * - - - - * - - - - * - - - - * - - - - * - - - - * - - - - *		
b. square corners	*- - - - * - - - - * - - - - * - - - - * - - - - * - - - - * - - - - * - - - - *		
c. curves	*- - - - * - - - - * - - - - * - - - - * - - - - * - - - - * - - - - * - - - - *		

8. Top of bobbin

9. Threading the Bobbin Case

10. Stitching on Fabric:

a. Straight line _____ b. Corner _____ c. FIX stitch _____

STAPLE FABRIC HERE →