

Lesson 5.7: Backstitch and Whipstitch

Unit: Unit 5, Make It, Mend It, Wear It (Apparel and Textile Production and Design) **Topic:** 5.2 Hand Sewing Skills **Grade:** 6 to 8 (written at grade 7; see Differentiation for the grade 6 support and grade 8 stretch) **Days:** 1 class period of 40 minutes (day 123 of the year) **Room:** FACS lab, three sewing stations of about seven students (a no-station version is below)

Two stitches today, and the reason for both is the same: a running stitch is not strong enough to hold a seam that a person is going to wear, wash, and pull on. The backstitch is the strong seam. The whipstitch joins two edges. Between the two of them a student can build the pouch in Lesson 5.10 and fix a split seam in Lesson 5.9.

Standards

- NYS module line: NYS ATPD 2. Production c) Demonstrate basic hand and machine sewing techniques by creating or repairing a textile product
- NYS module line: NYS ATPD 2. Production b) Demonstrate safe use and storage of equipment used in hand and machine sewing
- CTE theme line: CTE HSW 4. Classroom and Workplace Safety c) Apply safety practices when using tools, machines, and equipment
- CTE theme line: CTE PSI 2. Design Process (Proactive) b) Demonstrate personal development of design skills through practice of these skills in a variety of classroom applications
- NYS FACS Learning Standard 2 (Intermediate), Key Idea: Students will know the basic principles of home and community safety. They can demonstrate the skills necessary to maintain their homes and workplaces in a safe and comfortable condition. They can provide a safe and nurturing environment for themselves and others.; Performance Indicator: Students use age-appropriate techniques to select and maintain clothing.
- CDOS Standard 3a Universal Foundation Skills: Basic Skills. Students listen to and read the ideas of others and analyze what they hear and read; acquire and use information from a variety of sources; and apply a combination of mathematical operations to solve problems in oral or written form.
- National FCS 3.0: 16.4.5 Show the basic skills for making, altering, repairing, and recycling textiles and apparel.
- National FCS 3.0: 16.2.7 Judge the construction quality and fit of textiles, fashion, and apparel.

Note on the citations: 16.2.7 is added today because the self-check is a construction quality judgment, which is that competency exactly. Otherwise the citations match Lesson 5.6, because the same two state lines carry all of the stitch days.

Enduring understanding and essential question

Big idea: Different stitches do different jobs. A running stitch gathers and bastes. A backstitch holds. A whipstitch joins two edges and finishes them at the same time. Picking the wrong one is why things come apart. **Essential question:** Which stitch does this job need, and how do I know my stitch is strong enough?

Objectives

By the end of this lesson, students will be able to:

1. (Low: remember or understand) Explain why a running stitch is not strong enough for a seam and state one job each for the running stitch, the backstitch, and the whipstitch.
2. (Mid: apply or analyze) Sew at least two inches of backstitch on the practice cloth's marked seam line and at least two inches of whipstitch joining two fabric edges, with stitches of roughly even length.
3. (High: evaluate or create) Apply the three-criteria self-check (even length, straight line, no puckering) to both new stitches, and given three jobs, select the correct stitch for each and justify the choice in one sentence.

Vocabulary

Tier 2 (general academic): strength, join, secure, criteria, justify Tier 3 (FACS): backstitch, whipstitch, seam, seam line, seam allowance, right side and wrong side (of fabric), basting, finish off. See the unit vocabulary list (Vocabulary 05.md) for Turkish, Portuguese, and Spanish.

Materials and setup

Three stations of about seven students, same kits and layout as Lesson 5.5.

Per station:

- The station kit, counted: 10 needles in the cushion, 30 pins
- One spool of contrast thread
- Four needle threaders, out in the open
- The count sheet on the clipboard, the day's row ready
- Two pre-threaded, pre-knotted needles parked in the cushion
- Two pairs of small felt rectangles, about three by four inches, for the whipstitch practice, per student: felt is used here on purpose because it does not fray and it holds a stitch while a beginner works

For the whole class:

- Each student's named zip bag with their practice cloth from Lesson 5.6
- Spare practice cloths, ten
- Handout, one per student: Handout 05.07 - Backstitch and Whipstitch Steps.md

- The demonstration rig from Lesson 5.6: big blunt needle, bright yarn, burlap or plastic canvas on a board, plus two squares of burlap for the whipstitch demonstration
- The pull test props, made ahead: two scraps sewn together with a running stitch, and two scraps sewn together with a backstitch, both in the same thread. These are the hook and they get destroyed on purpose.
- Slides: Slides 05.07 - Backstitch and Whipstitch (outline in 05 Materials; the site renders it as a deck)
- Index cards for the closure
- Timer visible to the class
- Setup notes: make the two pull test props the day before and make the running stitch one loosely, with stitches about a quarter inch long, so it fails clearly. Cut the felt rectangles ahead. Set the count sheets. Any student still owed a check box from Lesson 5.6 comes to my table in the first three minutes.

Pre-assessment

The do now is the pre-assessment and it is a prediction, which tells me whether students understood what a stitch is doing structurally: they guess which of the two seams will pull apart first, and why. A student who can say “because the running stitch has gaps where nothing is holding” already has Objective 1.

Do now and hook (Time: 5 min)

On the board: “I sewed these two seams with the same thread, the same needle, and the same number of stitches. One will pull apart and one will not. Which one, and why? Write your prediction and your reason.”

Debrief in ninety seconds. Then the hook: pull both seams apart at the front, slowly, so the class can see it. The running stitch opens up and the thread shows as a ladder. The backstitch holds until the fabric itself gives. Say the line: “Every stitch in the pouch you make next week carries weight. So today you learn the one that holds.”

Procedure

Step	Teacher will	Students will	Time
1. Direct instruction: why a running stitch is not a seam	Draw both stitches large on the board or the slide, from the side. Running stitch: the thread goes over the top, under, over, under, so half the seam length has no thread across it at all, and a pull spreads the fabric between the	Fill in Part 1 of the handout: the two side-view drawings and one job each for the three stitches.	7 min

	stitches. Backstitch: the thread doubles back on itself so there is thread across every part of the line, on the top and underneath, with no gap. Name the jobs. Running stitch: basting (holding two pieces together temporarily), gathering, quick decorative lines, and the visible mend. Backstitch: any seam that takes stress, any repair on a split seam, anywhere a machine straight stitch would go if there were a machine. Whipstitch: joining two edges, closing a gap, holding a patch down, finishing a raw edge.		
2. Demonstration and practice: the backstitch	Demonstrate large on the yarn rig, narrating each move, then small under the camera. Steps, said in this order every time: (1) come up at point 1; (2) go down one stitch length behind, at point 0; (3) come up one stitch length ahead of point 1, at point 2; (4) go down into the hole at point 1; (5) come up	Sew at least two inches of backstitch on the marked seam line. Say the chant while doing it if it helps.	11 min

	at point 3; (6) go down into the hole at point 2. Say the pattern out loud as a chant while the class does it: “back into the last hole, forward one.” Show the top (a solid line, like a machine stitch) and the back (an overlapping line). Show the failure: stitches that do not go back into the last hole leave a gap, which is a running stitch with extra steps. Then release to the practice cloth’s marked seam line. Circulate.		
3. Demonstration and practice: the whipstitch	Demonstrate large on two squares of burlap held edge to edge, then small on two felt rectangles. Steps: (1) hold or pin the two edges together, lined up; (2) knot and come up through both layers near the edge; (3) take the needle over the edge and come back up through both layers a quarter inch along, at a slight angle; (4) repeat, keeping the angle and the spacing the same, so the stitches look like a row of slanted	Pin two felt rectangles edge to edge and whipstitch at least two inches.	11 min

	bars over the edge; (5) finish off with three small stitches in one place and a knot. Show when to use it: closing the last side of a pouch, holding a patch, joining two felt pieces. Show the failure: stitches too far apart, so you can see daylight between the edges, and stitches too deep, so the seam is bulky. Then release to the felt rectangles.		
4. Self-check, stitch selection, count in	Put three jobs on the slide: (a) the shoulder seam of a bag that will carry books; (b) closing the last two inches of a stuffed pouch from the outside; (c) holding two pieces together just long enough to sew the real seam. Take one answer each. Then call the five-minute warning: needles and pins back, Station Manager counts out loud, writes the return numbers, teacher initials. While the count runs, students do the three-criteria self-check on both new stitches.	Answer the three job questions in Part 3 with a one-sentence reason each, rate both stitches on the three criteria, return the needle and pins, run the count.	6 min

Day total: 5 (the do now) plus 7 plus 11 plus 11 plus 6 = 40 minutes. The 4-minute closure runs inside Step 4, with the count.

Questions to ask

Monitor understanding:

- Say the backstitch pattern out loud. Where does the needle go after it comes up?
- Show me the top of your backstitch. Is it a solid line or are there gaps?
- Which stitch is going over the edge of the fabric?
- Your whipstitches are an inch apart. What is going to happen to that seam?

Deepen learning:

- Pull on your own backstitch, gently. What gives first, the thread or the fabric? What does that tell you?
- A machine sews a straight stitch that looks like your backstitch on top. Why is the backstitch the right thing to teach first anyway?
- Where in your own clothes can you find a seam that has come apart? Which stitch would fix it?
- Basting takes extra time and then you take it out. When is that extra time worth it?
- A whipstitch shows on the outside. When is that a problem, and when is it the point?

Check for understanding

Clipboard with four boxes per student, checked during Steps 2 and 3: backstitch goes back into the last hole (the one thing that makes it a backstitch), two inches of backstitch done, whipstitch goes over the edge through both layers, two inches of whipstitch done. The backstitch box is the gate for Lesson 5.10, because the pouch seams are backstitched. Any student missing it gets three minutes at my table at the start of Lesson 5.8 with the chant and my hands next to theirs, not on theirs.

Closure (Time: 4 min, inside Step 4)

Exit card, three lines: (1) why a running stitch is not strong enough for a seam, in your own words; (2) your self-check numbers for the backstitch and the whipstitch; (3) which of the three stitches you would use to fix something in your own closet, and what the something is. Three students read line 1 aloud. Sort into “got it” and “needs more.” Practice cloths and felt pieces go back in the named zip bags; both stitches appear on the sampler card in Lesson 5.11.

Differentiation and supports

- ELL: both stitches are demonstrated twice, large then small, before words matter. The handout is a numbered step card with a picture described for each step, so the sheet alone is enough. The backstitch chant, “back into the last hole, forward one,” is six words and works in any accent. Word bank with Turkish, Portuguese, and Spanish for seam, strong, edge, join, back, over (see Vocabulary 05.md).

- IEP and 504 (general): pre-threaded, pre-knotted needles in the cushion, taken without asking; a student who cannot manage the backstitch's return-to-the-hole precision does the whipstitch first, where the edge guides the needle, and comes back to the backstitch with the printed dotted seam line as the guide; printed step cards at every station; extended time means the whipstitch can be finished in the first minutes of Lesson 5.8; a student may prove Objective 1 orally instead of on the handout.
- Grade 6 support: the backstitch is sewn on the printed dotted seam line where the dots mark exactly where the needle goes down and comes up, so the pattern is a matter of hitting marks. One inch of each stitch is enough today.
- Grade 8 stretch: sew the backstitch, then turn the cloth over and evaluate the back, then sew a second seam with a smaller stitch length and compare strength by pulling both; write two sentences on what stitch length does to strength and to speed. That is a real tradeoff and it is the kind of judgment the Exceeds column of the sampler check is looking for.
- UDL checkpoint used: multiple means of representation (side-view diagram, large demonstration, small demonstration, printed step card) and multiple means of action and expression (the pull test lets a student demonstrate understanding with their hands).
- No-kitchen or no-machine alternative: no machine is used. Reduced-dexterity alternative: both stitches work on plastic canvas or binca with a large plastic needle and yarn, where the holes are pre-made; the backstitch is actually easier there because the return hole is obvious. Felt instead of woven fabric for anyone whose fabric keeps fraying or slipping. A magnetic pin dish and a needle grip are available at every station.

Assessment

Objective	Standards met	Learning task	Assessment (formative or summative; tool)
1. Explain why a running stitch is not a seam and name a job for each of three stitches	ATPD 2. c); National FCS 16.4.5	Do now prediction, handout Part 1, exit card line 1	Formative; the drawing and the three jobs checked; the stitch selection in Step 4
2. Sew two inches of backstitch and two inches of whipstitch	ATPD 2. c), 2. b); HSW 4. c); PSI 2. b); Std 2 PI C; National FCS 16.4.5	Steps 2 and 3	Formative; the four-box clipboard check. Summative on the backstitch and whipstitch rows of Assessment 05.2 - Stitch Sampler Performance Check.md
3. Self-check both stitches and select	PSI 2. b); CDOS 3a Basic Skills;	The self-check and the three jobs, Step	Formative; ratings plus three justified

the right stitch for three jobs	National FCS 16.2.7	4	selections, scored complete, partial, or missing for daily work
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Homework

None. Optional: find a seam in something at home that has started to come apart. Do not fix it yet and do not bring it in unless Lesson 5.9's note comes home first. Just find it.

Connections

Technology and engineering: the running stitch versus backstitch comparison is a structural load test, and a technology teacher can take the same props into a lesson on joints and fasteners. Mathematics: stitch length against seam strength is a controlled comparison with one variable, and the numbers from Step 2 are real data. Community: the tailor or costumer guest invited in Lesson 5.5 is most useful today or in Lesson 5.9, because a professional's backstitch at speed is a thing students should see once. *[Sal: if the guest can only come one day, pick Lesson 5.9.]*

Sources

- NYS Middle Level CTE FACS Content Module 03, Apparel and Textile Production and Design (nycetcenter.org, June 2018), lines 2. b) and 2. c). Copy in 02 Standards/NYS Module PDFs/.
- NYS Middle Level CTE Theme Module 04, Health, Safety, and Wellness, line 4. c); Theme Module, Problem Solving and Innovation, line 2. b). Text per 02 Standards/NYS ML CTE FACS Modules - verbatim extract of all twelve.md.
- NYS Learning Standards for Health, Physical Education, and Family and Consumer Sciences (1996), Standard 2, Intermediate, Key Idea and PI C. Wording per the crosswalk, Part A.6.
- National Standards for Family and Consumer Sciences Education 3.0 (LEAD FCS Education, 2018), competencies 16.4.5 and 16.2.7, per 02 Standards/STANDARDS SOURCES - web research.md, section 4.16.
- Backstitch and whipstitch step sequences are standard hand sewing technique. Written new for this course.

Teacher notes

- Make the pull test props and make the running stitch one badly on purpose. The demonstration is the whole argument for the backstitch, and a student who watches a seam open up never forgets why.
- Say the chant. "Back into the last hole, forward one." Say it while you circulate. Students will say it to each other, which is exactly what you want.
- Common mistake, and the only one that really matters: the needle does not go back into the last hole, so the student is sewing a running stitch and calling it a backstitch. Check the top of every line; a backstitch top has no gaps.

- Common mistake: the whipstitch gets sewn through one layer instead of two. Check by opening the seam; if it opens, one layer got missed.
- Common mistake: students use felt for the backstitch practice and it feels so easy that they never practice on the woven cloth they will actually use. Backstitch on the muslin practice cloth, whipstitch on the felt. Keep it that way.
- If a station is far ahead, give them the second seam at a shorter stitch length and the pull comparison. Do not give them the pouch materials early; that period has its own setup.
- *[Sal: you now have two stitches on the board and two more days before the pouch. If the class is shaky on the backstitch after today, swap Lesson 5.8 and 5.9 so the button day gives the slow students another day of backstitch practice at my table before the repair clinic.]*