

Lesson 5.9: Repair Clinic, Hem, Seam, Patch

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 125 of the year) **Room:** FACS lab, three sewing stations of about seven students (a no-station version is below)

The Repair Clinic is the day the stitches become useful. Three stations, three repairs: a fallen hem, a split seam, a hole. Students diagnose first and sew second, because picking the right repair is the harder skill. A student may bring one real item from home to fix, with the permission note sent home after Lesson 5.8, or use the room's practice garments.

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 4. Consumer Resources and Finance a) Compare and contrast the cost of constructing an apparel item versus purchasing one or repurposing one
- CTE theme line: CTE FCL 4. Buying Goods and Services f) Apply a decision-making model to maximize consumer satisfaction when purchasing goods and services
- CTE theme line: CTE PSI 3. Troubleshooting Process (Reactive) a) Implement a formal troubleshooting process to solve a given problem by c. Testing and evaluating to isolate the problem; d. Correcting the problem by implementing changes or repairs
- 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: Thinking Skills. Students evaluate facts, solve advanced problems, and make decisions by applying logic and reasoning skills.
- National FCS 3.0: 16.4.5 Show the basic skills for making, altering, repairing, and recycling textiles and apparel.
- National FCS 3.0: 16.5.2 Examine what it costs to construct, manufacture, distribute, alter, repair, or recycle textiles, fashion, and apparel.

Note on the FCL citation: the task asked for an FCL line on the cost comparison. There is no FCL line that names repair against replacement. FCL 4. f), the decision-making model line, is the closest verbatim fit and is used, because repair or replace is a consumer decision run through a model; the cost comparison itself is carried by the state's own ATPD 4. a) and by National FCS 16.5.2. PSI 3. a) is added because diagnosing which repair a garment needs is literally the state's troubleshooting process, and this is the only lesson in the unit that uses it.

Enduring understanding and essential question

Big idea: Most clothing is thrown out for a problem that takes ten minutes and a needle. Knowing which repair a garment needs, and whether it is worth repairing at all, is a decision you can make with numbers. **Essential question:** Is this worth fixing, and which fix does it need?

Objectives

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

1. (Low: remember or understand) Match three common garment problems (fallen hem, split seam, hole) to the repair and the stitch each one needs.
2. (Mid: apply or analyze) Complete at least two of the three repairs at the stations, using the correct stitch for each, on a practice garment or an approved item from home.
3. (High: evaluate or create) Given a garment, its condition, the cost of the repair, and the cost of replacement, decide repair or replace using the five-step decision model and defend the decision with the numbers.

Vocabulary

Tier 2 (general academic): diagnose, compare, decide, defend, worth Tier 3 (FACS): hem, hem stitch, blind hem, split seam, patch, visible mend, fray, seam allowance, reinforce. See the unit vocabulary list (Vocabulary 05.md) for Turkish, Portuguese, and Spanish.

Materials and setup

Three stations of about seven students. Each station is one repair, and students rotate through two of the three in the period, choosing which two.

Station A, the fallen hem:

- Four practice garments with a hem partly fallen: thrifted pants, a skirt, or curtain panels cut into hem-width strips. Curtains are the cheap answer and they hem exactly like pants.
- Pins, thread that matches the fabric (this is the one repair where matching thread matters), an iron at the front for pressing the fold, or a hard fold pressed by hand
- Station card A from Handout 05.09 - Repair Clinic Station Cards.md

Station B, the split seam:

- Four practice garments with a seam opened about three inches: thrifted T-shirts and tote bags work, and a seam can be opened deliberately with the seam ripper the day before
- Pins, thread, seam ripper
- Station card B

Station C, the hole:

- Four practice garments with a hole about an inch across: thrifted jeans, sweatshirts, or fabric squares
- Patch fabric in several colors and prints, cut into squares about three inches, plus iron-on interfacing squares if you have them
- Embroidery floss in bright colors for the visible mend option, plus plain thread for the hidden patch option
- Station card C

For the whole class:

- The three station kits from Lesson 5.5, counted: 10 needles, 30 pins each
- Count sheets on clipboards, the day's rows ready
- Two pre-threaded, pre-knotted needles parked in each cushion
- Handout, one per student: Handout 05.09 - Repair Clinic Station Cards.md, which holds the three station cards, the diagnosis chart, and the repair-or-replace decision sheet
- Slides: Slides 05.09 - Repair Clinic Hem Seam Patch (outline in 05 Materials; the site renders it as a deck)
- The five-step decision model poster from Unit 0: name the choice, list options, weigh each against what matters, decide, look back
- The permission note for items from home, sent after Lesson 5.8: one paragraph saying a student may bring one item, that it will be repaired by the student and not by me, that a hand repair is visible and permanent, and that nothing valuable, borrowed, or irreplaceable should come in. No signature, no item. *[Sal: draft this in your own words and run it past the office once. One paragraph, on school letterhead, is enough.]*
- Timer visible to the class
- Setup notes: prepare the practice garments the day before, including opening the seams with the seam ripper, so the damage is real and consistent. Sort items brought from home at the door: anything valuable, borrowed, or leather goes back in the bag with a quiet "not this one, and here is why." Set the iron at the front with me as the only operator.

Pre-assessment

The do now is a diagnosis task, which is the pre-assessment for Objective 1: three photos of damage, and students name the problem before any teaching. Add the hand count on items from home; the number tells me how many students will be on practice garments and how to load the stations.

Do now and hook (Time: 5 min)

On the board, three photos on the slide: a pant hem hanging down with the thread trailing, a T-shirt side seam open at the underarm, a knee hole in jeans. "For each picture: what is the problem, in your own words? Then guess how long each one would take to fix."

Debrief: take one answer per photo, then reveal the real times, which are shorter than students guess: a hem is ten to fifteen minutes, a split seam is five, a patch is ten. Then the hook: hold up one of the practice garments and one thrift tag. "This pair of pants cost twenty-six dollars new. It is in the rag bin because of a hem. Today you are the tailor."

Procedure

Step	Teacher will	Students will	Time
1. Direct instruction: the three repairs and the stitch each one needs	Three short demonstrations at the front, about two minutes each, large then real size. (a) Fallen hem: fold the raw edge up to the original crease, pin it, press or crease it hard by hand, then sew a hem stitch: come up catching only one or two threads of the outer fabric, then into the folded edge, then along about a quarter inch, so almost nothing shows on the front. Say the trick: catch as little of the outside fabric as you can, because that is what makes it invisible. A running stitch works too and shows on the front, which is a choice, not a mistake. (b) Split seam: turn the garment inside out, line the two raw edges back up, pin, and backstitch along the original seam line, starting half an inch before the split	Fill in Part 1 of the handout, the diagnosis chart: problem, repair, stitch, about how long.	9 min

	and ending half an inch after, because the old stitching on both sides is where the new stitching has to grab. (c) Hole: two options, and both are correct. Hidden patch: cut a patch an inch bigger than the hole on every side, put it behind the hole, pin, and whipstitch or hem stitch around the hole's edge from the front. Visible mend: put the patch on the front in a color you chose on purpose and run rows of running stitch across it in bright floss, so the repair is part of the garment. Say the sustainability line plainly: a visible mend is a repair you are not hiding, and a lot of people now prefer it.		
2. Learning activity: the Repair Clinic, first station	Students pick their first station, no more than seven at any one. Hand out or approve garments. Rules, said once: the garment you have is the garment you finish, nobody takes somebody else's item, the iron has one operator and	Do the first repair, following the station card step by step.	12 min

	that is me, and every needle and pin stays in the cushion between uses. Circulate constantly; this step needs the most teacher hands of any period in the unit.		
3. Learning activity: second station or finish the first	Rotate anyone who finished; anyone still working stays. Push the finishers to a second repair rather than a second version of the same one, because the sampler in Lesson 5.11 needs one repair and the breadth is worth more than the polish.	Start the second repair, or finish the first one properly.	7 min
4. Repair or replace: the numbers, and the count in	Put four cases on the slide, each with the item, the damage, the repair time and cost, and the replacement price: (a) a 26-dollar pair of pants, fallen hem, 12 minutes, 5 cents of thread; (b) an 8-dollar T-shirt, split underarm seam, 5 minutes, 5 cents; (c) a 60-dollar winter coat, torn pocket lining, 20 minutes, 40 cents of patch fabric; (d) a 14-dollar pair of leggings, worn thin and pilled at the thigh, not torn, no	Complete the repair-or-replace sheet in Part 3 for two of the four cases, with the numbers and the decision. Return needles and pins, run the count.	7 min

	repair that fixes worn-thin fabric. Run case (d) on purpose: sometimes the answer is that it cannot be repaired, and the right decision is to cut it up for rags or send it to textile recycling, which is Lesson 5.14's content. For each, run the five-step decision model out loud: name the choice, list options, weigh each against what matters, decide, look back. Then the five-minute warning, the count out loud, and my initials on the rows.		
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Day total: 5 (the do now) plus 9 plus 12 plus 7 plus 7 = 40 minutes. The closure runs inside Step 4, with the count.

Questions to ask

Monitor understanding:

- What is the problem with this garment? Say it in your own words.
- Which stitch does a split seam need, and why not a running stitch?
- How much of the outside fabric should your hem stitch catch?
- Where does your backstitch have to start, relative to the split?

Deepen learning:

- Your hem is done and you can see the stitches from the front. Is the repair a failure? Who decides?
- A tailor charges twelve dollars to hem a pair of pants. The pants cost twenty-six. Is that a good deal? What are you paying for?
- Case (d) cannot be repaired. What should happen to it, and who pays for that?

- A visible mend says something about the person wearing it. What does it say? Would you wear one?
- If your family paid somebody for every repair, what would a year cost? What if nobody in the house could sew at all?

Check for understanding

Clipboard with three boxes per student: named the problem correctly on the diagnosis chart, used the correct stitch for the repair they chose, and the repair holds a tug or lies flat depending on which repair it is. The tug is the fast test for a seam and a patch; for a hem the test is turning the garment to the front and looking for thread. Any student whose repair fails the test gets it back with one instruction, not a grade.

Closure (Time: inside Step 4)

Out loud, station by station, one student per station holds up a finished repair and says two things: what the problem was and which stitch fixed it. Then the exit line on the handout: “One thing at my house I am now going to fix, and the stitch it needs.” Collect the handouts; the diagnosis chart is the record for Objective 1 and the decision sheet for Objective 3.

Differentiation and supports

- ELL: the three station cards are numbered picture steps with a picture described for each step, so a student can do the repair from the card alone; the diagnosis chart is a match, not writing. Word bank with Turkish, Portuguese, and Spanish for hem, seam, hole, patch, fix, cost, replace (see Vocabulary 05.md). The do now is photographs.
- IEP and 504 (general): the split seam station is the easiest of the three and the one to steer a student toward if the period is going badly, because the old seam line does the guiding; pre-threaded, pre-knotted needles in the cushion; a garment can be clipped to a small clipboard or held in an embroidery hoop so it does not shift; extended time means a repair can be finished at the start of Lesson 5.10 while pattern pieces are being cut; a student may report the diagnosis orally. No student is required to bring anything from home, and nobody is asked whether they brought something.
- Grade 6 support: the split seam station with the seam line already pinned, and one case on the decision sheet instead of two.
- Grade 8 stretch: complete all three repairs, and then price the same three repairs at a local tailor or dry cleaner and compare their prices to the materials cost, computing what the labor is worth per hour. That is the real cost comparison behind ATPD 4. a) and it sets up Lesson 5.13.
- UDL checkpoint used: multiple means of action and expression (three different repairs, student choice of which two, and the visible-or-hidden choice inside the patch station) and multiple means of engagement (an item from home is the highest-interest version of the task and it is optional).
- No-kitchen or no-machine alternative: no machine is used. If there is no iron, the hem fold is creased hard between fingernails or under a heavy book for two minutes; it is slower and it works. Reduced-dexterity alternative: the visible-mend patch on a loosely woven fabric with a large needle and embroidery floss, where every stitch is

meant to show and precision is not the standard; or the split seam station with the seam pre-pinned. Both are scored on the same repair row of the sampler check.

Assessment

Objective	Standards met	Learning task	Assessment (formative or summative; tool)
1. Match three problems to the repair and the stitch	ATPD 2. c); PSI 3. a) c., d.; National FCS 16.4.5	Do now and the diagnosis chart, Part 1	Formative; the chart checked for three correct matches
2. Complete two repairs with the correct stitch	ATPD 2. c); Std 2 PI C; National FCS 16.4.5	Steps 2 and 3 at the stations	Formative; the three-box clipboard check and the tug or flat test. Summative on the repair row of Assessment 05.2 - Stitch Sampler Performance Check.md
3. Decide repair or replace with the five-step model and defend it with numbers	ATPD 4. a); FCL 4. f); CDOS 3a Thinking Skills; National FCS 16.5.2	The decision sheet, Part 3 and Step 4	Formative; two cases with numbers and a defended decision, scored complete, partial, or missing for daily work. The same skill is assessed summatively in Topic 5.3's consumer comparison task

Homework

None. Optional: ask whoever handles clothes at your house what gets thrown out most, and whether any of it could have been repaired. Bring the answer, not the garment.

Connections

Mathematics: the repair-or-replace sheet is unit cost and a break-even comparison, and it is the same arithmetic as Lesson 5.13's cost per wear; hand the math teacher the four cases. Sustainability and science: textile waste is a real number and Lesson 5.14 carries it, but the science teacher may have the landfill data already. Community service: a clothing pantry, a shelter, or a thrift shop's reject bin turns this period into a service project with real garments and real recipients; the ATPD module's own Career and Community Connections activity asks for exactly that. *[Sal: this is the best community partner opportunity in the unit.]*

Call before this lesson, not after.] Community expertise: a tailor or a costumer as a guest is at their most useful today, because a professional hem is a thing worth watching once.

Sources

- NYS Middle Level CTE FACS Content Module 03, Apparel and Textile Production and Design (nyctecenter.org, June 2018), lines 2. c) and 4. a); the community-agency repair-and-donate idea comes from that module's Career and Community Connections illustrative activity. Copy in 02 Standards/NYS Module PDFs/.
- NYS Middle Level CTE Theme Module 03, Financial and Consumer Literacy, line 4. f); Theme Module, Problem Solving and Innovation, line 3. a) with sub-lines c. and d. 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 16.5.2, per 02 Standards/STANDARDS SOURCES - web research.md, section 4.16.
- The five-step decision model is the course's own, introduced in Unit 0: name the choice, list options, weigh each against what matters, decide, look back.
- Hem stitch, seam repair, patching, and visible mending are standard practice. Written new for this course.

Teacher notes

- Prepare the practice garments yourself the day before and open the seams with the seam ripper. Damage you made is consistent damage, and consistent damage makes the stations comparable.
- Sort the items from home at the door and be kind about it. "Not this one, it is too valuable for a first repair" protects the student and the garment. Keep two practice garments in reserve for anyone whose item goes back in the bag.
- This period needs more of your hands than any other in the topic. If there is ever a day to ask for a co-teacher, a paraprofessional, or the tailor guest, it is this one.
- Common mistake: the hem stitch catches half the outer fabric, so the front looks like a dotted line. Show one bad one and one good one side by side at the four-minute mark.
- Common mistake: the split seam gets backstitched exactly from the start of the split to the end, so it opens again at both ends within a week. Half an inch of overlap on each side, every time.
- Common mistake: students want to fix the leggings in case (d). Let them argue it, then land it: worn-thin fabric has no repair, and knowing that is also a skill.
- The visible mend is the option students choose once they see one. Have one made ahead in a bright color, on a pair of jeans, to hold up.
- Keep every finished repair, or a photograph of it, for the sampler evidence in Lesson 5.11. A repair that goes home on a student's own garment gets photographed at the station with the garment only, no student in the frame.



- *[Sal: your prices in Step 4 and your local tailor's actual hemming price. Call one and ask; it takes two minutes and the real number makes the whole step land.]*