

Lesson 6.9: Lab, Black Bean Quesadillas

Unit: Unit 6, From Farm to Table (Food Systems and Production) **Topic:** 6.2 Food Preparation Methods and Science **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 (this is Lab 4 of the year) **Room:** FACS lab with three or four kitchen stations of about seven students (a no-kitchen version is below)

Standards

- NYS module line: NYS FSP 1. Basic Culinary Skills e) Prepare a simple recipe
- NYS module line: NYS FSP 2. Food Preparation c) Prepare foods from the region being studied using ingredients common to the region
- NYS module line: NYS FSP 2. Food Preparation e) Practice safety and sanitation practices and procedures in the preparation of food
- CTE theme line: CTE HSW 4. Classroom and Workplace Safety c) Apply safety practices when using tools, machines, and equipment
- CTE theme line: CTE HSW 4. Classroom and Workplace Safety e) Participate in housekeeping procedures that help to establish and maintain safe working conditions in the classroom or workplace
- CTE theme line: CTE CIR 3. Workplace Communication f) Demonstrate effective communication skills in a group setting to accomplish a task
- NYS FACS Learning Standard 1 (Intermediate), Key Idea: Students will use an understanding of the elements of good nutrition to plan appropriate diets for themselves and others. They will know and use the appropriate tools and technologies for safe and healthy food preparation.; Performance Indicator A: Students understand the relationships among diet, health, and physical activities; evaluate their own eating patterns; and use appropriate technology and resources to make food selections and prepare simple, nutritious meals.; Performance Indicator B: Students apply principles of food safety and sanitation.
- CDOS Standard 3a Universal Foundation Skills: Managing Resources
- National FCS 3.0: 14.3.3 Show the ability to select, store, prepare, and serve food that is nourishing and looks good on the plate.
- National FCS 3.0: 8.5.7 Prepare fruits, vegetables, starches, legumes, dairy, fats, and oils safely and with professional technique.

(FSP 2. c) is cited because the quesadilla is a dish from a named cuisine made with the ingredients that cuisine uses, which is what the line asks for. Lesson 6.10 studies three cuisines in depth; this lab cooks one of them.)

What is new here, and what is a repeat

The four phases, the eight roles, the six-step sanitation routine, and the station check come from Unit 1 and are not retaught.

What is new in this lab: a repeating production line instead of one dish. Eight quesadillas come off two skillets in sequence, which means the station has to keep both skillets full for eighteen straight minutes or it will not finish. In Lesson 6.8 one long task set the clock; here the clock is set by throughput, how many come off per minute. That is a different scheduling problem and it is worth naming out loud.

The zero-knife rule gets its own line today because this is the first dish students portion themselves. A butter knife spreads the beans. Kitchen shears cut the tortilla if a station wants wedges before cooking. Nothing else cuts anything, ever, in this room.

Enduring understanding and essential question

Big idea: A production line runs at the speed of its slowest station. To feed seven people in eighteen minutes, you do not work faster, you stop the skillet from ever sitting empty.

Essential question: Two skillets, eight quesadillas, eighteen minutes. Where does the line stall, and how do you keep it from stalling?

Objectives

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

1. (Low: understand) Given the station card and their role card, state their own role's tasks in each of the four phases and name the two tools that are allowed to cut or spread anything in this room.
2. (Mid: apply) In a team of about seven, prepare and serve eight black bean quesadillas on two skillets, measuring the beans and the cheese, judging doneness by color, and following the six-step sanitation routine.
3. (High: evaluate) After the lab, calculate the station's throughput (quesadillas per minute in the cook phase), identify the minute the line stalled, and recommend one change that would close the gap.

Vocabulary

Tier 2 (general academic): sequence, throughput, stall, judge, recommend Tier 3 (FACS): skillet, spatula, golden brown, drain and rinse, portion, wedge, assembly line, food safe temperature. See the unit vocabulary list (Vocabulary 06.md) for Turkish, Portuguese, and Spanish.

Materials and setup

Per station of about seven students:

- 1 package flour tortillas, 10 count, store brand *[update from this week's circular]*
- 2 cans black beans, 15 oz, store brand, opened by the teacher before class
- 2 bags shredded Mexican blend cheese, 8 oz each (1 1/2 bags is enough)
- 1 jar salsa, 16 oz, store brand, for dipping
- Cooking spray, or 1 tsp of butter per skillet, from the room's pantry

- Optional dessert station, Graham Cracker Blueberry Stacks: 1 box graham crackers, 1 container of blueberries (6 oz) or a drained can of fruit, 1 can of aerosol whipped cream or a tub of whipped topping
- Tools: 2 skillets, 2 spatulas, 1 colander, 1 medium bowl for the beans, 1 small bowl for the cheese, 1 dry measuring cup, measuring spoons, 7 butter knives, 1 pair of kitchen shears, 7 plates, 7 forks, napkins, 7 small cups for salsa, 1 trivet, 1 sanitizing spray and 2 cloths
- Handouts: Handout 06.09 - Station Card Black Bean Quesadillas.md (one per station and one per student), Handout 06.08 - Role Cards Lab 3.md (the same eight role cards, with the quesadilla column), Handout 01.08 - Lab Reflection.md
- The 40-minute flowchart in five-minute blocks on the board from the slides, a visible timer, aprons and hair ties, the clean-up zone chart at each station
- Rubric 01 - Lab Rubric.md on a clipboard
- Slides: Slides 06.09 - Lab, Black Bean Quesadillas
- Setup notes: open the cans before class, because a can opener is a tool that needs supervision and there is no time for it in a ten-minute prep. Do not preheat the skillets; students set them and turn the heat on. Put the colander in the sink. The dessert station, if it runs, sits on a separate counter away from the stove and is assembled by the Toppings Chief and Plate Builder during the cook phase. Sanitation routine, all six steps, in this order: hair back, sleeves up, wash hands, sanitize surfaces, clean as you go, station check before dismissal. Allergy check the day before: wheat in the tortilla and the graham cracker, dairy in the cheese and the whipped cream, soy in some shredded cheese (the lecithin), and some salsas carry a shared-equipment note. Substitutions are in Differentiation. *[Sal: confirm against the nurse's allergy list, not the student's word.]*

Pre-assessment

The Lab 3 rubric scores and the recommendations from Lesson 6.8's reflection. Assign the roles so the station that fell behind on throughput last time has its strongest cook on a skillet. The do now is the second read: any student who cannot name the two allowed cutting tools gets that answer before the timer starts.

Do now and hook (Time: 3 min, inside the prep phase)

On the board: "Hair back. Sleeves up. Wash hands. Sanitize your surface. Role card in your pocket. Then stand at your station with your hands empty. The timer starts when every station is standing."

On the second board, in one line: "Eight quesadillas, two skillets, three minutes each. Do the math: how long does the whole batch take if nothing goes wrong?"

Hook: hold up a butter knife and a pair of kitchen shears. "These two. Nothing else cuts in this room, today or any day. Now, twelve minutes of math on the board says eight quesadillas take twelve minutes. You have eighteen. Find out where the other six minutes go."

Procedure

Step	Teacher will	Students will	Time
Prep phase (0 to 10)	Start the timer when every station is standing. Walk the room checking hair, sleeves, hands, and surfaces. Stay at the stove row. Confirm both skillets are on the burners with handles in and the heat on MEDIUM by minute 9, not earlier, because an empty skillet on heat for five minutes is a hazard and a smoke alarm.	Station Manager checks the drawer map, sets 7 plates, 7 forks, napkins, and 7 salsa cups, and clears cans and bags the moment they appear. Head Cook and Helper Cook pour both opened cans of beans into the colander, rinse under cold water until the water runs clear, and move them to the bean bowl near the stove. Prep Cook measures 1 1/2 cups of cheese into the cheese bowl and levels it. Second Cook sets both skillets with a spatula each, handles in, and sprays them. Toppings Chief portions salsa into the 7 cups. Plate Builder lines up the plates as the assembly line and sets 7 butter knives at the end of it.	10 min
Cook phase (10 to 28)	Stand at the stove row. Watch heat first: medium, not high. A tortilla that browns in under ninety seconds means the burner is too hot. Call time at 15, 20, and 25. Ask	Head Cook runs skillet 1, Second Cook runs skillet 2, both on MEDIUM. For each quesadilla: tortilla flat in the skillet, about 3 Tbsp of beans spread on one half with a	18 min

	each station once: “how many are done, and what minute is it?”	butter knife, about 1/4 cup of cheese on the beans, fold the tortilla over with the spatula and press gently, about 2 minutes on the first side until golden brown, flip, 1 to 2 minutes more. Slide onto a plate. Helper Cook feeds the next tortilla the moment one comes off so no skillet is ever empty. Prep Cook refills the bean and cheese bowls and calls the count out loud (“four done, four to go”). Station Manager washes prep dishes as they free up. Toppings Chief and Plate Builder build the optional graham cracker stacks on the far counter.	
Plate and eat (28 to 35)	Walk the room. Ask one question per station from the “deepen” list while they eat. Score the Lab Rubric on the clipboard: Objectives 1 and 2 and the safety row.	Plate Builder cuts each quesadilla into two or three wedges on the plate with a butter knife, never in the skillet. Toppings Chief sets a salsa cup at each plate. Everybody eats. Station Manager counts plates before anyone sits. Dessert stacks come out last if they ran.	7 min
Clean (35 to 40)	Call “clean” at 35.	Each pair works its	5 min

	Check each station against the clean-up zone chart. Sign off only when every line is done. Nobody leaves until every station is signed.	clean-up zone (stove and skillets; counters and supplies; dishes and sink; floor and trash). Station Manager walks the station check: both burners off, skillets washed and dry and in the drawer per the map, stovetop wiped, counters wiped, leftover cheese and beans covered and in the fridge or the trash, sink empty, floor swept, trash out, fridge closed.	
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Questions to ask

Monitor understanding:

- Is that golden brown or is it burnt? What are you looking at to decide?
- Why did we rinse the beans after draining them?
- Which knife is in your hand right now, and what is it allowed to do?
- Your skillet is empty and there are three tortillas left. Whose job was that?

Deepen learning:

- Beans and cheese together make a complete protein. Why does that matter for a meal that has no meat in it?
- A can of black beans is about a dollar and feeds most of this station. What does that tell you about beans in a tight food budget?
- The recipe says medium heat. What actually goes wrong at high, and why is the fix not just flipping it sooner?
- Your station finished the eighth quesadilla at minute 26 and another station finished at minute 22. Name the difference in one sentence.

Check for understanding

The clipboard Lab Rubric during plate, eat, and clean, plus the “what does done look like” checklist on the station card. The verbal throughput check during the cook phase: “how many are done, and what minute is it?” A station that can answer both numbers is running

its own line. A station that has to count plates to answer is not tracking, which is exactly what the reflection will ask about.

Closure (Time: 2 min, inside the clean phase)

The station check is the closure. When I sign a station, the Station Manager reads the station's throughput out loud: "we did eight in __ minutes, which is __ per minute, and we stalled at minute __." The Lab Reflection is completed in the first five minutes of Lesson 6.10 or goes home.

Differentiation and supports

- ELL: the station card has a photo for each step, including a photo of a correctly golden tortilla next to a burnt one; role cards are phase-based and short; "behind you," "hot," "done," "next one," and "help" are on the station card in Turkish, Portuguese, and Spanish (see Vocabulary 06.md); pair each ELL student with a tag-in partner.
- IEP and 504 (general): a student who should avoid heat takes Prep Cook, Toppings Chief, or Plate Builder, none of which touch a skillet; a large visible timer; role cards as checklists; the dessert station is a seated job at a counter with no heat; sensory note: the skillet sizzles and the whipped cream can hisses, and both are announced before they happen.
- Allergy substitutions: wheat, corn tortillas for that portion cooked first in a clean skillet, and gluten free graham crackers or a fruit cup instead of the stack; dairy, a dairy free shred and a bean-only quesadilla plated before any cheese comes near it, plus a coconut whipped topping for the dessert; soy, read the cheese bag the day you shop and pick one without lecithin. Any student with an allergy takes a role that does not handle their allergen.
- Grade 6 support: one skillet per station and four larger quesadillas instead of eight, which halves the line management and keeps the cooking skill. The station card lists one step per line with a photo.
- Grade 8 stretch: the Time Keeper runs as a line manager, recording the exact minute each quesadilla comes off, then computing throughput and naming the bottleneck. Stretch students also price the station from the receipt, compute cost per quesadilla, and answer which single swap from the shopping list would save the most money without changing the dish.
- UDL checkpoint used: multiple means of representation (a photo station card, a live demonstration of the first quesadilla by the Head Cook while the class watches, and the flowchart on the board) and multiple means of engagement (the throughput count is a score the station chases, and the dessert station gives a second real job to students who do not want to be at a stove).
- No-kitchen alternative: Rolled Bean and Cheese Wraps, cold, run with the same eight roles, the same four phases, and the same station check. Per station of seven: 1 package flour tortillas, 2 cans black beans drained and rinsed, 1 1/2 cups shredded cheese, 1 jar salsa, 1 bag of shredded lettuce, 7 plates and forks. The Head Cook and Second Cook run two assembly lines instead of two skillets: tortilla flat, beans spread with a butter knife, cheese, a spoon of salsa, lettuce, rolled tight, cut in half with a

butter knife on the plate. Prep 0 to 10 and clean 35 to 40 are unchanged; “cook” 10 to 28 becomes build, roll, and portion, and the throughput measurement works exactly the same way because the line is still a line. Cost about \$13 per station. A second option is a quesadilla made in a microwave on a plate for 45 seconds, which melts the cheese but does not brown the tortilla, and the comparison to the skillet version is itself a Lesson 6.6 discussion.

Assessment

Objective	Standards met	Learning task	Assessment (formative or summative; tool)
1. State the role's tasks by phase and name the two allowed cutting tools	HSW 4. c); CIR 3. f); FSP 2. e)	Role card and do now; the verbal check in the prep phase	Formative; do now collected; a wrong answer on the cutting tools is corrected before the timer starts
2. Prepare and serve eight quesadillas safely	FSP 1. e); FSP 2. c), e); Std 1 PI A and PI B; National FCS 14.3.3, 8.5.7; CDOS 3a Managing Resources	The lab, all four phases	Summative; Rubric 01 - Lab Rubric.md, three objective rows plus the safety and sanitation row, 16 points, scored on the clipboard
3. Calculate throughput, find the stall, recommend a change	FSP 1. e); CIR 3. f); HSW 4. e)	Throughput count and the Lab Reflection	Formative; Handout 01.08 - Lab Reflection.md scored complete, partial, or missing; the recommendation must name a role and a minute. Feeds the Feed the Class master flowchart in Lesson 6.14

Homework

The Lab Reflection, if not finished in class. Optional: make one quesadilla at home for somebody and report what you would change.

Connections

Math: throughput is a rate problem (items per minute), and cost per quesadilla is division with money. Social studies and Spanish: the quesadilla is one of the dishes Lesson 6.10 studies, and a Spanish teacher can give the class the right words for the ingredients, which costs them two minutes and gives students a reason to use the language. Careers: this is a line cook's job and a food truck's whole business model, and it belongs in the careers lesson at the end of the unit. *[Sal: if the school has a Spanish teacher, inviting them to name the ingredients in Spanish at the start of the period is a five-minute favor that students remember.]*

Sources

- NYS Middle Level CTE FACS Content Module 06, Food Systems and Production (nyctecenter.org, June 2018), lines 1. e), 2. c), and 2. e). Copy in 02 Standards/NYS Module PDFs/.
- NYS Middle Level CTE Theme Module 04, Health, Safety, and Wellness, lines 4. c) and 4. e); Theme Module 02, Communication and Interpersonal Relationships, line 3. f). Same folder.
- NYS Learning Standards for Health, Physical Education, and Family and Consumer Sciences (1996), Standard 1, Intermediate, FACS strand, Performance Indicators A and B. Wording per 02 Standards/STANDARDS SOURCES - web research.md, section 2. *[Sal: confirm against the NYSED PDF.]*
- CDOS Intermediate Standard 3a Universal Foundation Skills, Managing Resources. Same file, section 3.
- National Standards for Family and Consumer Sciences Education 3.0 (LEAD FCS Education, 2018), competencies 14.3.3 and 8.5.7.
- Rubric 01 - Lab Rubric.md and Handout 01.08 - Lab Reflection.md, reused unchanged.
- Sal's own materials: education_teaching_facs_lesson1_blackbeanquesadillas_2026_03.docx (Education/TeachingWork/LessonPlans). His package supplied the recipe, the butter-knife-only rule, the shopping list with budget swaps, the "what could go wrong" boxes, the four-phase workflow, the Gantt chart, the eight role cards, the clean-up zones, the graham cracker blueberry stack dessert, and the teacher notes. Rebuilt here for a station of seven with correct standards citations.

Teacher notes

- Open the cans before class. There is no ten-minute prep that survives a can opener in seven pairs of hands.
- Rinse the beans until the water runs clear. Unrinsed canned beans taste like the can, and students will tell you the dish is bad when the beans were the problem.
- Medium heat, and say it while they turn the knob. Sal's own note from his package holds: if the tortilla is burning before the cheese melts, the heat is too high, and if the cheese will not melt, it is too low and needs thirty more seconds a side, not more flame.

- The butter knife does the spreading and the plate does the cutting. Nothing is cut in a hot skillet, ever. Say it once at the start of plate and eat.
- The empty skillet is the whole lesson. When you see one sitting on heat with nothing in it, ask whose job the next tortilla was rather than fixing it yourself.
- Sal's package included the graham cracker blueberry stacks running in parallel. Keep them as an optional dessert station: it gives two students a real job away from the heat and it is the only thing in the lab a student with a dairy or wheat allergy can run start to finish with a substituted ingredient.
- If the period is under 35 minutes, cut to four large quesadillas on one skillet per station and skip the dessert.
- Per-station cost estimate (store brand, Long Island supermarket; every price marked [update from this week's circular]):

Item	Qty per station of seven	Estimated price	Budget swap
Flour tortillas, 10 count, store brand	1 package	\$2.49	Corn tortillas, about \$1.99
Black beans, 15 oz, store brand	2 cans	\$0.99 each, \$1.98	Pinto beans, about \$0.89 each
Shredded Mexican blend cheese, 8 oz	2 bags	\$2.99 each, \$5.98	1 1/2 bags store brand mozzarella, about \$3.74
Salsa, 16 oz, store brand	1 jar	\$2.49	Store brand picante sauce, about \$1.99
Cooking spray or butter	pantry	pantry	A teaspoon of butter per skillet works
Main dish total per station		about \$12.94	about \$10.24 with swaps
Optional dessert: graham crackers, blueberries, whipped cream	1 box, 1 container, 1 can	$\$2.49 + \$2.99 + \$2.49 = \7.97	Vanilla wafers \$1.99, canned fruit drained \$1.29, whipped topping tub \$1.79, about \$5.07
Station total with dessert		about \$20.91, over the cap	about \$15.31 with swaps, under the cap
Class of four stations, main dish only		about \$52	about \$41 with swaps
No-kitchen Rolled Wraps	per station of seven	about \$13	Tortillas \$2.49, beans \$1.98, cheese \$5.98, salsa \$2.49,

			lettuce \$1.99, minus the spray
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- The dessert is what pushes this lab over \$20 at full prices. Sal's own package flagged the same thing. Either run the swaps or drop the dessert to a shared class platter instead of a station each, which is about \$8 for the whole room.
- *[Sal: your March 2026 package priced the main dish at about \$14.93 for eight and the whole thing at about \$22.90 at full prices. The numbers here are the same list at seven per station with your own swap column applied.]*