

Lesson 6.2: Local, Seasonal, and Global

Unit: Unit 6, From Farm to Table (Food Systems and Production) **Topic:** 6.1 Where Food Comes From **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 **Room:** Either (classroom or FACS lab)

Standards

- NYS module line: NYS FSP 2. Food Preparation a) Identify specific foods from the region being studied
- NYS module line: NYS FSP 2. Food Preparation b) Explore factors affecting regional food choices
- NYS module line: NYS FSP 4. Future of Food in a Global Society b) Explore the advantages and disadvantages of selecting and purchasing sustainable food products
- CTE theme line: CTE SUS 2. Environmental Management h) Explain factors to consider when assessing the environmental impact of food choices
- CTE theme line: CTE FCL 4. Buying Goods and Services g) Compare local, national, and global resources for obtaining goods and services
- 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.
- CDOS Standard 3a Universal Foundation Skills: Thinking Skills
- National FCS 3.0: 14.1.4 Examine how events and conditions, local to global, change what people eat.
- National FCS 3.0: 2.5.1 Examine how resources get used when individuals, families, and communities choose among needs and wants.

(The region being studied in FSP 2. a) and b) is our own: Long Island and New York State. Lesson 6.10 studies three other regions. National FCS 14.1.4 is quoted exactly as the source prints it, with no closing period.)

Enduring understanding and essential question

Big idea: Everything grows somewhere, and it grows at a time. When you eat something outside its place or its season, somebody paid to move it or to store it, and the food usually gives up something on the way. **Essential question:** Why does a tomato in February taste like nothing, and is that worth fixing?

Objectives

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

1. (Low: understand) Given the New York seasonal chart, identify at least eight foods that grow in New York and name the season for each.
2. (Mid: apply) Build one January meal and one July meal from what is local and available in that month, and label each item with its source: local, state, national, or global.
3. (High: evaluate) Weigh the four trade-offs of buying local (cost, taste, availability, jobs) for one food, and decide whether you would pay more for it, with a reason for each trade-off.

Vocabulary

Tier 2 (general academic): season, trade-off, available, source, weigh Tier 3 (FACS): local, seasonal, food miles, farmers market, CSA (community supported agriculture), in season, out of season, storage crop. See the unit vocabulary list (Vocabulary 06.md) for Turkish, Portuguese, and Spanish.

Materials and setup

- Handout 06.02 - New York Seasonal Chart and Two Meals Task.md, one per student
- The four wall paths from Lesson 6.1, still up. Four sticky notes ready: MILK local, BREAD state and national, BANANA global, NUGGET national.
- Two paper plates per pair for the meal build, or the printed plate on page 2 of the handout
- Slides: Slides 06.02 - Local, Seasonal, and Global
- Optional taste demo, if the room and the budget allow: one fresh supermarket tomato and one canned diced tomato, tasted on a toothpick at two stations. Cost about \$3. This is a taste, not a lab, and it needs the allergy list checked.
- Setup notes: put the four sticky notes on the wall paths before class so the connection to yesterday is visible. Allergy check for the optional tomato taste: tomato is not one of the top nine allergens, but check the nurse's list for tomato and for the sulfites in some canned goods, and offer a no-taste seat with no explanation asked.

Pre-assessment

Hand vote in the do now debrief: "Raise your hand if you have been to a farmers market. Keep it up if you know what a CSA is." The second count tells you how much of the middle of Step 2 you need.

Do now and hook (Time: 5 min)

On the board: "Name one fruit or vegetable you like. Write the month you think it grows near here. If you have no idea, write 'no idea' and that is an honest answer."

Debrief: take five answers. Put a check next to the ones that are right for New York and a question mark next to the rest, without saying which is which yet. Then the hook: “Two tomatoes. One was picked eleven days ago in Florida and rode a truck. One was picked in August ninety minutes from here. Same word on the sign, same price some weeks. They are not the same food. Here is why.”

Procedure

Step	Teacher will	Students will	Time
1. Direct instruction: what grows here and when	Show the New York seasonal chart on the slide, month by month, and name the growing season (roughly May to October outdoors, plus storage crops and greenhouse crops). Point out the three surprises: apples store until spring, potatoes and onions and cabbage store for months, and greenhouse greens and mushrooms run all year. Explain what has to travel and why (citrus, bananas, coffee, rice, most winter produce).	Fill in the chart on the handout: circle eight foods and write the season for each. Mark the three storage crops with an S.	8 min
2. Guided discussion: food miles, markets, and the trade-offs	Put food miles in plain terms: the number of miles a food traveled to reach you, which stands in for the fuel, the trucks, and the days. Say the honest part: local is not automatically better, because a greenhouse tomato heated all winter	Take the four trade-offs into the handout's T-chart, writing one plus and one minus for local in each row.	8 min

	can use more fuel than a truck from Florida. Introduce farmers markets, CSAs, and school gardens in one minute each. Then post the four trade-offs on the board: cost, taste, availability, jobs.		
3. Learning activity: build a January meal and a July meal	Give the task: in pairs, build two meals using the chart, one for January and one for July, each with a protein, a grain, a vegetable, and a fruit. Rule: label every item local, state, national, or global. Second rule: the January meal has to be real food a family here could actually buy in January. Circulate with the clipboard checklist.	Build both meals on the plate page. Label all eight items. Count how many items in each meal are local. Write the one item that was hardest to place in January.	11 min
4. Share and decide	Take three January meals out loud and ask the class to check the labels. Then the decision question: "Pick one food. Would you pay a dollar more for the local one? Use the four trade-offs." Take four answers, two yes and two no, and hold both as reasonable.	Two pairs read their January meal. Everyone writes the one-food decision and the four reasons on the handout.	6 min

Questions to ask

Monitor understanding:

- Which month is the hardest to build a local meal in? Why that one?
- Is a potato in February local, or is it stored? What is the difference?
- Your meal has a banana in January. What is the source label for it?

Deepen learning:

- A farmers market tomato costs more than a supermarket tomato. Who gets the extra dollar, and what do they do with it?
- If every family here bought only local food in February, what would they eat? Is that a plan or a slogan?
- The school could grow something. What would actually be worth growing here, and who would take care of it in July?
- Your grandparents ate fewer fresh vegetables in winter than you do. Is that a loss or a gain?

Check for understanding

Clipboard checklist during Step 3: for each pair, yes or no on “eight items placed,” “every item labeled with a source,” “the January meal is realistic,” and “one plus and one minus in every trade-off row.” A pair that labels a January strawberry as local gets that question in Step 4, gently and by pointing at the chart.

Closure (Time: 2 min)

3-2-1 exit card: 3 foods that grow in New York, 2 months when almost nothing grows outside here, 1 question about local food. Two students read a line. Sort into “got it” and “needs more.” Any student who still has fewer than three New York foods gets the chart taped inside their folder.

Differentiation and supports

- ELL: the seasonal chart is a picture grid, not a word list; every food on it has a photo; the four trade-off words are on the slide with an icon each and in Turkish, Portuguese, and Spanish (see Vocabulary 06.md); sentence frame for the decision: “I would / would not pay more because ____.”
- IEP and 504 (general): the meal build is a pair task; the plate page can be completed by cutting and gluing the food pictures from the handout’s last page instead of writing; extended time by dropping the July meal to four items named out loud; a printed copy of the chart with the eight foods already circled for a student who needs a starting point.
- Grade 6 support: build the January meal only, with three items instead of four, and label the sources from a word bank of four words.
- Grade 8 stretch: compute food miles for three items in the January meal using the distance table on the handout’s last page, then answer the harder question: name one

case where the food that traveled farther is the better environmental choice, and explain the reasoning.

- UDL checkpoint used: multiple means of representation (a photo chart plus the month-by-month slide plus the optional side-by-side taste) and multiple means of engagement (students choose their own food for the pay-more decision, so the argument is about something they eat).
- No-kitchen alternative: not needed. If the optional tomato taste is not possible, show the two tomatoes cut open on the document camera and describe the difference, or skip it and use the photo pair on the slide.

Assessment

Objective	Standards met	Learning task	Assessment (formative or summative; tool)
1. Identify eight New York foods and their seasons	FSP 2. a); Std 1 PI A	Seasonal chart, Step 1	Formative; handout checked for eight foods with correct seasons and three storage crops marked
2. Build a January and a July meal with source labels	FSP 2. b); FCL 4. g); National FCS 14.1.4	Meal build, Step 3	Formative; clipboard checklist; handout scored complete, partial, or missing for daily work
3. Weigh the four trade-offs and decide	FSP 4. b); SUS 2. h); National FCS 2.5.1; CDOS 3a Thinking Skills	T-chart and the pay-more decision, Steps 2 and 4	Formative; the decision needs a reason in all four rows. Assessed summatively on the Food Systems Quiz, items 3, 4, and 12

Homework

None. Optional: ask an adult at home which fruit or vegetable tastes best to them in summer and worst in winter, and bring the answer.

Connections

Science: growing season, climate, and greenhouse energy use line up with the earth science unit on climate and seasons; science gives the why, FACS gives the grocery cart. Social studies: trade routes and immigration explain half of what is in a Long Island supermarket. Community: a farm stand, a farmers market manager, or a CSA farmer for a ten-minute visit

in spring or fall. *[Sal: Long Island has working farms east of you and farm stands closer; a printed CSA share list from one of them makes this lesson concrete.]*

Sources

- NYS Middle Level CTE FACS Content Module 06, Food Systems and Production (nyctecenter.org, June 2018), lines 2. a), 2. b), and 4. b). Copy in 02 Standards/NYS Module PDFs/.
- NYS Middle Level CTE Theme Module 06, Sustainability, line 2. h); Theme Module 03, Financial and Consumer Literacy, line 4. g). Same folder.
- NYS Learning Standards for Health, Physical Education, and Family and Consumer Sciences (1996), Standard 1, Intermediate, FACS strand, Performance Indicator A. Wording per 02 Standards/STANDARDS SOURCES - web research.md, section 2. *[Sal: confirm against the NYSED PDF.]*
- CDOS Intermediate Standard 3a Universal Foundation Skills, Thinking Skills. Same file, section 3.
- National Standards for Family and Consumer Sciences Education 3.0 (LEAD FCS Education, 2018), competencies 14.1.4 and 2.5.1.
- The seasonal chart on the handout is built from the general New York growing calendar. *[Sal: check it once against the NYS Department of Agriculture and Markets availability calendar or a local farm stand's own list, and fix any month that is wrong for your part of the Island.]*

Teacher notes

- If time runs short, cut the July meal. The January meal is where the thinking is.
- The moment that lands: when a pair realizes their January meal is potatoes, apples, cabbage, and eggs, and that this is exactly what people here ate every winter until refrigerated trucking.
- Do not let “local is always better” go unchallenged. The heated greenhouse case is the one that teaches students to check instead of repeating a slogan.
- Common mistake: students count a food as local because the store is local. Point at the wall path from Lesson 6.1 and ask which step the label describes.
- Tape the four source sticky notes onto the wall paths at the start and leave them. The wall keeps building through the topic.
- *[Sal: if you ran the \$40 family project in Unit 1, remind students what a tomato cost in their circular and ask what month that circular was from. They already have the data.]*