

Lesson 1.9: The Six Nutrients

Unit: Unit 1, Kitchen Skills and Smart Eating (Nutrition and Wellness) **Topic:** 1.3 Nutrients, MyPlate, and Labels **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 tables; no cooking today)

Standards

- NYS module line: NYS N&W 2. Nutrition Across the Lifespan a) Identify nutrient groups, common sources of nutrients, and nutrient requirements across the lifespan
- CTE theme line: CTE HSW 1. Health Practices c) Identify personal health practices that promote overall good health
- CTE theme line: CTE HSW 1. Health Practices b) Describe how personal health behaviors and practices impact an individual's body systems
- 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: 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 2 Integrated Learning: Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.
- National FCS 3.0: 14.2.1 Judge how nutrition affects health, wellness, and performance.
- National FCS 3.0: 14.2.2 Examine how nutrition and wellness connect to individual and family health at every stage of life.

Health class coordination

Health class typically covers: the names of the food groups, “eat a balanced diet,” and the basic idea that the body needs food for energy and growth. Some health programs also name the six nutrients once.

This lesson goes further: students match real foods to the nutrient they supply, explain what each nutrient does in the body, and compare what three real people at different ages need. That is the nutrition science a cook needs before Lesson 1.10 (plates), Lesson 1.11 (labels), and the \$40 family meal project. *[Sal: ask the health teacher which week they teach nutrients so this lesson lands after it or at least a week away from it.]*

Enduring understanding and essential question

Big idea: Every food is a delivery truck. What it delivers is the nutrient, and different bodies need different deliveries. **Essential question:** Can one plate be right for a toddler, a teen athlete, and a grandparent?

Objectives

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

1. (Low: remember) Given the six nutrient names, state one job each nutrient does in the body and name two common foods that supply it.
2. (Mid: analyze) Given 30 food cards, sort them by the main nutrient each supplies and explain two cards that belong in more than one pile.
3. (High: evaluate) Given a toddler, a teen athlete, and a grandparent, decide which two nutrients each one needs most and defend each choice in one sentence using a body job from Objective 1.

Vocabulary

Tier 2 (general academic): supply, function, compare, defend Tier 3 (FACS): nutrient, carbohydrate, protein, fat, vitamin, mineral, lifespan. See the unit vocabulary list for Turkish, Portuguese, and Spanish.

Materials and setup

- Nutrient Sort Cards, one set of 30 per team, cut and clipped: Handout 01.09 - Nutrient Sort Cards.md (print the card page on card stock; the lifespan table page is one per student)
- Six labeled pile cards per team (Carbohydrates, Proteins, Fats, Vitamins, Minerals, Water)
- Slides: Slides 01.09 - The Six Nutrients.md (outline; build the deck from it)
- The Lesson 0.5 pre-assessment results, tallied by item (see Pre-assessment)
- Whiteboard space for a six-column chart
- Setup notes: sort and clip the card sets the day before; five teams of four to five students. No food is handled today. Allergy check: not needed.

Pre-assessment

The Unit 1 pre-assessment from Lesson 0.5 had four nutrition items: name the six nutrients, name the food groups, which nutrient gives quick energy, and what a serving size is. Tally them before class. Use this rule:

- If more than two thirds of the class named at least five nutrients correctly, skip Step 1 (the direct instruction) and go straight to the sort, using the slide chart as a reference on the screen. Add the saved time to Step 3.
- If fewer than one third named the nutrients, run Step 1 in full and cut Step 3 to two life stages (the toddler and the teen athlete).
- Anywhere in between, run the lesson as written.

Today's do now is the second read.

Do now and hook (Time: 5 min)

On the board: “Write what you ate for breakfast today, or the last thing you ate. Next to each food, write what you think it did for your body. One word is fine (energy, muscle, bones, nothing).”

Debrief in two minutes: cold call three students, write their foods on the board. Then the hook: “Here is the pre-assessment score. [Sal: read the class number, for example 14 of 22 could name five nutrients.] You already know more than I expected, so today we skip the part you know and get to the part you do not: what these things actually do, and why your little cousin and your grandmother do not eat like you.”

Procedure

Step	Teacher will	Students will	Time
1. Direct instruction: the six nutrients, one slide each	Show the six-column chart. For each nutrient: the job in one line, two foods, one thing that happens when you do not get enough. Keep it moving: one minute per nutrient. Say the memory line: “Carbs for go, protein for grow, fat for stored go and brain, vitamins and minerals run the show, water carries it all.”	Copy the six jobs into the chart on the handout page 2 (job, two foods).	8 min
2. Learning activity: the Nutrient Sort	Hand each team a card set and six pile cards. Rules: every card goes in a pile; if a card fits two piles, put it between them and write why on the handout. Circulate with the clipboard. Do not confirm answers; ask “what does that food do for you?”	Sort 30 cards into six piles. Write the two hardest cards and why on the handout.	9 min
3. Learning activity:	Reveal the key on	Fix the sort. Fill in	10 min

three people, three plates	the slide; teams fix their piles (two minutes). Then show the three people: a two year old, a 14 year old on a travel soccer team, a 78 year old grandparent. Give the task: for each person, pick the two nutrients they need most and write one sentence why, using a job from the chart.	the lifespan needs table on the handout: two nutrients and one reason per person.	
4. Share and debrief	Take one person at a time. Ask two teams for their choice and reason. Push back once per person: "The grandparent still needs protein. Why?" Close with the chart on the slide showing what the science says for each age.	Reporters share. Class votes with fingers (1, 2, 3) on which nutrient the toddler needs most and defends the vote.	4 min

Questions to ask

Monitor understanding:

- Which nutrient does bread mostly give you? What about chicken? What about butter?
- Name a food that gives you two nutrients at once. Which two?
- What happens to a body that gets almost no water for a day?

Deepen learning:

- Why does a toddler need more fat than you do?
- A teen athlete and a teen who sits all day are the same age. Do they need the same nutrients? The same amount?
- Your grandparent eats less than you but needs more calcium. How can that work?

Check for understanding

Clipboard checklist during Step 2: for each team, yes or no on “the water and vitamins piles have at least three cards each,” “the team can say why a card is in its pile without reading the card,” and “the team found at least one card that belongs in two piles.” A team with three yeses is ready for Step 3. A team that puts cheese only in Fats gets the question “what else is in milk?” at Step 4.

Closure (Time: 4 min)

3-2-1 exit card: 3 nutrients and one job each, 2 foods you ate this week and the nutrient they mostly gave you, 1 question you still have about what your body needs. Three students read one line aloud. Sort the cards into “got it” and “needs more” before the next period. A “needs more” pile over a third of the class means Lesson 1.10 opens with a two-minute nutrient review.

Differentiation and supports

- ELL: each food card has a picture in words and the food name; the handout word bank gives the six nutrient names in Turkish, Portuguese, and Spanish (see Vocabulary 01.md); sentence starter for the lifespan table: “A ___ needs ___ because it helps ___.” Pair each ELL student with a partner who can point to the pile.
- IEP and 504 (general): teams of four or five so the recorder role can rotate; the lifespan table has the nutrient names in a bank to circle instead of write; a student who cannot handle cards can be the team’s reader and say where each card goes; extended time on the exit card.
- Grade 6 support: the sort uses 20 cards, not 30 (remove the ten cards marked “8” on the key), and the lifespan table asks for one nutrient per person.
- Grade 8 stretch: teams also mark which nutrient each card gives second most, and the lifespan task adds a fourth person: a pregnant adult (folate, iron, calcium). This connects to Unit 3.
- UDL checkpoint used: multiple means of representation (the six-column chart on the board, the same chart on the handout, and physical cards to move) and multiple means of action and expression (students show the sort with cards and explain it aloud before writing).
- No-kitchen or no-machine alternative: not needed; no cooking today.

Assessment

Objective	Standards met	Learning task	Assessment (formative or summative; tool)
1. State a job and two foods for each nutrient	N&W 2. a); HSW 1. b); National FCS 14.2.1	Handout chart, Step 1; exit card	Formative; chart checked for six jobs and twelve foods (complete, partial, missing)

2. Sort 30 foods by main nutrient	N&W 2. a); Std 1 PI A; CDOS 2	Nutrient Sort, Step 2	Formative; clipboard checklist; team sort scored against the key (24 of 30 is “got it”)
3. Choose and defend two nutrients for three life stages	N&W 2. a); HSW 1. c); National FCS 14.2.2	Lifespan needs table, Step 3; debrief, Step 4	Formative; table scored complete, partial, or missing for daily work

Objective 1 is assessed summatively on the Label Reading Quiz at the end of this topic (nutrient matching items) and again on the Unit 1 test.

Homework

None. Optional: ask the oldest person you live with what a doctor has told them to eat more of or less of. Bring the answer, not the name.

Connections

Inside the building: the health teacher. FACS gives health a class that already knows the six nutrients and their jobs; health gives FACS the body systems lesson so this one can stay on food. Science: the digestive system unit, if the science teacher runs one, is the natural partner for “what happens after you swallow.”

Sources

- NYS Middle Level CTE FACS Content Module 05, Nutrition and Wellness (nycetecenter.org, June 2018), line 2. a). Copy in 02 Standards/NYS Module PDFs/.
- NYS Middle Level CTE Theme Module 04, Health, Safety, and Wellness, lines 1. b) and 1. c). Same folder.
- NYS Learning Standards for Health, Physical Education, and Family and Consumer Sciences (1996), Standard 1, Intermediate, FACS strand. Wording per 02 Standards/STANDARDS SOURCES - web research.md, section 2. *[Sal: confirm against the NYSED PDF.]*
- CDOS Standard 2, Intermediate. Same file.
- National Standards for Family and Consumer Sciences Education 3.0 (LEAD FCS Education, 2018), competencies 14.2.1 and 14.2.2.
- Lifespan nutrient facts: Dietary Guidelines for Americans 2020 to 2025 (dietaryguidelines.gov), chapters on toddlers, adolescents, and older adults. *[Sal: the 2025 to 2030 edition may be out; check the site and update the slide numbers if any changed.]*
- Sal’s own materials: the Unit 1 pre-assessment from Lesson 0.5.

Teacher notes

- If time runs short, cut Step 3 to two people (toddler and teen athlete) and keep the grandparent for the do now of Lesson 1.10.
- Common mistake: students put every dairy card in Proteins or every dairy card in Fats. Milk, cheese, and yogurt are the classic “belongs in two piles” cards; that is the point of the rule. Do not fix it for them.
- The pre-assessment rule at the top is the reason this lesson exists in one day and not two. If the class already knows the six nutrients, do not teach them again; teach the jobs and the lifespan piece, which health class does not do.
- *[Sal: your students eat breakfast at school. If the do now stalls because “I did not eat,” switch to “the last thing you ate” and move on.]*
- Keep the card sets. They come back in Lesson 1.10 (build a plate), the no-kitchen version of Lesson 1.13, and the \$40 project MyPlate check in Lesson 1.19.