



Brain-Based Teaching for Culinary Education

**Practical Strategies for Attention, Memory, Feedback, and Skill
Transfer**

2026 ProStart Teacher Participant Packet

NAME: _____

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Session Overview

Brain-Based Teaching in the Culinary Classroom

Culinary education asks students to do many things at once: listen, observe, remember, organize, move safely, manage time, work with others, solve problems, and produce food that meets professional standards. Brain-based teaching helps instructors design learning experiences that support attention, memory, motivation, feedback, and transfer.

Today's Big Question

How can we design culinary labs and classroom lessons so students are more focused, remember more, make fewer avoidable mistakes, and transfer skills into performance?

By the End of This Session, You Will Be Able To:

- Identify moments where students experience overload in culinary labs.
- Use simple strategies to improve attention, memory, and feedback.
- Make the purpose behind culinary skills more visible to students.
- Plan for repeated practice and transfer across the semester.
- Choose one realistic brain-based teaching strategy to implement in an upcoming lab or lesson.

Notes

What Is Brain-Based Learning?

Brain-based learning is an approach to teaching that uses what we know about how people pay attention, process information, remember, practice, receive feedback, and transfer learning to new situations. It incorporates neuroscience to guide teaching methods and improve learning outcomes. It seeks to understand how the brain stores, processes, and remembers information, and to apply these principles to create effective learning environments.

In culinary education, brain-based learning means designing labs, demonstrations, instructions, and feedback in ways that reduce overload, strengthen memory, increase relevance, and help students perform skills more confidently and consistently.

Why It Matters in Culinary Arts

Culinary learning is active, physical, social, and cognitive. Students must connect what they know with what they do. They need to understand not only the steps of a task, but also the rationale behind it and how to apply it in new settings.

Students engage more when they understand:

- Why this matters
- Where they will use it
- How it connects to identity
- How it builds or supports independence
- How it relates to careers
- How it helps them create something meaningful

Culinary Labs Are Brain-Based Learning in Action

In every lab, students are managing:

- Attention
- Working memory
- Safety
- Sanitation
- Timing
- Tools and equipment
- Peer interaction
- Teacher feedback
- Skill development
- Transfer to future tasks

Reflection

One way my culinary classroom or lab already supports brain-based learning is:

One area where my students may need more support is:

Activity 1: Turn & Talk

Prompt

List one thing your students often forget, miss during demonstrations, or struggle to transfer into lab performance.

My Response

Area	My Notes
One thing students often forget	
One thing students miss during demonstrations	
One thing students struggle to transfer into lab performance	

Partner Idea

One useful idea I heard from a partner:

Possible Follow-Up

What might be causing this issue?

- Attention?
- Working memory?
- Cognitive load?
- Lack of relevance?
- Not enough retrieval practice?
- Not enough feedback?
- Not enough opportunities to transfer?

My initial thought:

The 8 Brain-Based Principles and Strategies

Principle	Strategy	What This Means in Culinary Teaching
Principle 1: Attention is Key	Capture, Focus, Reset	Students need clear cues that direct their attention before and during lab tasks.
Principle 2: Working Memory is Limited	Chunk the Demo	Students can only hold a limited amount of information at once, so demonstrations should be broken into manageable parts.
Principle 3: Reduce Cognitive Load	Do a Cognitive Load Audit	Identify what students are trying to remember, manage, or track, and make some of it visible.
Principle 4: Emotion Shapes Learning	Lower Threat, Raise Challenge	Students learn better when they feel safe enough to try, make mistakes, and improve.
Principle 5: Motivation Comes From Relevance	Make the “Why” Visible	Motivation increases when students understand why a skill matters and where it will be used.
Principle 6: Retrieval Strengthens Memory	The 2-Minute Retrieval Warm-Up	Students remember more when they regularly practice recalling key knowledge and skills.
Principle 7: Spaced Practice Beats Cramming & Builds Transfer	Spiral Culinary Skills	Important skills should reappear across multiple labs and contexts throughout the semester.
Principle 8: Feedback Drives Skill Growth	Feedback During Labs, Not Just After	Students improve when feedback is timely, specific, and actionable.

Key Takeaway

Brain-based teaching does not require redesigning everything. Small, intentional changes can improve student focus, confidence, performance, and transfer.

Notes

Strategy Snapshots

Capture, Focus, Reset

Use a short cue to direct student attention before they begin a task or transition to a new step.

Example: “Before you start cutting, pause and check: flat side down, claw hand, even size.”

Chunk the Demo

Break a demonstration into smaller, meaningful parts instead of showing too many steps at once.

Example: Demonstrate knife grip first, then guide hand, then cutting motion, then consistency of size.

Cognitive Load Audit

Identify what students must hold in memory and decide what can be made visible.

Examples: Post a step sequence, timing chart, station checklist, recipe flow, doneness cues, or common mistakes list.

Lower Threat, Raise Challenge

Create an environment where students feel safe enough to try while still being challenged to meet professional expectations.

Example: Normalize revision: “This is your first attempt. Now let’s adjust one thing and try again.”

Make the “Why” Visible

Explain why a skill, habit, or expectation matters.

Examples:

- Uniform knife cuts matter because food cooks evenly, plates look professional, and safety improves.
- Sanitation matters because people can get sick, restaurants can close, and professionals protect the public.
- Mise en place matters because it reduces stress, prevents mistakes, and helps kitchens run smoothly.

The 2-Minute Retrieval Warm-Up

Begin class or lab with a short recall task that asks students to retrieve important knowledge before using it.

Example: “Before we begin, write down three signs that a sauce is thickening properly.”

Spiral Culinary Skills

Plan for important skills to return across the semester in different recipes, labs, and levels of complexity.

Example: Knife skills appear in salads, stocks, soups, sauces, entrées, and garnishes.

Feedback During Labs, Not Just After

Give students specific, actionable feedback while they can still use it.

Example: Instead of “Be careful,” say, “Curl your guide fingers and keep the knife tip on the board.”

Activity 2: Capture, Focus, Reset

Principle 1: Attention is Key

Students cannot focus on everything at once. A brief focus cue can help students notice what matters most before they begin or before they make a common mistake.

Prompt

Where in your lab could a 30-second focus cue prevent mistakes?

My Lab or Lesson

Moment Where Students Need a Focus Cue

My 30-Second Focus Cue

Before students begin, I could say:

Optional Cue Structure

Use this sentence frame if helpful:

“Before you begin, focus on _____ because _____. Check _____ before moving on.”

My version:

Activity 3: Cognitive Load Audit

Principle 3: Reduce Cognitive Load

Students may appear careless or unprepared when they are actually overloaded. A cognitive load audit helps identify what students are trying to remember, track, manage, or interpret during a lab.

Prompt

Think of one lab you teach. What is one thing students currently have to hold in memory that could be made visible?

Lab or Topic	What Students Must Remember	How I Could Make It Visible

Ways to Make Learning Visible

- Checklist
- Step-by-step sequence
- Timing chart
- Board notes
- Station card
- Visual diagram
- Doneness cues
- Ratio chart
- Equipment list
- Safety reminder
- Common mistakes list
- Mise en place map

Reflection

One visible support I could add to an upcoming lab is:

Activity 4: Make the “Why” Visible

Principle 5: Motivation Comes From Relevance

Motivation increases when students see relevance. Sometimes we assume the relevance is obvious because culinary is hands-on, but students still need us to make the purpose visible.

Why This Matters

Students engage more when they understand:

- Why this skill matters
- Where they will use it
- How it connects to professional practice
- How it supports independence
- How it relates to careers
- How it helps them create something meaningful

Prompt

Rewrite these common culinary instructions so that they include the **why** behind the instruction.

Common Instruction	Revised Instruction With the “Why”
Keep your station clean.	
Keep knife cuts consistent.	
Taste as you go.	

Example

Instead of saying: “Cut the vegetables uniformly.”

Say: “Uniform cuts matter because they cook evenly, plate consistently, and show professional knife control.”

Reflection

How does adding the “why” change the way students may understand or follow the instruction?

Activity 5: Spiral Culinary Skills

Principle 7: Spaced Practice Beats Cramming & Builds Transfer

Students need repeated opportunities to practice important skills across time and in different contexts. When skills reappear throughout the curriculum, students are more likely to remember, refine, and transfer them.

Prompt

Think of skills your students need all semester, such as knife skills, heat control, seasoning, and sanitation. Where in the curriculum can those skills reappear at least three times?

Skill	First Appearance	Second Appearance	Third Appearance
Knife skills			
Heat control			
Seasoning			
Sanitation			
Other: _____			

Reflection

One skill I need to spiral more intentionally is:

I can bring this skill back in these labs or lessons:

1. _____

2. _____

3. _____

Activity 6: Rewrite the Feedback

Principle 8: Feedback Drives Skill Growth

Feedback is most useful when students know exactly what to adjust and how to improve. General feedback may identify a problem, but specific and actionable feedback helps students correct it.

Prompt

Rewrite the following common culinary lab feedback so that each statement is more specific and actionable.

Common Feedback	More Specific and Actionable Feedback
Be careful.	
That cut is wrong.	
Your station is messy.	
You need to work faster.	

What Makes Feedback Useful?

Useful feedback helps students answer:

1. What specifically needs improvement?
2. What should I do differently?
3. What does better performance look like?

Activity 7: Strategy Reflection – Reflect on your one change

Prompt

Think about your own students and labs. Use the questions below to identify where one brain-based strategy could improve student learning or performance.

Reflection Question	Notes
Where do your students get overloaded?	
What skills need more retrieval practice?	
What feedback routines could improve lab performance?	

Step 1: Choose a Strategy I Want to Try

The strategy that seems most useful for my teaching is:

Because:

Strategy List

- Capture, Focus, Reset
 - Chunk the Demo
 - Do a Cognitive Load Audit
 - Lower Threat, Raise Challenge
 - Make the “Why” Visible
 - The 2-Minute Retrieval Warm-Up
 - Spiral Culinary Skills
 - Feedback During Labs, Not Just After
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Solidify Your One Change

Step 2: Write Your Strategy Use Sentence

Review all of the strategies discussed today. Choose one strategy that you will realistically implement in your next culinary lab or classroom lesson.

Complete the sentence:

In my next culinary lab, I will use this strategy to...

Step 3: Move From Reflection to Application

Choose one upcoming lesson or lab. Complete the planning frame below.

Planning Prompt	My Plan
My lab/topic is...	
Students often struggle with...	
I will use this strategy...	
I will use it before/during/after lab...	
Students should be able to...	

My First Step

The first thing I need to prepare is:

How I Will Know It Worked

I will know this strategy helped students if:

Closing Reflection

One Change. One Lab.

You do not need to redesign your entire course to use brain-based teaching. Start with one realistic change in one lab. Make one step clearer, one expectation more visible, one feedback comment more actionable, one skill more repeated, or one “why” more explicit.

My Commitment

One change I will make is:

The lab or lesson where I will try it is:

The date or timeframe when I will try it is:

Final Notes
