

Food for thought

All teachers want their students to lead healthy, happy lives. **Ginger O'Donnell** introduces an exciting project that uses a simple and universally accessible tool to meet this challenge – food.



How do you engage students in a new topic? Most likely, you connect it to something they already know, allowing them to discover something new in the process. But what if your resources included the expertise of award-winning chefs and professionally catered lunches? How would you use food to meet your instructional objectives, whether it's a lesson about poetry, multiplication or photosynthesis?

With the dual aim of integrating nutritional awareness into the academic curriculum and reducing childhood obesity, four Chicago-based chefs founded a nutrition education program for elementary school students called Pilot Light (pilotlightchefs.org), built into the school day at Disney II Magnet School. To expand the program, they are creating a virtual library of videos, lesson plans and lunch menus that can be implemented by other teachers in the Chicago Public School District.

As a teacher in Chicago, I was especially curious about Pilot Light from the perspective of curriculum design and student engagement, and recently spoke with co-founder, Matthias Merges. As well as sharing the story of this innovative partnership between local chefs and educators, I will share a few sample lesson formats for integrating food into the academic curriculum, based on collaborations between teachers and chefs.

A shared vision

The inspiration for Pilot Light can be traced back to Michelle Obama's Let's Move initiative, a comprehensive government program designed to curtail childhood obesity. The shared sense of urgency surrounding nutrition education in the United States can be attributed to the fact that almost a third of American children are obese, a percentage that is significantly higher for African American and Hispanic students, according to research conducted by Let's Move¹. In 2011, The Mari Gallagher Research and Consulting Group calculated that about 124,000 children in the city of Chicago live in 'food deserts' – areas where fresh produce is severely limited and convenience stores or fast food chains serve as a poor substitute for grocery stores.²



To combat these challenges, Let's Move uses many diverse channels to promote nutrition and exercise, such as working with mass retailers to lower the cost of fruits and vegetables and writing legislation that improves the quality of school lunches. The Chefs Move to Schools programme is one piece of the Let's Move agenda – a way of inviting the country's most food-literate professionals to make an impact on their communities.

After participating in a White House event hosted by Mrs. Obama, Chicago chef, Paul Kahan, felt compelled to form his own Chicago-based group with chefs Matthias Merges, Jason Hammel and Ryan Poli. Collectively, the chefs manage 12 highly acclaimed restaurants in Chicago. Despite their busy schedules, they recognised a need for integrating nutrition programs into the school day, making nutrition awareness available to the widest group of students possible.

'One of the things that was very important to us,' chef Merges explained to me, 'is the need to hit every student – for every student to have access. A lot of programs only hit a certain group of kids, the overachievers, so to speak.'

To achieve this goal, the chefs leveraged their connections at Disney II Elementary Magnet School and began a pilot program, partnering with principal Bogdana Chkoumbova and a team of classroom teachers to develop lesson plans and long term curriculum goals.



What's it all about?

'There's no reason why the cafeteria cannot be a classroom.' This is chef Merges's straightforward explanation of the program's approach. However, by merging lunch and class, Pilot Light allows food to accomplish several aims simultaneously.

On the one hand, it initiates a process of collaboration between chefs and teachers – a professional development opportunity for both groups resulting in the design of hands-on, food related lessons that meet specific instructional objectives in all subjects, from maths to science to language arts. However, as well as covering academic content, the lessons use food to directly teach students about nutrition and food production, giving them the knowledge base and critical thinking skills to make healthier choices.



In fact, Pilot Light has developed its own set of learning standards related to building a healthy relationship with food, such as interpreting nutrition labels, thinking critically about advertisements and being able to prepare healthy snacks. The overarching goal is to help students make healthier decisions.

As chef Merges explained to me, 'We're about creating awareness, not "you're going to learn how to cook this pancake." The vast majority of CPS (Chicago Public School) students, they have no access to that. But if they stop at a 7-Eleven and they have a choice between four bags of potato chips for the car ride, they're going to be able to read the nutritional label and decide which one they want.'

The lesson ends with a catered lunch, cooked and underwritten by the participating chefs, incorporating specific ingredients from the day's activities. These school-wide events are held every few months throughout the school year, facilitated by a large network of chefs recruited by the programme's founders.

Measurable outcomes

Since its founding in 2011, both teachers and chefs have noticed positive outcomes in all targeted areas – student engagement, retention of information and healthy decision-making. Curriculum and Instructional Coach, Euna Lee, says: ‘Pilot Light has been an amazing enrichment opportunity that has engaged our students, serving as both an inquiry launching day or a culminating activity.’

Chef Merges adds: ‘We always start out with, “Who remembers last time?”, “What did you learn?” and “Where should we go from here?” And students are super, super eager. It becomes this rallying cry – “Oh, the chefs are coming back to the school!”’ Parents have also reported students wanting to take weekend field trips to locations discussed during Pilot Light events. For example, following a lesson on Polish migration to Chicago in which students examined products from a Polish food store, several students visited the store on their day off.



Beyond anecdotal evidence, the programme leaders have developed a rigorous evaluation process in order to refine curriculum standards and instructional practices as they plan for expansion. Both the Pilot Light team and Disney II teaching staff formally evaluate each event in such areas as student engagement, lesson quality, teacher participation and student interactions with food. Their findings have significantly increased the sophistication of Pilot Light from a curriculum writing perspective – for example, prompting the chefs to consistently use measurable learning objectives, follow teachers’ planning templates and develop a planning calendar to ensure collaboration with classroom teachers.

The evaluation process has also increased the potential impact on students’ attitudes toward food – for example, to address some students’ nervousness about trying new foods, the chefs decided to circulate more during the lunch portion, interacting with students and making connections to the lesson.

Plans for expansion

The formal evaluation process has been especially helpful in crafting a strategic plan to make Pilot Light viable across the Chicago Public School district, the third largest school district in the United States, with a current enrolment of over 400,000 students.³

The size of the district presents a meaningful opportunity for Pilot Light, since its mission of reducing childhood obesity is inherently large in scope. However, the founders quickly realised that chefs in every classroom would not work, since they would need ‘about 10,000 chefs’. This problem was ‘the impetus for us to look at how we use existing technology to visit schools online, making a virtual library that all teachers and students can access,’ says Merges. He characterises the virtual library project as ‘professional development for teachers, from [chefs’] perspective’.

A key part of creating this virtual library is ensuring that the Pilot Light curriculum is closely aligned with the Common Core State Standards, currently in use by 45 states and being pushed as a nationwide initiative. This is necessary to scale up in ‘an intelligent way,’ says Merges, ‘not only for us and what our goals are, but also for educators’.

Their collaborative approach to expansion is reflected in such strategic planning goals as having equal board representation from the education policy side and the culinary arts side, as well as converting the chef-led events at Disney II into clear and comprehensive resources that any classroom teacher can use. Currently, they are working on four videos per grade level from Kindergarten (four to five-year-olds) to Grade 5 (nine to ten-year-olds).

‘They will have a 30 minute video of us doing the lesson at Disney, so that students feel that we’re not just talking to them, but that they’re in a bigger group of students,’ says Merges. ‘Then we give teachers the materials to do an activity with the students afterwards, and provide a menu so the food service provider can cook the lunch.’ If all goes well within CPS, the founders could potentially take their model back to Washington and seek funding to implement the program nationally.

Food across the curriculum

Given its importance to daily life, it is not entirely surprising that food can be made relevant to any subject matter. As demonstrated by Pilot Light, food can be a teaching tool for any new concept if teachers take advantage of the many layers of food – for instance, the biological, cultural and historical aspects.

Integrating food into teaching is a matter of being interested and curious about it. For example, during a science lesson at Disney II, students examined the life cycle of salmon, from the fertilised egg to the harvested salmon, then tried a salmon quinoa salad for lunch. In another science lesson, the chefs used kitchen knives to demonstrate the concept of magnetism.

History and citizenship

One history lesson involved identifying types of grains and exploring the importance of different grains to different cultures, such as corn in Mexico and wheat in Europe. Another history lesson for sixth grade students (11 to 12-year olds) connected access to healthy food to the Civil Rights Movement, having students explore the relationship between food and social inequality.

Created as part of a unit called ‘Healthy Food For All’ by Euna Lee and chefs, Jason Hammel and Ryan Poli, this hour-long lesson had students analyse the distribution of fresh, healthy foods in the city of Chicago and discuss why healthy food access constitutes a civil right. The unit was part of a year-long inquiry into how urban space is utilised to foster healthy communities.

The lesson was guided by these big ideas:

- Why is access to healthy food a civil right?
- How can we understand ways to make the world better today?
- What is a food desert?
- What solutions are there to fixing the problems of food access for all?

The following vocabulary words were introduced, defined and used throughout discussion:



- food deserts (urban areas where fresh, nutritious foods are largely unavailable)
- disparity
- healthy food
- food insecurity (a situation of uncertainty surrounding one's access to food)
- obesity.

General lesson structure

1. The teacher places four signs in separate corners of the classroom – strongly agree, agree, disagree, strongly disagree – and reads the following statements to students:

- It's easy to eat healthy food.
- Limited access to a supermarket can be linked to obesity.
- Supermarket chains should be forced to build in urban and rural areas, not just suburban areas.

2. Students walk to the sign that represents their beliefs or feelings about each statement. Students discuss their position with others who chose to stand by the same sign. Each group shares their position with the class.

3. The chefs (or teachers) leading the lesson connect what students have said to the idea of healthy urban space, and the necessary elements of a healthy community. Students work in table groups to make a list of five things a healthy community must have.

4. Continuing in their table groups, students use Google maps on iPads to look up different kinds of food access points in a designated area of Chicago:

- seasonal restaurants
- farmers' markets
- convenience stores
- grocery stores
- neighbourhood gardens.

5. Chefs (or teachers) facilitate small group discussion about what students noticed on the map, using the following questions:

- What does this exercise tell us about the city and food access?
- Who has the most access to food?
- Who has the most access to *healthy* food?
- Who has the least access?
- Where in the map has the least?

This lesson enabled students to meet a range of target outcomes by the end of the unit:

- Recognise and communicate the value of making healthy decisions regarding food, on immediate and long term health. (*Pilot Light Standard*)
- Use goal-setting and decision-making skills to make long-term decisions about their diet. (*Pilot Light Standard*)
- Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively. (*Common Core Standard, Speaking and Listening*)

- Report on a topic or text, tell a story or recount an experience. (*Common Core Standard, Speaking and Listening*)
- Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (*Common Core Standard, Speaking and Listening*)
- Distinguish their own point of view from that of others. (*Common Core Standard, Reading*)

Language and literacy

Another lesson for fifth graders (ten to 11-year-olds) connected the process of designing menus and recipes to the process of writing poetry in terms of brainstorming an overall mood and theme and highlighting certain words or ingredients.

Created by teachers, Amy Peterson and J. Zapata, as part of a unit called 'Writing Poetry with Food', the students explore the importance of brainstorming and word choice by comparing these aspects of writing poetry to the creative process of crafting a menu.

The lesson was guided by these big ideas:

- Word choice in a poem is like ingredient choice in a menu.
- How does word choice change the tone and mood of your poetry?
- Chefs brainstorm a menu or a recipe by thinking about themes and choice ingredients.
- How does a poem get started and organised? How is this brainstorming process similar to crafting a menu?

General lesson structure

At the beginning of the lesson, chefs present their process for creating a menu – for example, how they decide on a feeling or mood and support that feeling or mood with specific ingredients. Chefs show examples of their brainstorming sheets, menus they have created and pictures of food they have created. The lesson continues in small groups, with several options:

- Students compare 'flavourful' recipes and poems with 'bland' recipes and poems, analysing what makes poems and recipes interesting, or full of flavour.
- Students try different foods that evoke different emotions and translate their reactions into descriptive words.
- Students turn their descriptive words into a poem or write a journal entry based on what they have learned.

This lesson enabled students to meet these target outcomes by the end of the unit:

- Use concrete words, phrases and sensory details to convey experiences and events precisely. (*Common Core Standards, Literacy*)
- Produce clear and coherent writing in which the development and organisation are appropriate to task, purpose and audience. (*Common Core Standards, Literacy*)
- Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story. (*Common Core Standard, Reading*)
- Ask and answer questions to demonstrate understanding of a text. (*Common Core Standard, Reading*)

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For more information on the Pilot Light project, please visit pilotlightchefs.org or email info@pilotlightchefs.org.

Fuelling a future generation

When I asked chef Merges what he has learned about elementary students' beliefs about cooking and nutrition, he said that most kids have a surprisingly good sensibility about what to eat: 'There's always this high end, families who have put time in to make something really special and organic and balanced, then you have a big broad band where kids are eating well and it's homemade, but it might be peanut butter and jelly and crackers, and then there's that ten to 15 per cent on the bottom.'

In fact, this bottom undernourished group is much larger nationally. According to the United States' National Center for Education Statistics, 44.6 percent of students were eligible for free or reduced-price lunch during the 2008-2009 school year⁴. This reflects a steady rise from the year 2000, when the percentage was 38.

The school lunch they are receiving costs between two or three dollars on average, according to School Food Focus⁵. A dollar or less goes toward the food itself – typically donated or government subsidised – and the rest is directed toward transportation, packaging and labour costs. While the federal government has passed legislation to make school lunches more nutritious (and more expensive), balancing nutrition and budget demands for such a large student population is a huge challenge, likened to a 'high-wire act' by School Food Focus.

On top of free lunches, many districts offer free breakfast. In 2011, the Chicago Public School District decided to implement a free breakfast program during students' first class, rather than before school.

'We can always rip on the school lunch thing,' Merges said. 'But my point of view is that until the US really makes education a priority, nothing is going to change. The education of our children is national security. Without that, we're doomed. That's part of what we're trying to do – we're community members, we want to be active participants, because we have a responsibility. We want to get across respect for food and yourself and others in your community, whether it's not throwing something away when you're making dinner or making an appropriate portion size or donating to a food [bank].'

Managing high end restaurants, the chefs are in a unique position to instruct students on this topic – on one hand, they are passionate about the 'poetry' of crafting special dining experiences for their patrons, and on the flip side, they are frequently exposed to food waste and the need to manage waste in resourceful, respectful ways.

Their message of appreciating food in a broad-minded, resourceful, respectful way is perhaps best encapsulated by the program name. As explained by chef and co-founder Jason Hammel, 'In the American colonies, the 'pilot' was a small pile of embers left to ignite the hearth for the next morning's breakfast. We aim to ignite the hearth of today's youth, so that they may better provide for themselves, for their families and for the generations to come.'

References

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Knowledge trails

- 1) **The tiger who came to tea** – Debra Kidd recalls an exciting cross curriculum project she created based on the book 'The Tiger Who Came to Tea', in order to explore the theme of healthy eating with a group of young readers. library.teachingtimes.com/articles/tiger-class-ttc