



Food Fuels Learning Toolkit:
Conducting an Assessment of School System Food Security

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ABBREVIATIONS

CCFSC	Cumberland County Food Security Council
FDA	Food and Drug Administration
IRB	Institutional Review Board
USDA	United States Department of Agriculture

INTRODUCTION TO THE TOOLKIT

Overview of the Food Fuels Learning Toolkit

The Food Fuels Learning Toolkit is a resource to a) help food security champions better understand their school food system, and b) to identify the strengths and areas for improvement in food security programming. This toolkit has step-by-step instructions on how to conduct a school system food security assessment in your district. If you have any questions about this resource, please contact Food Fuels Learning at info@ccfoodsecurity.org.

Food insecurity, and its many intersecting factors, can be sensitive and difficult subjects to discuss. We recommend using a trauma-informed approach while performing this work to ensure as safe and supportive of an environment as possible. To learn more about trauma-informed approaches, please visit these resources gathered by ACES Connection:

<https://www.acesconnection.com/g/resource-center/blog/resource-list-topic-trauma-informed-practice>

What is food security?

Food security means “access by all people at all times to enough food for an active, healthy life” (Coleman-Jensen et al, 2018, p.2).

What is a food security champion?

A food security champion is a member of the school community who is working on, or has influence over, the food security programming or holistic school food system. These individuals may or may not be compensated for the work they are doing in this realm (Let’s Go!, n.d.).

What is school system food security?

Food Fuels Learning defines school system food security as access by all students to enough nutritious food during the school day and beyond to ensure they are able to attain their full potential.

Why are people food insecure?

At the Cumberland County Food Security Council (CCFSC), we recognize that people are not deprived of food because food is unavailable in the market, but rather because their ability to get that food is restricted, most often by limited income resulting from systemic inequity and injustice. We believe that addressing the root causes of hunger means addressing racism and oppression in all forms.

To learn more about systemic inequity and the role that it plays in food systems, we encourage you to explore these resources compiled by Food Solutions New England:

<http://www.foodsolutionsne.org/racial-equity-challenge-resources>

What is a needs assessment?

A needs assessment is a systematic process through which knowledge or resource gaps are measured against desired outcomes (International Federation of Red Cross, 2006). As conducted for Food Fuels Learning, the needs assessment process was used to identify what was being done already and where the gaps were with regards to food security in five areas: charitable food programs, federal nutrition programs, school gardens, nutrition education, and sustainable practices.

Why conduct a school food security needs assessment?

For many food insecure students, school meals comprise the bulk of overall daily food consumption. Researchers have found that eating school breakfast and lunch provides half or more of students' daily energy intake, making school meals a vital access point for those without sufficient food at home (Cullen & Chen, 2017).

Hunger can make concentration, learning, and prosocial behavior more difficult in school environments. Food insecure students often receive lower grades and report higher absences, leading to increased likelihood of negative repercussions, including poor academic outcomes (Alaimo, K., Olson, C. M., & Frongillo, E. A., 2001; Faight, E. L., Williams, P. L., Willows, N. D., Asbridge, M., & Veugelers, P. J., 2017). Alaimo et al. (2001) found that food insecure students were several times more likely to be suspended or to repeat a grade than their food secure peers. Lack of academic success can result in fewer opportunities, perpetuating food insecurity and poverty in future generations (Faight et al., 2017).

Food insecurity also influences children's psychosocial development. Many students experiencing food insecurity have higher rates of behavioral and emotional issues compared with their food secure peers, such as difficulty making friends and maintaining self-control in classrooms. Additionally, these students were much more likely to have consulted a psychologist (Alaimo et al., 2001; Faight et al., 2017; Kimbro & Denney, 2015). These challenges further impact the students' academic performance.

Food insecurity impairs students' physical well-being, with lasting consequences for their academic performance and health. Food insecurity often leads to consumption of cheap foods that contain high levels of saturated fats and sugar but lack the nutritional content necessary for proper brain and body development (Alaimo et al., 2001; Faight et al., 2017). Poor nutrition increases the risk of diet-related diseases. Studies have found an association between food insecurity and the risk of obesity among school-aged children (Kaur et al., 2015). According to FoodCorps, a national leader in school-based healthy food programs, children with diet-related diseases are less likely to achieve success in their school lives and their careers (FoodCorps, n.d.). In the United States, one in three children are on track to be overweight and develop type 2 diabetes (FoodCorps, n.d.). FoodCorps emphasizes the impact food insecurity has on children's health and the ability to succeed in school.

For a child experiencing poverty, several factors in their living and learning environments can prevent them from reaching their full potential. Food insecurity is one such negative factor as existing research draws a clear connection between food insecurity and children’s physical, academic, and cognitive-behavioral development. While recognizing that food insecurity is only one of the challenges resulting from systemic poverty, we believe it is necessary to address the basic human need for food in order to ensure the well-being of students.

HOW TO CONDUCT AN ASSESSMENT OF SCHOOL SYSTEM FOOD SECURITY

STEP 1: PREPARE FOR THE ASSESSMENT

Define Research Question(s)

To build clarity and shared understanding, it is important to articulate the research question(s) for your assessment at the onset of this process. You will collect and analyze a substantial amount of data from the school community. What are the questions you are trying to answer?

Example research questions: What work (if any) is being done within Portland Public Schools to address food insecurity and by whom? What is the need and where are the gaps?

Identify Scope of Assessment

After outlining your research question(s), begin to clarify your vision and decide on parameters. It is important to document the entire assessment process in detail. It is recommended that you find a central, accessible location, such as a shared Google Drive, where notes and other important information can be stored. To help determine the scope of your assessment, begin by answering the following questions:

- Who is the target audience for the assessment?
 - What do you hope they will do with the findings?
- Which school(s) will be a part of the food security assessment?
- What is the available budget or funding for the assessment?
- What is the timeline for the assessment?
 - When will you have hired or assembled your Assessment Team by?
 - When will data collection begin and end?
 - When will data analysis begin and end?
 - When will report writing begin and end?
 - When will you share your findings and recommendations?
- How frequently will the Assessment Team meet, for what duration, and where?

The answers to these questions may need to be modified as the assessment is underway but it serves as a helpful guideline as you start onboarding team members and seeking support.

 *Food for Thought: When considering the timeline, factor in the school calendar and how that will affect data collection. Be mindful of school vacations, holidays, academic testing, and the beginning and end of the school year, which are often times when stakeholders may not be as*

available or willing to participate. Additionally, if partnering with a local college, consider the availability of students and professors.

Gain Community Support

Before beginning the assessment it is necessary to have school community buy-in. The more grassroots and public support from key stakeholders, the easier it is to collect data and share results later on.

Consider key stakeholders such as the:

- Superintendent
- School Board of Directors
- Principals
- Teachers
- Food Service Director
- Food Service Staff
- Parents
- Students
- Partner Organizations (*service providers that work with school community*)
- Local politicians

If possible, secure community support by gathering stakeholders and meeting face-to-face to gain a better sense of their priorities and concerns. Other ways to engage in stakeholder outreach include social media, email (via partner organization contacts or various school administrative lists), newspaper, radio, and/or local television.

Define Categories and Terms

Food Fuels Learning identified five categories of research which address the holistic school food system: charitable food programs, federal nutrition, school gardens, nutrition education, and sustainable practices. Reflect upon the scope and purpose of your assessment to identify which categories you are interested in researching. Clearly define each category with relevant details to the school population being assessed.

Example categories:

- ***Charitable food programs*** donate food to students and families through the school for use within and outside of the school environment. Charitable food programs include backpack programs, in-school food pantries, distribution tables, and community meals.
- ***Federal nutrition programs*** include all food served through schools' nationally regulated meal programs that are prepared and overseen by Portland's Food Service Department. In Portland, nutrition services available to all schools include breakfast, lunch, the After School

Snack Program, and the Summer Food Service Program.

- **School garden** programs support students' familiarity with vegetables, increase access to fresh produce, and connect students to food systems through hands-on learning to help them make educated decisions about the food they consume.
- **Nutrition education** teaches students about healthy eating, motivates students to adopt healthy eating practices, and teaches positive skills so students can accomplish their nutrition goals (Collins et al., 1995). These skills and goals are developed through multiple strategies including taste tests, nutrition and cooking classes.
- **Sustainable practices** include responsible food procurement and food waste management. Sustainable practices may include the organization of the food system within the school, such as cafeteria environment, time, set-up, and communication to students regarding how to access food and proper disposal.

Build Assessment Team

The composition of the assessment team is based on access to different resources. For example, perhaps you have the funding, time, and skillset to perform the majority of the assessment alone. Or maybe the assessment team will be a large group of volunteers who are each able to donate a couple of hours per week. There are many ways to assemble a team. When assembling a team consider the following:

- Do you have access to individuals with research and data analysis skills?
- Will you compensate members of the assessment team, will it be part of their work plan, or will it be voluntary?
- What is the ideal number of people to have on the team? Why?
- Who will be the lead convenor and facilitator of the team? Why?
- How will you clearly delegate responsibilities to each team member?
- How will the team communicate and share documents?
- How will you make decisions as a group?

 *Food for Thought: When thinking about access to someone with research skills there are many available options. Consider organizations you partner with, individuals within the school community, local universities or colleges that are interested in semester or year-long research projects, local health or human services departments, Americorps or Foodcorps service members, and contractors in the area.*

When inviting people to join the assessment team, share the predetermined scope, purpose, and values identified earlier. This allows potential team members to better understand what they are agreeing to and why this is an important process.

STEP 2: COLLECT DATA

Create Data Collection Plan

Before embarking on data collection, create a detailed data collection plan. The most important questions to asks are:

- What data do we need to help us answer our research question(s)?
- How will we use this data?

Understand the Environment

Create a visual representation of the school food environment by filling out the Assessment Map (Appendix A). This tool establishes what is already known and where there are gaps in the assessment team's knowledge. To complete the map, reach out to relevant stakeholders for input including principals, organizational partners, and the food service director. Utilize tools such as the Principal Survey (Appendix B) and Partner Organization Survey (Appendix C) to complete this process.

Additionally, it is important to understand the socioeconomic and demographic information about the population being assessed. Research the following:

- How many students are in the school or school district?
- How many students are eligible for free or reduced lunch?
- What is the demographic breakdown of the student body?
- What cultural and ethnic groups are represented in the student body?

 *Food for Thought: If a student is eligible for free meals, it means that they live in a household with income at or below 130% of the poverty line adjusted for family size. The number of students qualifying for free or reduced-price meals (family income up to 185% of the federal poverty line) is a commonly used proxy for childhood food insecurity that relies on a specific, income-based definition rather than household survey data (Maine Department of Education, 2018a).*

Once you have gathered this information, we recommend adapting the larger Assessment Map into individual School Reports (Appendix D) that can be shared with food security champions at each school.

Qualitative Data Collection

If the research question(s) requires information beyond what was gathered during the *Understand the Environment* step, further qualitative data may need to be collected. For example, qualitative interviews, focus groups, or surveys.

Before conducting interviews, use your research questions as a guide to develop an interview guide specific to each interview or interview type. One method is to create interviews by category or a guide relevant to a specific key stakeholder. Special attention should be paid to how questions are asked to ensure a consistency in later analysis. Examples of interview guides based on categories can be found in Appendix E.

Protect Human Subjects

All interview subjects should provide written consent before an interview. The consent form should cover the subjects participation in an audio-recorded interview and the potential use of information provided. Please reach out to your local Institutional Review Board (IRB) office to determine if IRB approval must be granted before you begin data collection.

Qualitative Interview Training

After completing the interview guides, team members who will conduct interviews should be trained. During training, interviewers will be instructed on best practices for interviewing, and the goals and objectives of each interview or interview type. The trainer should review the interview guides to ensure the interviewers have a consistent understanding of the objectives. Beforehand, consider if the interview guide fits the analysis strategy. For example, do the questions have answers that are easily documented and aggregated?

As part of the training, it may be helpful to provide a packet of relevant documents to each interviewer. Examples of content to share at trainings can be found in the Interviewer Information Packet in Appendix F.

Conduct Interviews

After completing the interview guides, consent forms, and training, you are prepared to conduct interviews. Suggested interview protocol guidelines are in the Interviewer Information Packet (Appendix F). When attending interviews, bring a recording device and a School Report (Appendix D) to share the information already gleaned through during earlier data collection.

After the interview, we recommend transcribing the recording directly afterwards or during same day while the conversation is still fresh in your mind. Transcribing, or turning your verbal interview into written text, is essential as you move forward with analysis. If you took notes during the conversation, it can be helpful to include those, denote which text is quoted and which are your personal thoughts. For recordings and notes with identifying features, store them in a confidential location as dictated by the IRB or the procedure outlined in your consent form.

STEP 3: ANALYZE DATA

Analyzing Numbers and Counts

It is possible that most of the data can be reduced down to numbers and counts (e.g., District A has 23 schools, 15 pantries, and two school gardens). In this case, tables, charts, and figures may be the best way to represent this data.

Example of using numbers and counts to communicate data:

Table 4. Summary of Federal Nutrition Programs in Portland Public Schools

	CEP & Fresh Fruit and Vegetable Program (FFVP)	% of Free/Reduced Eligible Participation in Breakfast*	% of Free/Reduced Eligible Participation in Lunch*	School Participation Rate Lunch*
Elementary Schools				
East End Community School	✓	83.07%	84.15%	83.91%
Hall Elementary School		71.28%	68.28%	42.98%
Longfellow Elementary School		15.72%	60.83%	26.88%
Lyseth Elementary School		31.33%	74.69%	44.38%
Ocean Ave Elementary School		28.60%	71.22%	46.71%
Peaks Elementary School		15.68%	54.52%	40.79%
Presumpscot Elementary School	✓	82.72%	74%	72.83%
Reiche Elementary School	✓	55.98%	65.82%	65.76%
Riverton Elementary School	✓	59.71%	78.52%	78.61%

Analyzing Text

Determine the method that fits best with your research and interview questions. Maybe your team has the capacity and expertise to take on a more formal thematic analysis by identifying patterns and themes within the data (Braun & Clarke, 2006), or maybe it would be best to just summarize the findings coming out of the interviews.

While this step may seem overwhelming, keep in mind that the goal of analyzing text is simply to take the data gathered and synthesize it into a more useful and approachable format. You may have biases about the results but do your best to stay as objective as possible to fairly present the results. Focus on what is interesting, surprising, and relevant to your research question and your analysis will be a success.

STEP 4: USE DATA

Write a Report

With all the data analyzed, take your results and turn them into a compelling narrative. While writing the report, consider the target audience (e.g., School Board, parents, teachers, etc.) and tailor the information to appeal to those readers. You may also create an executive summary, a brief description of the most important parts of your report, that can be distributed to stakeholders who would benefit from this information but may not want to read an entire report.

Consider including the categories below in the report. The categories may evolve as the report develops.

- Executive summary
- Table of contents
- Introduction
- Methodology
- Demographics and supporting data
- Results
- Conclusions
- Recommendations
- Conclusion
- Future use and limitations
- References
- Appendix

It is important to acknowledge that people in schools are working at their maximum capacity. In assessing programs and making recommendations, we cannot expect school staff to work more or harder. We can include their input to develop solutions that create efficiencies and lessen the burden on the school community. More food secure students makes everyone's job in the school system easier.



Food for Thought: For examples of what an assessment report and executive summary might look like, refer to 'Food Fuels Learning: A Portland Public Schools Food Security Needs Assessment (Appendix G) or the 'Food Fuels Learning: Executive Summary' (Appendix H).'"

Share Your Findings

Create an outreach plan for how to share the report and recommendations. Depending on the assessment team's budget, you may choose to distribute both printed and electronic versions of the report. Be sure to share the report to everyone that participated in the assessment and the stakeholders identified earlier:

- Superintendent
- School Board of Directors
- Principals
- Teachers
- Food Service Director
- Food Service Staff
- Parents
- Students
- Partner Organizations (*service providers that work with school community*)
- Local politicians

Your assessment team might choose to give public presentations on your findings. This provides a captive audience and allows stakeholders the opportunity to ask questions. Your team may consider presenting at a:

- School Board meeting
- Parent Teacher Organization meeting
- School staff meeting
- Neighborhood Association meeting
- Local food council gathering

If you used this toolkit to conduct an assessment, please reach out to Food Fuels Learning and share your experience and results at info@ccfoodsecurity.org. Your assessment team's findings are an important step in ensuring that every child in your school district has the food they need to succeed. Share them proudly and widely because food fuels learning!

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WHO WE ARE

Food Fuels Learning

First convened in July 2017, Food Fuels Learning began as The Portland Public Schools Food Security Task Force: a group of stakeholders interested in supporting, bolstering, and addressing gaps in food security work happening in Portland Public Schools. In August 2018, the Task Force published “Food Fuels Learning: A Portland Public Schools Food Security Needs Assessment,” the product of a year-long, community-driven research and needs assessment process. Food Fuels Learning is an unprecedented approach to understanding Portland's school food system and food security programming through five key areas: charitable food programs, federal nutrition programs, school gardens, nutrition education, and sustainable food practices. To learn more about Food Fuels Learning visit their website at www.foodfuelslearning.org.

Cumberland County Food Security Council

The Cumberland County Food Security Council is made up of engaged citizens, community leaders, and representatives from local organizations who are leading the efforts to build food security in Cumberland County and across Maine. Our efforts focus on educating our community about why our neighbors are food insecure and what can be done to create greater food security in Cumberland County. We advocate for policy changes and decision-making that support systemic change and ground-level action relevant to alleviating hunger. We believe that we can accomplish more together and that collaborative advocacy and collective action can result in a hunger-free Maine. To learn more about the CCFSC visit their website at www.ccfoodsecurity.org.

For consultation or guidance about the toolkit, please contact the Food Fuels Learning at info@ccfoodsecurity.org.

APPENDIX

For electronic copies of the appendices please visit www.foodfuelslearning.org.

Appendix A: [School Assessment Map Template](#)

Appendix B: [Principal Survey Template](#)

Appendix C: [Partner Organizations Survey Template](#)

Appendix D: [School Report Template](#)

Appendix E: [Interview Guides \(Combined\)](#)

Appendix F: [Interviewer Information Packet Template](#)

Appendix G: [Food Fuels Learning: A Portland Public Schools Food Security Needs Assessment](#)

Appendix H: [Food Fuels Learning: Executive Summary](#)