FoodCorps Program Guide

FoodCorps

PROGRAM GUIDE

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We also want to express deep gratitude to all our funding partners for supporting our mission, supporting hands-on education, and helping us create these teaching materials.

About This Guide

What Is the *FoodCorps Program Guide?*

This guide is a set of resources for FoodCorps members, designed to support effective FoodCorps programming. FoodCorps members should use this guide alongside FoodCorps' trainings. In this guide, you will find the following:

- Resources for planning and evaluating your year with FoodCorps
- Tips for getting to know your school community
- Teaching approaches and considerations
  Best practices in classroom management
  Tips for cooking with students
- Tips for building and maintaining school gardens
- Activities to engage students in the cafeteria
- Best practices for safety during hands-on activities

This guide also includes key FoodCorps tools, some of which are required during your year with FoodCorps:

- FoodCorps Menu & Action Plan
- Member Transition Guide

How Do I Use It?

We recommend that everyone start by reading the following sections: "Introduction to FoodCorps" and "Planning and Evaluating Your Year." These sections cover the basics about how FoodCorps partners with communities and include documents and resources that you will become familiar with.

After that, you can continue reading, or check out the Table of Contents throughout the year to find exactly what you need.

A Work in Progress!

This guide brings together many tried-and-true FoodCorps tools, but other parts of it are new. We will be adding to and adapting the material over time. If you have ideas, please reach out to your Manager of Program Impact.

Introduction to FoodCorps

What Is FoodCorps?

Our mission: FoodCorps partners with schools and communities to nourish kids' health, education, and sense of community.

Our vision: Every child, in every school, experiences the joy and power of food.

Why Schools?

School is where kids grow and learn—physically, academically, and emotionally. For many kids, it's also the place where they eat as many as two out of three of their daily meals and where they build relationships with food that will last a lifetime. FoodCorps sets students up for success by working with schools to provide nourishing meals, nutrition education, and community engagement through food.

We get kids excited about eating fruits and veggies, support school nutrition staff in bringing locally grown and freshly prepared meals onto lunch trays, and work with families to create positive school food environments for all kids. FoodCorps reaches more than 500,000 students each year, helping to support kids' health, academic progress, and connection to their community through food in school. Our hands-on, place-based education framework help to meet the need of all learners, support kids' social and emotional growth, and help teach academic concepts, too.

What Is a Nourishing School Food Environment?

A nourishing school food environment has three things: hands-on learning, nourishing school meals, and a culture of health.

What Is Staying Power?

Staying power means that a nourishing school food environment stays strong after FoodCorps leaves that school. Staying power is strongest when people from all parts of the school community work together to create a nourishing food environment for students.

Planning & Evaluating Your Year

FoodCorps Member Action Plan

At the beginning of each partnership, FoodCorps and a school district create a partnership plan with multi-year goals. Before each school year, they collaboratively create an annual plan that breaks down each goal into activities and projects for that year. Once the FoodCorps member begins their term, they will review the annual plan and work with various stakeholders to detail the member's role and contribution using the Member Action Plan.

The Member Action Plan includes a Weekly Schedule section where the FoodCorps member can document and plan their weekly programming and discuss professional development goals and FoodCorps required evaluation components.

Sample School Schedule

This Sample School Schedule outlines an example week in the life of a FoodCorps member. Please note that members are not expected to follow this exact schedule. Because each school co-develops its own Action Plan, every member's schedule will look slightly different.

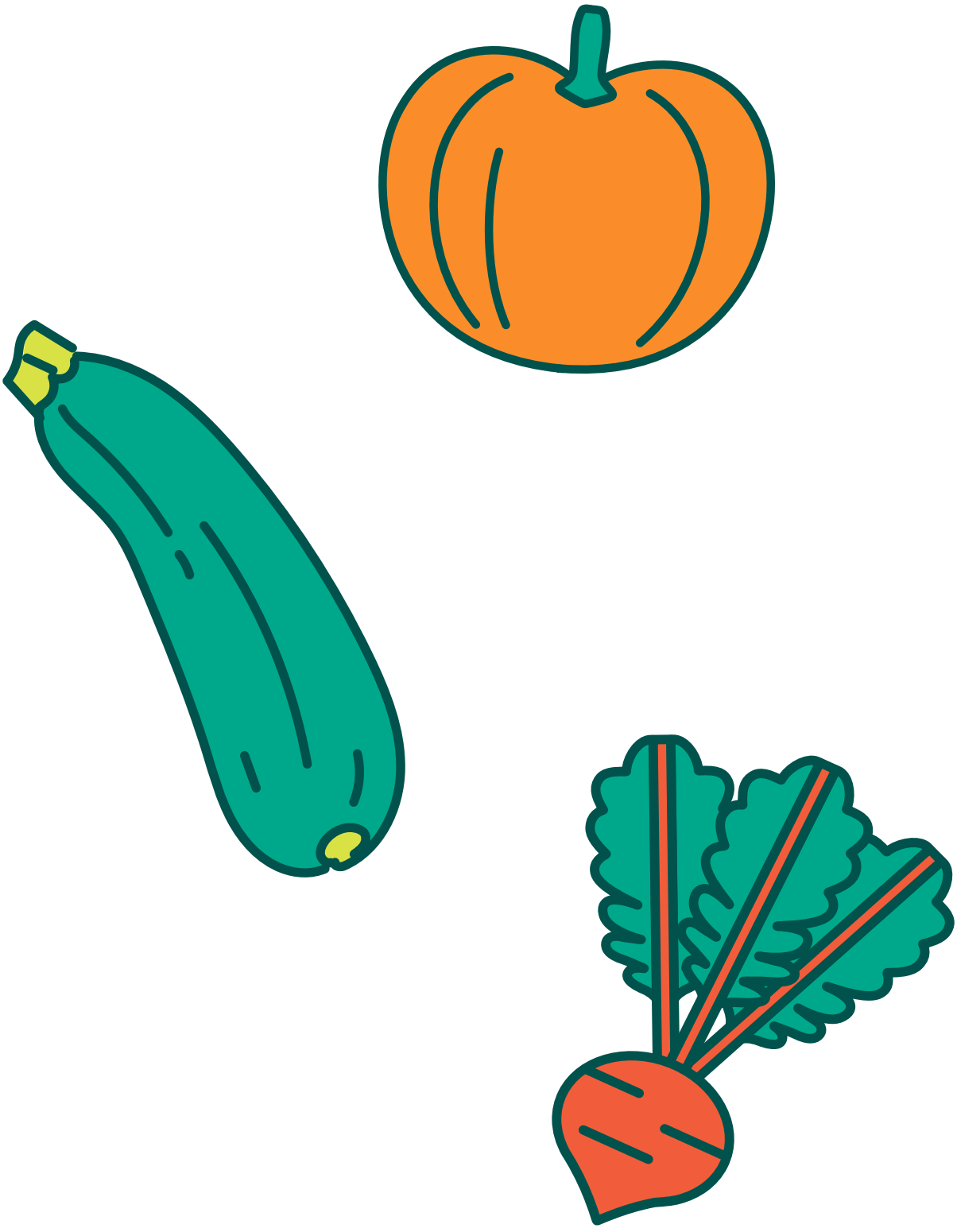
Key Tools *(Found in Appendix)*

Member Transition Guide

FoodCorps members use the Member Transition Guide to record important contacts, resources, and partners of the school. This ensures that important information is recorded and passed on from year to year. You should regularly update your Member Transition Guide throughout the program term.

Know Your State & District Policies Worksheet

The choices schools can make about their food environment are often governed by policies at many levels: federal, state, district, and school. These policies can directly influence students' experiences of and decisions about food in school. These policies may make it easier—or harder—for your school community to make certain changes, so it is important to understand what policies are in place and how you might be able to influence them. This optional worksheet outlines some of the policies that are helpful to know about at the start of your term.



Getting to Know Your Community

Community engagement is essential for successful programming. It is just as important to understand how your school functions as it is to form relationships within the broader community. You will rely on members of your school's community to support taste tests, get involved in family cooking nights, and sign their children up for after-school clubs. Community members are not only the parents and caregivers of the students you teach but also the people who support fundraising efforts, participate on the school board, deliver the extra load of soil you need to get your garden growing, and help maintain the garden in the summer.

The community engagement strategies outlined in this section offer recommendations for how to support your school and community using a meaningful approach that recognizes the complexities of our nation's food system.

You have an exciting opportunity to learn about your community as you get to know individuals in your school. During the process, listen closely and deeply: share about yourself, and ask your school community members about who they are and what their lives are like. Be sure to consider how you can create a space that welcomes all members of the community. The "Facilitating" section of this guide covers ideas for bringing people together. FoodCorps strives to make change that endures beyond an individual FoodCorps member's term. To make lasting change, ownership of this important work must live not with our members or our national organization but with the school communities we partner with. The community engagement strategies outlined in this section offer recommendations for how to serve your school and community using an inclusive approach that recognizes the complexities of our nation's food system.

Asset-Based Community Development Strategies

FoodCorps encourages members to become familiar with Asset-Based Community Development (ABCD) strategies. Asset-based community development focuses on leveraging existing strengths within the community (a glass-half-full approach). This approach contrasts with needs-based community development, which emphasizes local deficits and looks to outside organizations for resources (a glass-half-empty approach). John McKnight and Jody Kretzmann developed the ABCD approach, and the Asset-Based Community Development Institute supports it. It emphasizes that solutions to community problems already exist within a community. The institute highlights the following principles that guide ABCD strategies (Rowland 2008):

- *Everyone has gifts: Each person in a community has something to contribute.*
- *Relationships build a community: People must be connected for sustainable community development to take place.*
- *Citizens at the center: Citizens should be viewed as actors—not recipients—in development.*
- *Leaders involve others: Community development is strongest when it involves a broad base of community action.*
- *People care: Challenge notions of "apathy" by listening to people's interests.*
- *Listen: Decisions should come from conversations where people are heard.*
- *Ask: Asking for ideas is more sustainable than giving solutions.*
- *Inside-out organization: Local community members are in control.*
- *Institutions serve the community: Institutional leaders should create opportunities for community member involvement, then "step back."*

Rowland, Stan (26 April 2008). «What is Asset Based Community Development (ABCD)» (PDF). Collaborative of Neighborhood Transformation.

Using these strategies, FoodCorps members can play an important role in changing the school food environment. As you get to know your school, keep in mind that all community members bring something to the table. By asking questions and listening to the needs of the community, you can develop strong schoolwide goals and program goals.

Community Demographics and Access

Learning about the demographics and histories present in your community is an important first step in preparing to offer students foods and activities that celebrate local traditions. This knowledge is also key to sharing accessible resources, like take home recipes, with your students and their caregivers. When you have the opportunity, listening to people's personal accounts is one of the richest ways to understand their backgrounds and experiences.

To better understand your community's demographics, you can research the following:

- Percentage of students eligible for free or reduced cost school lunch programs
- Average household income
- Transportation access to grocery stores
- Languages spoken within the community
- Percentage of people in the community who utilize the Women, Infants, and Children (WIC) program or the Supplemental Nutrition Assistance Program (SNAP)

Keep in mind that demographic statistics are a one-dimensional method to get to know a community. Think about how you might create opportunities to welcome families of all backgrounds into the classroom, cafeteria, and school garden. Can you find a volunteer translator/interpreter for special events? Can you offer family activities at different days and times throughout the school year, in order to accommodate different work schedules? How might you survey families about how they'd like to be involved? Just like kids have different learning styles, every family engages with their child's education differently—and it's important to make them all feel valued.

Community History

Take time to understand the history of the community you are in. If you are from the place where you are serving, you may have

the opportunity to recontextualize your role and responsibility in the community as a FoodCorps member. Consider the perspective you bring, and make an effort to spend time in areas that you don't know. Reach out to individuals who can share a variety of perspectives. Learn the local narratives that might not be formally documented. How have neighborhoods changed? What are the local gatherings, festivals, and celebrations? Where have people traditionally congregated? Is there community trauma that you should learn about and navigate with compassion? Who are the local leaders; elected officials; and people with personal, political, or economic influence? Who are the people who may not have influence but are equally important to engage?

It takes time to learn about any community, and setting intentions about your strategy for doing this is important.

Local Grocery and Agricultural Landscape

Understanding your city or town's local agricultural context is incredibly helpful to understand what people eat and where they get their food. Questions to consider include the following:

- What does local food production look like? Are there farms you might visit? What do they grow and sell?
- Are there local farmer's markets? Do they accept SNAP funds, electronic benefits transfer cards, or the Supplemental Nutrition Program for Women, Infants, and Children (WIC) WIC funds? Do they offer produce vouchers and rewards that your students' families might use?
- Explore a variety of places to get food within your community. Where do locals go? This can include farmers markets, grocery stores, and corner stores.

Communication

Communicating effectively and appropriately with people in your community is important in building successful relationships. As you develop relationships at your site and in your school, consider these tips for being a thoughtful communicator:

- Are there any language barriers that might shift the manner in which you communicate? If you do not speak a community member's language, how might you find the resources to communicate as best and as thoughtfully as you can? School and district staff, like a school administrative assistant, can help you find local resources to communicate across multiple languages.
- Learn the best methods of contacting community members because not all community members may have access to a phone or email. Use in-person conversations to ask people about the best way to stay in regular contact.
- It is important to speak to community members in a way that respects their narratives and stories. Be mindful to listen, and refrain from making assumptions about an individual's background and needs. If needed, follow up with thoughtful and respectful questions.
- Use inquiry. Seek to understand the experience and points of view of the people you are speaking with.

Facilitating

All FoodCorps members introduce themselves to school staff at the beginning of the year. And throughout the school year, you may be called upon to convene a group, lead a meeting to share ideas and goals for FoodCorps programming, or present on a topic related to the program. In these instances, good facilitation is key to ensure your meeting uses time well, that you have clearly shared your goals, and that the meeting creates space for all members of the group to participate. Here are some tips for success:

Meeting Planning Tips

- Location: Where will you be meeting? How is the room set up?
- Food: Bring food! Well fed people are happy and engaged.
- Notes: Consider asking someone in the group to be the note taker, so you can focus on facilitation. How will this person take notes? On a flip chart or chalkboard? (We recommend transferring notes to a computer after the meeting.)
- Timing: Start and end on time to value all meeting participants' time.
- Materials: Be sure to print important materials, especially if participants haven't had time to review important information ahead of the meeting.

Meeting Agenda Tips

- Decide on the purpose and outcome of the meeting. Make sure to share them with the group. The purpose is the broad meeting goal, and the outcome is what you hope to get done by the end of the meeting.
- Consider what you will cover during the meeting. Is the goal of the meeting to collect information, have a discussion, make a decision, or all three? How often will the group meet? What can the group realistically accomplish within the time you have?
- If members of the group don't already know each other, lead a short icebreaker activity. For example, ask participants to share their favorite fruit or veggie or favorite food memory.
- Use a variety of information-sharing techniques, depending on group size. For example, "round robin," "think-pair-share," or "shout out/popcorn."
- Remember to leave time to discuss next steps.

Meeting Facilitation Tips

When you facilitate a meeting, you are guiding the conversation. If you are new to facilitation, keep the following tips in mind:

- Practice neutrality: let your own opinions take a back seat so that you can take a neutral point of view, and guide the conversation according to what other participants think and feel.
- Develop a way for people to participate in the conversation so that everyone's ideas can be heard.
- Help the group come to an agreement or compromise so that they can make a decision.

Key Relationships with FoodCorps Partners

As you engage with members of your school and the broader community, remember that building relationships with your school principal, cafeteria staff, and teachers is especially important. Consider the following tips:

Relationship with the Principal

The principal is the key decision-maker or gatekeeper at every school. This person supervises the school's instructional program; maintains order and discipline; enforces federal, state, and district rules, policies, and laws; evaluates and supports teachers; and represents the school to parents and the community. To make an impact in the classroom and garden, it will be important to establish a respectful, collaborative relationship with the principal. Remember to include the principal as a key person to share successes with, as referenced in the Tips for Celebrating and Sharing Success section on p. 47.

Relationships with Cafeteria Staff

Building a relationship with cafeteria staff is one of the most important things you can do in school food. These staff members are in charge of navigating child nutrition programs—including the National School Lunch Program, School Breakfast Program, and others—to develop a menu for students, and they have great influence on how students make choices in the cafeteria line. Just as a teacher sets the tone for expectations in the classroom, cafeteria staff can choose to influence the tone during meals. Building a positive relationship with cafeteria staff is key to everything from leading successful taste tests to your ability to borrow equipment such as trays needed for classroom-based cooking lessons. Cafeteria staff are sometimes undervalued within a school's community, so it is important to acknowledge their hard work and essential role in student nourishment. Here are some tips for success:

- Spend time in the kitchen to build relationships.
- Collaboratively set expectations for working in the cafeteria.
- Be consistent and reliable with how you show up to help.
- Listen to challenges, ask questions, and identify opportunities to support these efforts.
- Give assistance, not demands.
- Be humble, not the expert.
- Acknowledge barriers and successes.
- Connect and relate personally.
- Eat the food served in the cafeteria.
- Be appreciative!

As you are building your relationships, consider asking cafeteria staff these questions:

- How can we stay in touch? (Email? What is the best time to call?)

- What are your important kitchen logistics?
- What foods do you want to serve?
- How do you plan your menu?
- How are contracts and decisions made?
- Are there opportunities for a FoodCorps member to have a daily presence in the cafeteria? If so, how would this be helpful?

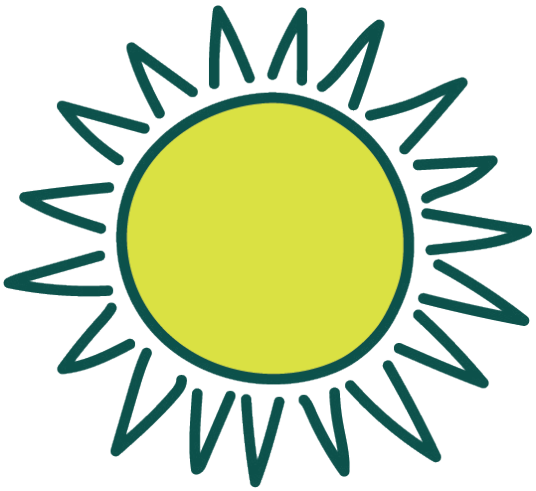
Just as it's important to understand how learning standards influence classroom curriculum, a key part of doing your research when building relationships with cafeteria staff is understanding the National School Lunch Program and National School Breakfast Program (see Glossary on p. 137 for details). These programs provide the basic structure and parameters under which cafeteria staff operate.

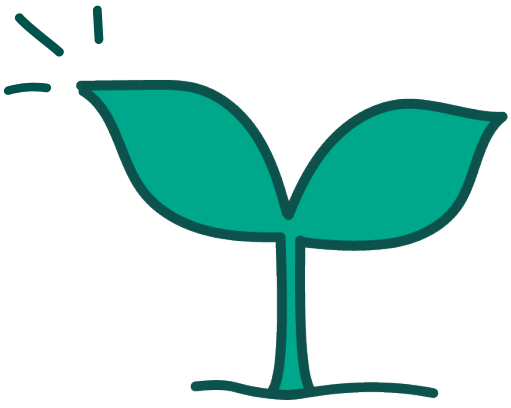
Relationships with Teachers

It is important to get to know the teachers in your school because you will often be in their classrooms leading hands-on lessons. The more you can develop a partnership and level of trust with the teachers, the easier it will be to meet your goals. Here are some tips for building relationships with classroom teachers:

- **Lead with empathy, and remember that teachers care about their students.** Teachers have a lot on their plates. It is important to recognize their hard work and remember that FoodCorps members are on hand to help enhance their students' experience in and out of the classroom.
- **Ask what the norms of the classroom are and what the teacher's behavior management structure is.** What strategies and systems does the teacher use to reward positive and redirect inappropriate behaviors, and how can you emulate these practices? It may be helpful to spend time in the break room or teachers' lounge and chat with teachers during their planning period (although be aware this is valuable teacher time!).
- **Ask to observe a lesson.** Explain that you're eager to learn from an experienced educator.
- **Understand the daily schedule.** What times are best to meet? Are there grade-level or curriculum meetings you could attend?
- **Understand what guides teachers.** What are the broad school goals, curriculum parameters, and standards that inform classroom instruction? How is their performance being evaluated, and can you help them succeed?
- **Ask what concepts and skills the teachers are passionate about.** What is their favorite topic to teach? Why did they start teaching? What are their favorite memories from being a student?
- **Seek teachers' advice and feedback.** Is the teacher willing to review the lesson you're thinking of teaching before you teach it? Does the teacher have advice on how to ensure it goes smoothly? Also ask the teacher to observe you teaching the lesson and give critical feedback.
- **Find out what responsibilities teachers have besides leading their class.** For instance, do they act as a recess monitor or participate on a school committee? How can you be a resource to teachers during their often maxed-out time?
- **Ask what topics the teacher might not feel confident or comfortable teaching.** How can you provide support and help the teacher, just as he or she is helping you?
- **Ask what motivates each teacher.** What does each teacher enjoy about his or her students? What can you learn from watching the teacher teach?
- **Ask how each teacher prefers to**

communicate. Does the teacher want to hear from you by email, by phone, or by you dropping by their desk?





Tips for Celebrating & Sharing Success

As you review this guide and develop your action plan, you will be looking forward: planning, working toward goals, and evaluating progress. Remember to take time to celebrate each success, big or small! It will be important to schedule time throughout the school year for you to take a step back and look at what you have achieved so far. These moments are important for group morale and to promote teamwork. It is also important to share the successes from within your school with the broader school community. The more you share the positive results of your collaborative efforts, the more you are able to honor and celebrate your relationships, and the more long-term support you will gain. Below are some tips for accomplishing this:

✓ Involve Students

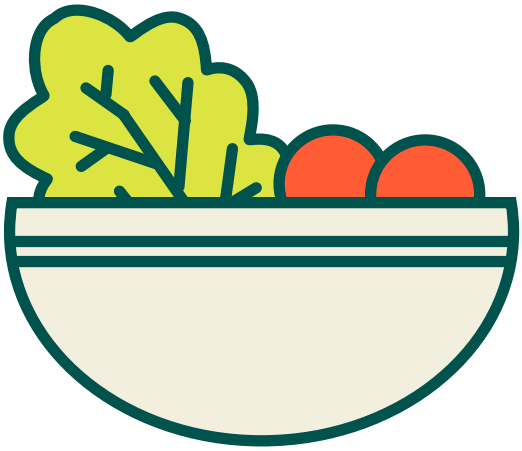
It is important for students to have a sense of ownership and responsibility in building a nourishing school food environment. Ask students about what they are proud of and what successes they want to share. They will be the best at representing their personal efforts in the larger school community goals. They're also very popular with local media!

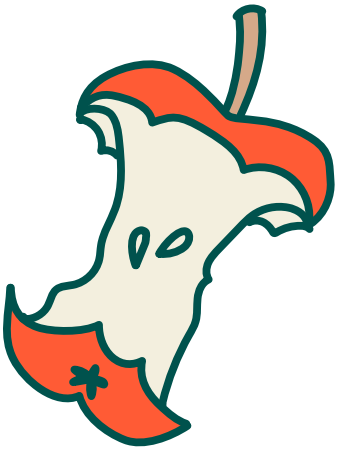
✓ Celebrate the Small Things

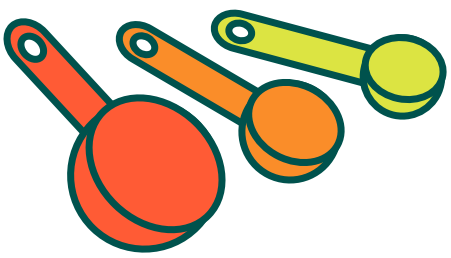
What may seem small is actually big! When you come to a seemingly small milestone, like building the first raised bed, growing the first tomato, or successfully navigating the first cafeteria taste test, share these successes. People will be excited to learn about what you are doing! Take photos, get quotes, and document your milestones. Post updates in the hallways, include them in the school newsletter and morning announcements, and share successes at schoolwide meetings and family events.

✓ Share Your Story

Once you reach these milestones, connect with the local newspaper, radio, or TV stations. Highlight your success along with your overall goals. Feel-good stories are always popular with local news media, and you never know who may want to lend a hand (or provide a donation) after they learn about your efforts. Remember to share your successes with FoodCorps too—through ongoing reporting, through social media, and by communicating with your Manager of Program Impact.







Teaching Hands-On Lessons

As outlined in the *FoodCorps Member Handbook*, every FoodCorps Food Education member is required to teach or co-teach ten or more hours of ongoing, high-quality, hands-on lessons to a minimum of eighty students. Each member will develop a FoodCorps Member Action Plan that outlines how they will reach this goal.

This section of the guide has been developed for FoodCorps members as an overview of topics that FoodCorps believes are important to understand while leading hands-on nutrition education lessons and specially-developed FoodCorps Lessons with students. Please use this guide as a quick reference on those topics, and note the recommended resources included in it. Our goal is to outline broad tips and information on each topic and point you to additional resources, so you can learn more.

FoodCorps Lessons

FoodCorps has developed a series of hands on lessons that we encourage members to use with their ongoing classes. FoodCorps staff, alumni, and trainers collaboratively developed and wrote these lessons. They are organized by grade level and season (fall, winter, spring). FoodCorps Members are required to use FoodCorps Lessons to meet the teaching requirement unless required to use alternative food education curriculum by their site or schools. FoodCorps staff must have the opportunity to review that curriculum prior to the start of the school year. You will find all FoodCorps Lessons in the FoodCorps Lesson Book. The FoodCorps Lesson Book also includes an overview of the FoodCorps Lessons learning progression and themes, along with charts to help you identify lessons based on grade, theme, season, and topic. Please also reference the Sprout Scouts Handbook for garden-based activities and ideas for running a comprehensive after-school club with students.

Lesson Structure

After you review the FoodCorps Lessons Book, you'll notice that each FoodCorps Lesson is structured the same way. Please review the framework below that shows what to keep in mind as you choose, adapt, or develop the lessons you lead with students.

FoodCorps Lesson Structure

After you review the FoodCorps Lessons Book, you'll notice that each FoodCorps lesson is structured the same way. Please review the framework below that shows what to keep in mind as you choose, adapt, or develop the lessons you lead with students.

Grade and Season: Lessons are designed for grades K–5 to be taught during fall, winter, or spring; however, many lessons can be adapted for any season.

FoodCorps Theme: Lessons are tied to one of FoodCorps' six themes. Themes are either knowledge-and-concept-focused or skill-building focused. (See the FoodCorps themes in the FoodCorps Lesson Book)

Essential Question: A thought provoking open-ended question. This "big idea" provides the grounding framework for the lesson (see more below).

Learning Objective: This gives an overview of the lesson, including concepts and skills the students will learn.

Lesson Time: Each step in the lesson has an estimated time. The total time is listed at the top.

Materials: This is a list of materials needed to lead the lesson, including any cooking ingredients.

Preparation: This includes all steps required to prepare for the lesson. It is important to review early because some preparation may need to happen several days prior to leading the lesson.

Action Steps: This section follows the "5 Es" structure: Engage, Explore, Explain, Elaborate, and Evaluate. It includes a breakdown of time needed for each step.

Reflection: These are questions to discuss with your students to promote reflection. They include process and content questions. Reflection is included in the total time for the lesson.

Adaptations: These are ideas for adapting the lesson to take place outdoors or during a longer class period. Note that adaptations may require additional materials not previously listed in the lesson.

Academic Connections: If there is a connection to a Common Core State Standard or Next Generation Science Standard, it will be listed here.

You will also notice that many lessons have some portion written in italics. The words in italics are ideas for what you might say to your students when you lead the activity. Say things in your own words, and make these lessons your own!

Essential Questions

All FoodCorps lessons are linked to an "essential question." Essential questions are a central part of the Understanding by Design curriculum planning process that authors Jay McTighe and Grant Wiggins championed. This approach to education focuses on identifying big ideas we want students to understand, then building lessons that help students move toward greater understanding over time. Essential questions are open-ended; that is, they typically will not have a single, final, correct answer, and

students can examine them at increasing depth over multiple years of schooling. According to McTighe and Wiggins, an effective essential question does the following:

- Is thought-provoking and intellectually engaging, often sparking discussion and debate
- Calls for higher-order thinking, such as analysis, inference, evaluation, or prediction; cannot be effectively answered by recall alone
- Points toward important, transferable ideas within (and sometimes across) disciplines
- Raises additional questions and sparks further inquiry
- Requires support and justification, not just an answer
- Recurs over time; that is, the question can and should be revisited again and again

With the FoodCorps Lessons, you can use the essential questions to provide a grounding framework to guide student learning toward an understanding of key concepts about food and nutrition. Each lesson is designed to support students in exploring and discovering answers to the guiding essential question. Please consider how the essential question tied to each lesson provides a springboard for the rest of the lesson and how you might leverage this approach to your teaching; for example, by reinforcing key concepts and considering how other lessons you teach tie to these essential questions.

Recommended Resource

- *Understanding by Design Framework* of Jay McTighe and Grant Wiggins and the Association for Supervision and Curriculum Development (ASCD)

School Curriculum and Academic Connections

It is important to learn about the activities and content that teachers and school staff cover in the classroom and in before-and after-school programming. This will help inform how you can best integrate your FoodCorps goals of teaching food-, nutrition-, and garden-focused topics. Although there are national and state standards that drive curriculum (see more below), specific academic priorities and strategies are typically set at the state level and district level.

When working with classroom teachers, ask them to share their scope and sequence for the curricula they're using, and seek their input on how you might reinforce learning through the FoodCorps lessons. Many schools have curricula specialists. These are great people to have a meeting with to share more about your role and express your desire to help support student learning. Ask them for their advice on what areas you should consider exploring for lesson integration.

Learn about the instructional priorities of the schools you support by asking questions:

- What academic standards does the school follow?
- What curricula are teachers required to use?
- How are students evaluated on their academic progress?
- Are there special programs that teachers are implementing?
- Are there any before-or after-school programs? What kinds of activities are involved?
- Are there any schoolwide initiatives to promote student learning, attendance, or positive behavior?

Your ability to gain access to class time, earn the trust of teachers and administrators, and deliver value to the school community will depend heavily on your ability to help schools and school leaders deliver on their own goals, while delivering on your own.

Common Core and Next Generation Science Standards

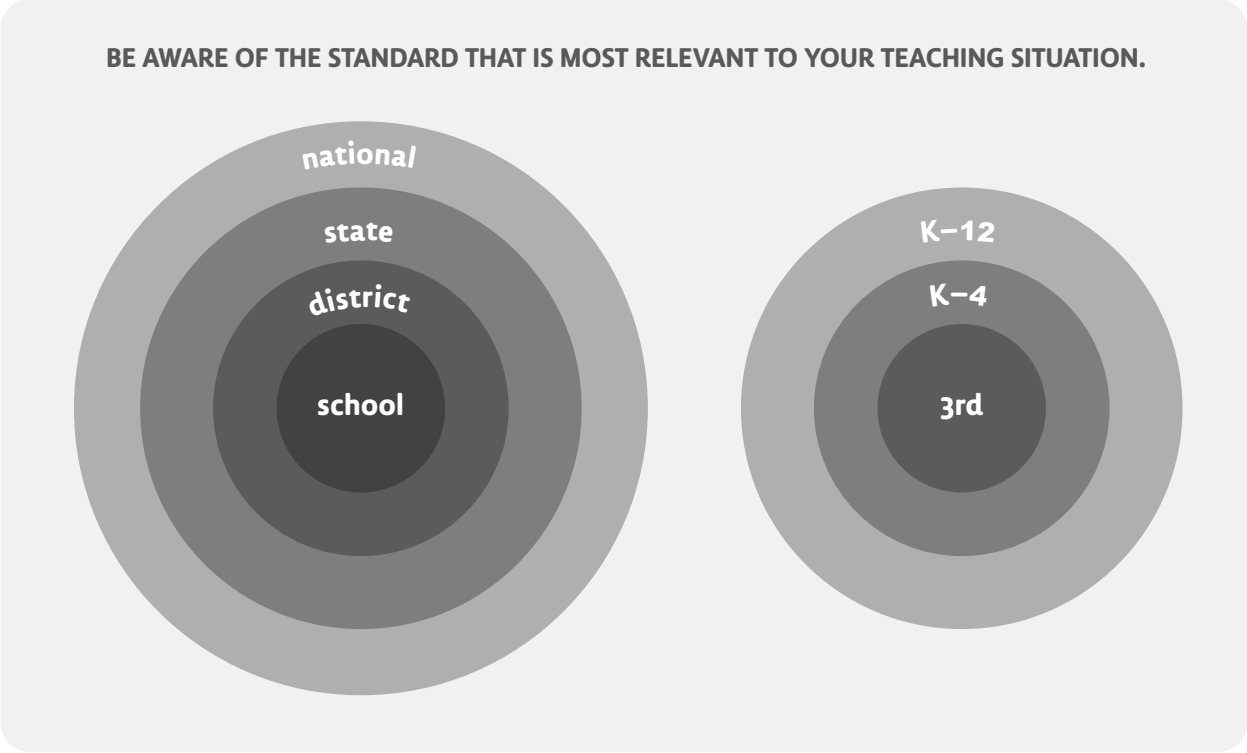
What are Academic Standards?

Every public school is guided by a curriculum framework or set of learning standards. Standards provide guidance about what students should know and be able to do by certain grades and are used to guide the work of teachers and administrators. Reviewing these standards is a good starting point for understanding how any hands-on learning you are leading through your FoodCorps programming links to school curricula, which will help make the case for integrating lessons into broader classroom learning.

There are a few useful things to know about standards that will make it easier for you to navigate them. First, they come in layers. There are federal education laws that apply nationally, and there are state standards that guide the public schools in a particular state. Additionally, some school districts or charter networks, and even some individual schools, have their own curriculum frameworks. These are based on the state standards but often include a greater level of detail regarding grade-by-grade curriculum.

What are Common Core and Next Generation Science Standards?

You'll notice that each FoodCorps Lesson



Source: FoodCorps has adapted some of this section from the Shelburne Farms "Connecting Food, Farm and Nutrition Education to School Curricula" handout.

includes "Academic Connections" to Common Core State Standards (CCSS) and Next Generation Science Standards (NGSS). The CCSS are English language arts and math standards that most, but not all, states have adopted. As of this printing, these standards, or some version of them, were adopted and being used in all FoodCorps states. Although some have criticized the CCSS for its focus on testing, the framework has been praised for bringing consistency and improved adoption of effective practices to our nation's fragmented education system. The NGSS are K–12 science content standards that eighteen states have adopted. They emphasize ecological literacy and hands-on learning goals that closely align with FoodCorps' approach. While some states have adopted state science standards that are similar to the NGSS, others are using state-specific standards. You can learn more about your state standards from your partner schools or find more information online.

FoodCorps Lessons and District or School Curriculum Framework

FoodCorps Lessons highlight connections to the NGSS and CCSS, showing how each lesson addresses academic standards that are commonly in use in FoodCorps schools and giving you a helpful tool to explain to teachers and administrators how the program can support their objectives. However, as a FoodCorps member, because you will be working solely within a given district or school, you should ask if these are the most relevant curriculum frameworks for your community.

Just as there are multiple layers of standards, those standards typically contain multiple layers that pertain to different grade levels. There are often overarching Pre-K through grade 12 standards that apply to all students at all levels of schooling. These are then broken down into grade clusters, such as Pre K–4, 5–8, and 9–12, that identify how expectations change across elementary, middle, and high school levels. Within those grade clusters, some standards specify even more detailed expectations. For instance, if you're working with a third grade class, check if there are standards specific to that grade. If you're working with a broader range of grades, you might refer to the broader grade cluster standards.

Recommended Resources

- Common Core State Standards Initiative website
- EdWeb webinar: "Common Core in the Garden"
- Life Lab Connecting Garden-Based Learning with Academic Content Standards webpage
- National Farm to School Network webinar: "Food, Farm and Nutrition Curriculum Connections: Developing Educational Experiences That Meet Teacher Needs"
- Next Generation Science Standards website

The 5 Es: Engage, Explore, Explain, Elaborate, and Evaluate

When you look at a FoodCorps Lesson, you will notice there are "Action Steps" that outline how you should lead the session. We developed each action step using the "5 Es" framework that Biological Science Curriculum Study developed. The 5 Es are a proven strategy for engaging students in fun, hands-on skill building. The 5 Es stand for Engage, Explore, Explain, Elaborate, and Evaluate. You can use the 5 Es to create your own lessons or strengthen other lessons you are delivering.

The purpose of each part is described below, along with tips for leading each part effectively.

ENGAGE

Purpose—To help students connect with what they are learning about and stay focused

Methods for Engaging Students

- Establish the purpose of the day's lesson.
- Activate students' prior knowledge of the focus skill for the day.
- Get students excited to learn more about the lesson.
- Transition students from their typical school day into their FoodCorps lesson, which should feel different and special.

Tips for Engaging Students

- **Introduce the practice of gathering your students in the same routine at the beginning of every session, including an opening activity to activate brains and help calm bodies.** Wait until everyone is quiet before you start talking. If students start talking while you are still talking, stop and wait until it's quiet again.
- **Ask broad and open-ended questions to allow for critical thinking and equalize participation among your students.** Suggested questions are included in the action steps, or you can come up with your own. A broad question has many possible correct answers (similar to an essential question), such as the following: What are some things you think nourishing food does for our bodies? In contrast, a narrow question has only one specific correct answer, such as the following: Which vitamins boost the immune system?
- **When facilitating group discussions, you may reference the tips provided in the Structuring Student Participation in Discussions section on p. 93.**

EXPLORE

Purpose—To provide students with opportunities to explore physical materials or interesting ideas before they are fully explained; this practice inspires curiosity, engages critical thinking, and activates prior knowledge

Tips for Helping Students Explore

- **If you've sent students out to explore materials in the classroom or garden, you can use a callback to help grab their attention quickly when it's time to move on to the next part of an activity.** You can make an animal sound (such as crowing like a rooster or howling like a coyote) or use a chime or whistle. Introduce a callback when you meet students for the first time (see the "Developing Group Agreements" section on p. 89 for more tips). Before you disperse in the classroom or send students out to the garden, establish a callback such as the following: "When you hear me crow like a rooster, come on back! I'll count down from ten, and we'll see if everyone can get into a quiet circle before I get to zero." Right after you introduce the idea of a callback, have students practice. Ask them to wander around the classroom or garden and then gather quickly into a quiet circle when called back together.

EXPLAIN

Purpose—To teach students a new skill or explain a new concept

Tips for Explaining a New Skill

- **Whether they're going to be preparing a bed, planting seeds, watering, or cooking, don't**

just talk through the steps for a new skill—demonstrate the skill, with an emphasis on safety whenever relevant. This will help all students, particularly English language learners, understand the instructions.

- **Wait until after you've demonstrated to distribute resources or tools and have students join in the work.**
- **Whenever possible, provide enough resources or tools for everyone to have their own.** This gives everyone a meaningful way to stay engaged. In cases where you do not have enough materials, think about student roles to help engage all learners.
- **Once they're working, especially with new tools, broaden your focus to make sure that you're watching everyone and ensuring their safety.**

Tips for Explaining a New Concept

- **Start by listening to students' ideas about the new concept based on their recent explorations.** Build on their ideas, adding any new vocabulary or concepts that they don't mention.
- **Use multiple modalities (see p. 73) to introduce new vocabulary or concepts.**

ELABORATE AND EVALUATE

Purpose—To provide students with a chance to demonstrate their new skill and/or summarize what they've learned, which helps them synthesize and remember their learning and gives you a chance to evaluate how well they grasped the new idea or skill; reflection is essential to learning

Tips for Elaborating and Evaluating

- **It can be tempting to run an activity right up to the end of your time together and say, "No time to reflect," but it's crucial to cut your activity a few minutes short to ensure a few minutes for closure.**
- **Gather as a group, revisit the purpose of the lesson, and invite students to demonstrate what they learned.**
- **Invite students to take their learning with them in a meaningful way, like replicating a recipe at home or repeating a skill they've practiced in a future class.**

5 Es Cheat Sheet

Remember to keep the 5 Es in mind whenever you lead a lesson—no matter how long. If you find yourself in a situation where you have a short amount of time with students, here's a "cheat sheet" of what to remember to do:

Engage

- *Gather your students in a circle. Transition to "FoodCorps Time," promote excitement, and ask questions. Review the group agreements.*
- *Lead an opening activity. Consider using a "do now"—a short activity awaiting students when they enter the classroom. Students should be able to complete the do-now activity without your direction. It can preview the FoodCorps lesson or review a previous lesson. An example would be as follows: Write the following for students to see: "Work with a partner to design a dinner menu that captures your family traditions and favorite foods. If time allows, draw this meal to share visually."*

Explore

- *Have students disperse in the learning space to explore materials or ideas before they are fully explained. Call students back in an engaging way.*

Explain

- *Lead your lesson. Demonstrate a new skill or concept, then engage students in the lesson using multiple modalities and hands-on teaching methods. Adapt your lesson to build on students' prior knowledge.*

Elaborate/Evaluate

- *Always leave time for a closing activity or conversation to promote reflection. Prioritize asking questions that are process-oriented, such as, When we were learning about each other's traditions, what were some ways we showed respect and appreciation for one another? And ask questions that are content-oriented: What were some things you learned about food? With students in upper grades, you can use a "ticket out the door" strategy by asking students to write "Something I Learned," "Questions I Have," and "Something Important to Remember." They can then submit this as they leave.*

Recommended Resources

- *Biological Science Curriculum Study (BSCS) Overview of the 5 E Instructional Model website*

Learning Models to Inform Hands-On Education

FoodCorps' approach to hands-on education can be paired with many learning models. Ask if there is a specific educational model or framework that the school uses. If there is, explore how this can support you to meet your goals during the year. The following section of the guide highlights some models that complement FoodCorps, including social and emotional learning and place-based education. These models provide ideas and structures to support a thoughtful, student-centered approach to teaching that promotes experiential learning, whole-child development, and community engagement in a variety of settings. Read more to discover how to apply these practices to your work and how you can build connections between FoodCorps' approach to hands-on education and educational models educators at your school may use.

Social & Emotional Learning

What Is Social and Emotional Learning?

The Collaborative for Academic, Social, and Emotional Learning (CASEL) states that social and emotional learning (SEL) is "the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions." According to the CASEL, research shows that children who participate in programs that support SEL have significantly better school attendance records, less disruptive classroom behavior, like school more, and perform better in school.

Our emotions and relationships affect how and what we learn and how we use what we learn in work, family, and community contexts. On the one hand, emotions can enable us to generate an active interest in learning and sustain our engagement in it. On the other hand, unmanaged stress and poor regulation of impulses interfere with attention and memory and contribute to behaviors disruptive to learning. Moreover, learning is an intrinsically social and interactive process. It takes place in collaboration with one's teachers, in the company of one's peers, and with the support of one's family. Relationships are the engine of learning. For these reasons, SEL is key to the school and life success of all children" (CASEL 2013).

What Skills Do Socially and Emotionally Competent Children and Youth Have?

The CASEL defines socially and emotionally competent children and youth as being skilled in five core areas:

- **They are self-aware.** They are able to recognize their emotions, describe their interests and values, and accurately assess their strengths. They have a well-grounded sense of self-confidence and hope for the future.
- **They are able to regulate their emotions.** They are able to manage stress, control impulses, and persevere in overcoming obstacles. They can set and monitor progress toward the achievement of personal and academic goals and express their emotions appropriately in a wide range of situations.
- **They are socially aware.** They are able to take the perspective of and empathize with others and recognize and appreciate individual and group similarities and differences. They are able to seek out and appropriately use family, school, and community resources.
- **They have good relationship skills.** They can establish and maintain nourishing and rewarding relationships based on cooperation. They resist inappropriate social pressure; constructively prevent, manage, and resolve interpersonal conflict; and seek and provide help when needed.
- **They demonstrate responsible decision-making at school, at home, and in the**

community. In making decisions, they consider ethical standards, safety concerns, appropriate social norms, respect for others, and the likely consequences of various courses of action. They apply these decision-making skills in academic and social situations and are motivated to contribute to the well-being of their schools and communities (CASEL 2013).

Why Is Social and Emotional Learning Important for FoodCorps Members?

FoodCorps members have the opportunity to use instructional methods that support SEL when leading hands-on learning activities with students. Ideally, these strategies are infused throughout all school time with students, and the broader school community supports them. Reach out to school staff and families to share your interest in including SEL instructional approaches in your programming. Explore how the broader school community might support these efforts.

What Teaching Strategies Support Social and Emotional Learning?

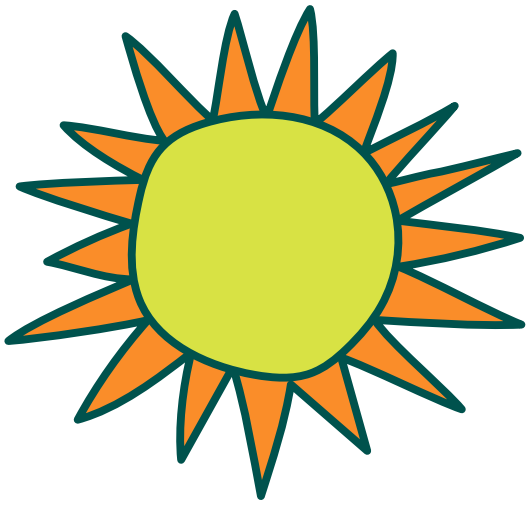
Evidence-based SEL approaches that educators can use to reach students include the following:

- ✓ Students can be taught through modeling and coaching to recognize how they feel or how someone else might be feeling.
- ✓ Students can practice group decision-making and setting classroom rules.
- ✓ Cross-age mentoring, in which a younger student is paired with an older one, can be effective in building self-confidence, fostering a sense of connection and community, and enhancing academic skills.
- ✓ Students can learn cooperation and teamwork through participation in games.
- ✓ Students can deepen their understanding of a current or historical event by analyzing it through a set of questions based on a problem- solving model.
- ✓ Having one member of a pair describe a situation to his or her partner, and having the partner repeat what he or she heard is an effective tool in teaching reflective listening.

You will find many tips in this guide that support these approaches, including developing team agreements, FoodCorps lessons that include group decision-making, cooperative and project-based learning, and reflection questions that promote conversations about group process. Finally, one of the six FoodCorps lesson themes focuses on "living up to our full potential" to highlight SEL competencies while building skills in and knowledge of food and community-focused topics.

Recommended Resource

- The Collaborative for Academic, Social, and Emotional Learning (CASEL)



Place-Based Education

What Is Place-Based Education?

Place-based education (PBE) immerses students in local history, heritage, geography, and experiences as the basis for learning about food and gardening as well as other subjects including math, language arts, social students, and science (Promise of Place). This learning model is grounded in the local community context and can take place in rural, urban, and suburban areas. Place-based education connects communities and schools and invites students to become engaged and active citizens. According to the Learning and The Power Of Place Project, outcomes of PBE include increased student engagement, improved learning outcomes, social and emotional learning, improved motivation and persistence, and a positive community impact.

Why Is Place-Based Education Important for FoodCorps Members?

FoodCorps members engage students in a wide variety of public school contexts across the United States. One objective of hands-on food education is to ensure that a lesson's content and approach is relevant for individual students. Food education is inherently place based because of how climate and seasonal differences affect growing food. A spring rural school garden in the Southwest is extremely different from a spring rural school garden in the Pacific Northwest. The food students eat is also influenced by the local community and traditions. Across the country, communities also have differing socioeconomic pressures, histories, and values. Despite these differences, it is possible for all students to feel pride in their community and value what makes their place special. By using the place-based approaches described below, hands-on food education can provide a wonderful opportunity to engage students in their place.

What Are the Principles of Place-Based Education?

The following set of place-based learning design principles can help create place-based learning experiences in any setting:

- **Community as Classroom:** Communities serve as learning spaces for schools, where local and regional experts, experiences, and places are part of the expanded definition of a classroom.
- **Learner Centered**: Learning is personally relevant to students and enables student agency.
- **Inquiry Based:** Learning is grounded in observing, asking relevant questions, making predictions, and collecting data to understand the economic, ecological, and sociopolitical world.
- **Interdisciplinary Approach:** The curriculum matches the real world where the traditional subject area content, skills, and dispositions are taught through an integrated, interdisciplinary, and frequently project-based approach where all learners are accountable and challenged.
- **Local to Global Context:** Local learning

serves as a model for understanding global challenges, opportunities, and connections.
- **Design Thinking:** Design thinking provides a systematic approach for students to make meaningful impact in communities through the curriculum.

Questions to consider that inform a PBE approach to teaching:

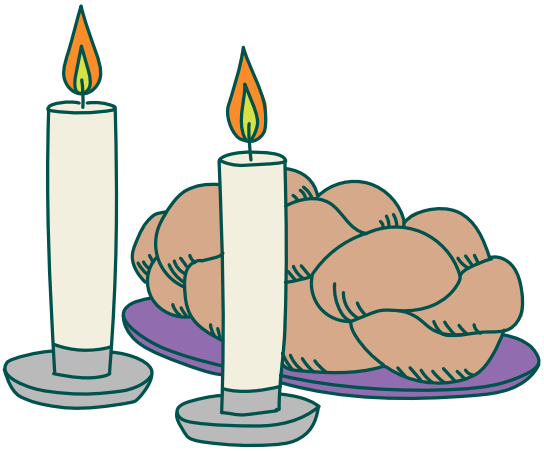
- How can I use the surrounding community and environment to inform my teaching in an age-appropriate way? Have I explored the local community, including its history, economics, politics, ecology, and social dynamics?
- What are challenges the local community faces?
- How have I adapted my lesson to reflect the local community?
- How can I collaborate with other teachers to develop an interdisciplinary lesson?
- Does my lesson allow for student inquiry and ownership?
- Is there an opportunity to engage my students in a service-learning project?
- Do students have an opportunity to help adults with genuine problem solving?
- How can my students become agents of change?
- How are my students involved as school leaders?
- How can I learn alongside my students?
- Do my students feel a sense of pride in their community as a result of my lesson?

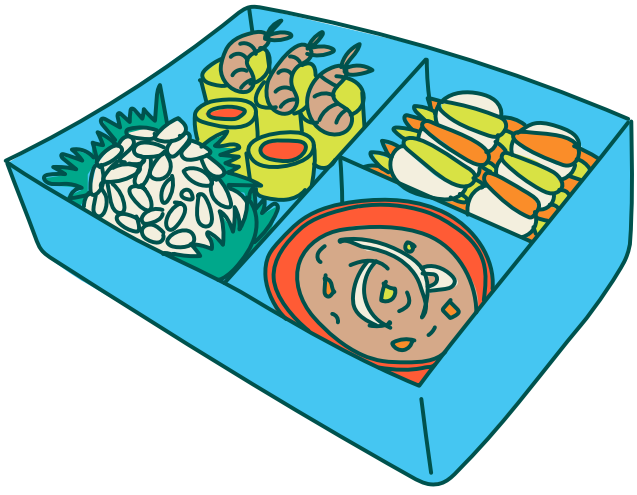
As you plan to lead hands-on experiences with students, keep these principles and questions in mind.

Source: *What is Place-Based Education and Why Does it Matter?* Developed by Getting Smart in partnership with EduInnovation & Teton Science Schools (gettingsmart.com)

Recommended Resources

- The Center For Place-Based Education
- Place-Based Education Evaluation Collaborative
- Rural Schools Collaborative





Customizing Lessons to Climate, Community & Students' Needs

Adapting FoodCorps Lessons

At FoodCorps, we understand that every school, classroom, and community is different. Growing seasons, local traditions, and the life experiences of students vary significantly from place to place. Accordingly, we've intentionally designed all FoodCorps lessons to be adaptable, while still retaining the essential goals of FoodCorps programming. We encourage you not to adapt the core learning objective behind each lesson because these are central to giving students a strong foundation in how to grow, prepare, understand, and enjoy nourishing food; instead, we encourage you to adapt the details within lessons to the local context, available ingredients and supplies, seasonality, and varying comfort and skill levels of the students you are working with. You will notice that we've intentionally left room for you to decide how you might adapt each lesson to your needs.

Adapting for the Community

Food is at the heart of communities, and it looks, tastes, and feels different depending on where you are in the country. To honor those differences, we created the FoodCorps Lessons with a level of adaptability that encourages adjustments to be made around which plants to grow and which ingredients to use in recipes, so the program maximizes relevance to your students. We recognize that beans are a staple food in some communities, and okra is a staple in others, so the lessons can (and should!) be adjusted to teach students skills in growing, preparing, and eating nourishing food that matches the local context. Make sure to give yourself adequate time to plan for these adaptations.

It's important to learn about various family traditions in your school community. Here are some questions to consider:

- What are the staple foods in the community?
- What types of foods are celebrated and are a source of pride?
- How could these foods be highlighted in your programming?
- What foods might be forbidden for traditional or religious reasons (such as pork)?
- Are the ingredients you are using locally available and affordable to students' families?
- How do beliefs or traditions about health and well-being show up in this community?
- What can your students teach you about food? What new foods can you try?

When you are striving to feature foods that reflect community customs and traditions, do your homework before you decide on a specific recipe. Reach out to parents, teachers, elders, farmers, and cooks in the community to learn about local food traditions. Use this information to support adapting your FoodCorps Lessons appropriately. Refer to your Member Transition Guide and the Get to Know Your Community section of this guide for other tips on connecting with the local community. It is a good rule of thumb to avoid meat when cooking with students—for safety reasons as well as relevance to the community. Also be aware that some communities are sensitive to certain foods (like dairy), and many schools have prohibitions around nuts and other allergens. This presents an opportunity to highlight lesser known and highly nutritious sources of protein.

Introducing students to a broad array of new foods and new food traditions is an important and positive part of FoodCorps programming. We just encourage you to take an approach that is rooted in and mindful of local traditions and work outward from there.

Seasonal Relevance

As you get to know your school, teachers, and students, we encourage you to think ahead about what lesson you will teach when and the best timing for specific lessons. You will notice that all FoodCorps lessons are structured around fall, winter, and spring—the seasons that take place during the school year. However, this doesn't mean that you can't adapt a fall lesson for spring or vice versa.

It is also important to explore opportunities for curriculum integration with the teachers you partner with. Would a garden-based lesson on compost fit nicely with a science concept a teacher is introducing in the classroom? Pay close attention to the "Adaptations" section of each FoodCorps Lesson. This will provide ideas about how to extend learning opportunities on the specific topic covered in the lesson. Be creative about looping back to a theme multiple times during the school year. Mix and match lessons to work for your specific teaching situation!

Recommended Resources

- American Indian Health and Diet Project: "History of Traditional Tribal Foods"
- Native Food Systems Resource Center
- Oldways resources
- Southern Foodways Alliance resources
- University of Arizona Family and Community Medicine, College of Medicine webinar: "Nutrition Education with American Indians"
- USDA webinar: "Incorporating Traditional Foods in Child Nutrition Program Menus"

Preparing to Teach

Seasoned educators often say that it takes as long to prepare for a lesson as it does to lead it. As you continue to lead hands-on lessons throughout the term, your preparation routine will become refined. Here are some tips for being as prepared as possible, with an eye on efficiency.

Know Your Lessons

The first step in preparation is to know what you're going to do:

1. Read the entire lesson plan ahead of time.
2. Be sure you understand the following:
   - The learning objective; which skills or concepts will be new to students and which are students learning?
   - Each action step and the time required for each step
   - Which reflection questions you intend to use with students to assess what they have learned
3. Some lessons suggest that you try out specific activities before you lead them with students. Read the lesson plan thoroughly to assess whether this will be necessary because this may be required several days ahead of leading the lesson.

Teaching with Texts

When a FoodCorps lesson requires or suggests the use of a published book, check to ensure that text is not banned by your state or district. Familiarize yourself with any "banned book" lists in your state or district and avoid using those books, even if they are included in FoodCorps lesson plans. PEN America tracks book bans across the country; find more information at pen.org.

Gather Your Materials

The supplies available to FoodCorps members at each school and partner site will vary from place to place. Here are two rules of thumb to follow:

1. Plan ahead to make sure you have the materials and supplies you need for the lesson.
2. Try to be creative and flexible about the supplies you have available to you.

As you plan for a lesson, first ask your school and/or partner site if the required and optional supplies are available to use. Are you able to borrow trays for a cooking lesson from the cafeteria? Does a classroom teacher have a prized tool, like a grain grinder, that you might be able to borrow? Would the school maintenance staff be able to lend you a shovel? Within the FoodCorps Lessons you'll also notice room for adaptations in the realm of materials and supplies. If you are excited about leading a lesson but are feeling stumped about how to pull it off with a specific supply, reach out to your fellow members and FoodCorps staff to brainstorm ideas for low-cost supplies or alternative methods to lead the lesson.

Preparing materials for your lesson in advance allows you to be timely and thoughtful about

your schedule. Before leading hands-on lessons with a class, do the following:

1. Print out your lesson plan for handy reference, along with any other printable handouts linked to the lesson.
2. Gather, label, and consolidate food supplies (see more below).
3. Gather any lesson materials, such as chart paper, materials for hands-on student experiences, and visual aids.
4. Set up and test any media required in the teaching environment, such as short clips, videos, and audio.
5. Prepare visual cues to help give students ownership and control of lessons, including agenda, goals for the lesson, student roles, and key concepts.

Use Shortcuts for Materials

If you use things all the time in the same place, consider having a set in the classroom or garden where you use it. For example, get a set of colored pencils to keep in the garden shed, or install a whiteboard in the garden so you don't have to haul out a chart stand every time you teach there.

- If you will be using the same visual aids many times, consider laminating them to make them last.
- Consider how you can reuse materials. For example, you might use the "mystery canisters" from the FoodCorps Plant Part Mystery lesson to build anticipation for many other lessons, simply by putting new, relevant items in the canisters each time.

Have a Plan B

Having a Plan B in place is always helpful in the event that an activity takes longer than expected, students are not comprehending an activity and you've exhausted all your options, students are having behavioral issues, or a schoolwide schedule change interrupts your class. In terms of materials, it can be helpful to have a "Plan B Box" with the necessary materials at all times. Some Plan B options might include these:

- Sing a song.
- Read a book.
- Lead a writing activity with students.
- Lead an art activity; reflect on and express prior learning in a new, different way.
- Lead an impromptu nature scavenger hunt in the school garden or on the school grounds.
- Review the "Adaptations" or "Extensions" sections of lessons that you've previously led with that group of students. Can you extend an activity within the theme you are teaching?

To create a safe and fun cooking environment for your students, preparation is key! Before any class, take the time to create an organized system and space for a seamless teaching experience. Consider the following practices:

Do Your Food Prep

1. Label your food supplies in the refrigerator according to the date/class that you plan to use them for, and store food supplies in a food-safe manner.
2. Review your class allergy list to make sure that your recipe is safe for the entire class to consume.
3. Create cooking stations for student use.
4. Wash, peel, and chop vegetables that may require adult skill level.
5. Set up an area that is specifically for tasting with students.

Organize Your Cleanup

Designing a thoughtful cleanup system will allow you ample time and space to devote to your other obligations as a FoodCorps member throughout the day. Cleaning up can be less challenging if you do the following:

- Assign tasks to different groups of students so that students assist with cleanup.
- Use bus bins or a cart, if available, to store and transport dirty dishes and utensils to a dish-washing area.
- Set out dish soap, sponges, and other cleaning supplies before class begins.

Take a Breath

With so much to do, it is easy to run around preparing right until the minute you walk into class to join your students. Whenever possible, give yourself just a moment to stop with the details, take a breath, and mentally shift from logistics coordinator to inspiring, warm, well-prepared lesson leader. That way, the minute you start teaching your mind is on your students and not on your to-do list.

Co-Teaching

Co-Teaching Effectively

As a FoodCorps member, you will at times find yourself in a role of leading hands-on lessons with another educator. Co-teaching may happen with another FoodCorps member or with a classroom teacher. (Refer to "Relationships With Teachers" on p. 46 for tips on working with teachers.) Either way, this provides an opportunity to learn from and observe another person's teaching style. It can also be tricky to navigate how to align your approach to leading a lesson. Planning ahead and establishing good communication with your co-teacher is key. Here are some tips:

Teaching Styles and Classroom Management

1. Take time to discuss your individual teaching styles. To create a cohesive lesson and a positive and reliable working relationship, be aware of your teaching styles and needs.
2. Discuss and agree upon a classroom management system (certain phrases, hand signals to use with students, etc.) to help create consistency for students. If you are co-teaching with a classroom teacher, prioritize their regular classroom expectations and practices.

Planning for the Lesson

1. If you are developing a lesson from scratch, determine how you'll build the lesson together. Will you meet in person? Use a shared Google Doc? How far ahead of time will you finalize the plans?
2. Create specific, clear time allotments for each activity in your lesson, and determine ahead of time who will teach each part so that you and your co-teacher can create a smooth and seamless transition between activities.
3. A strong lesson often involves visuals, handouts, and supplies that need to be prepared. Determine which of you will prepare for the lesson and gather necessary materials.

Roles During the Lesson

1. Review roles. Who will lead which part of the lesson? Are you both comfortable with the other person interjecting and adding additional information while teaching? Or is the preference for the other person to fully take a back seat when it's not his or her turn to lead? A good option to consider is to try to ask each other this throughout the lesson: Do you have anything to add?
2. Discuss timing. How long do you anticipate each part of the lesson will take? If part of the lesson goes longer than expected, what is the plan for making up time?

Following the Lesson

1. Ask your co-teacher for constructive feedback on the lesson. Take a little time to debrief together and record ideas for

improving the lesson, ideally while they're still fresh.

2. If you plan to work together in the future, discuss how you will continue to grow and strengthen your lessons and your work dynamic. Providing constructive feedback is a great way to create a sustainable work dynamic. A common format is to share with one another "pros" (specific things that worked well) and "grows" (specific ideas for improvement).

Meeting the Needs of All Learners

Teaching with Multiple Modalities

Have you ever listened to a teacher talk about a really interesting topic, but then, maybe twenty minutes into it, you start to lose focus? A few minutes later, you realize you aren't following at all, and you start watching the clock? Now imagine that the teacher pauses and asks you to stand up, walk around the room, and find someone you haven't met. Then she projects a thought-provoking photo and asks you to discuss it with that person. And suddenly, you wake up, and you're back in the game and back on track with learning. This is the power of multimodal teaching. By switching the modality used to deliver new information, your educator re-engaged you.

There are many ways a person can take in new information or learn. In the 1980s, psychologist Howard Gardner identified the following multiple intelligences:

- **Bodily/kinesthetic**—learning by moving your body
- **Visual/spatial**—understanding by relating to physical items
- **Verbal/linguistic**—using language, both written and verbal
- **Logical/mathematical**—conceptualizing relationships among symbols, processes, and actions
- **Interpersonal**—interacting with others
- **Intrapersonal**—solo work such as journaling
- **Musical**—sensitivity to sounds as well as the emotions music conveys

Gardner later added spiritual and naturalist intelligences. His central claim was that "different students have different modes of learning, and their learning could be improved by matching one's teaching with that preferred learning mode" (Riener and Willingham 2010).

Riener and Willingham later debunked the second part of Gardner's theory—the part about matching your teaching style to your students' individual learning styles (See Recommended Resources below to learn more). Nonetheless, the first part of Gardner's theory remains essential for effective teaching: people learn in a variety of ways. These are sometimes referred to as intelligences, learning styles, or learning modalities. The more variety we can offer in the way we deliver information, the more effective we will be in educating all our students.

Say, for example, you're teaching a lesson about plant parts that involves a lot of you talking and your students listening (linguistic). They could quickly become disinterested. Therefore, you will be more effective with all your students if you switch it up by having them draw each part (visual/spatial), get up and act out the plant

parts (kinesthetic), look around the garden for living examples (naturalist), and sing the song "Six Plant Parts" (musical). This is the key lesson for educators: Mix it up to make it stick! Remember this as you consider using the 5 Es framework to structure your lesson.

Recommended Resources

- Gardner's multiple intelligence theory
- "The Myth of Learning Styles" by Cedar Riener and Daniel Willingham (Change: The Magazine of Higher Learning, August 2010)

GRADES K–3 (AGES 5–9)	
Learning to be friends	Focus on small-group activities rather than individual activities.
Want to be liked by adults	Let students know that they've done a good job.
Learn best when physically active	Lead activities that encourage movement, physical activity, and running.
Easily motivated; don't like to fail	Provide encouragement; foster cooperation, not competition.
Concrete thinkers; more interested in doing than the result	Focus on process rather than product and on short activities that can be accomplished within the lesson.

GRADES 4–8 (AGES 9–13)	
Acceptance by peer group and joining clubs is important; students look up to older youth.	Allow for opportunities for role modeling by older youth; use peer group to recognize good work; don't allow put-downs. Help them identify their own strengths.
Students show independence and want to find their own solution; they begin to think abstractly and become interested in specific subjects of interest.	Offer a wide array of activities to ensure that many students can succeed. Offer simple, short directions and brief learning experiences.
Can discuss current events in the community and world.	Allow for opportunities to engage in community-based activities and problem solving.
Students are still active and may go through a growth spurt. Often this happens to females before males.	Provide active learning experiences. Avoid competitions between sexes, and don't compare students to one another.

Informing Your Teaching Practice with Child Development Characteristics

Students have different learning styles, personalities, and needs. It's important not to put children in a box according to their age or any other information you may know about them. It is important to keep in mind that children develop new skills and abilities at different paces. One of the exciting opportunities of hands-on learning is that it can be a particularly engaging way for students to engage in learning at every level, especially if they struggle in traditional classroom settings. You'll find more tips about specifically working with students with special needs below. Here you'll find some general tips to keep in mind when you are working with students of a specific age or grade based on general developmental stages.

Working with Students with Disabilities

FoodCorps members, and staff should demonstrate the unwavering belief that every child can learn. We must also recognize that each child has unique needs and talents and makes progress at his or her own pace. During the course of your year, you will likely work with students who have disabilities. Part of serving with intention means that we acknowledge differences in student abilities and learning styles and work to create opportunities for every child to learn and contribute to their community.

Students with disabilities—those who experience challenges related to learning, language, mobility, or social–emotional development— often have the greatest difficulty achieving success in a traditional classroom setting. They may struggle to stay focused for long periods of time, to keep up with their peers in math or reading, to handle frustration, or to make friends with their classmates. For these students, the nontraditional, hands-on garden and food-based learning experiences that you provide can offer new opportunities to achieve success in school. We hope that you will seize this opportunity to help those students—and their peers and teachers—see and appreciate the talents that shine in the garden and with experiential food-based education.

The federal Individuals with Disabilities Education Act, which was reauthorized in 2004, requires that students with identified disabilities be provided with a "Free and Appropriate Education" within the "Least Restrictive Environment." This means that, to the maximum extent possible, students with disabilities must be educated in a comfortable environment, participating in classroom activities alongside their regularly abled peers.

Tips for working with students with disabilities

- ✓ Use "child-first" language when speaking with or about children with disabilities. This type of language puts the child before the disability. For example, she is a "child with autism," rather than an "autistic child."
- ✓ Reach out to the lead teacher in advance of your lesson to find out about the variety of student needs and abilities and to learn about particular strategies or supports that are most effective for individual students.
- ✓ Connect with the special education coordinator/ director or teachers at your school to learn more about the programming for students with special needs. If possible, offer support for hands-on learning opportunities in the

garden or classroom.

- ✓ Remember that not every child can or should be working on the same skills or activities at the same level. Be flexible, and whenever possible, differentiate your approach to meet the needs of individual students.
- ✓ Present information in multiple modalities so that all students can access the information regardless of learning style or level. For example, you may explain a concept verbally (for auditory learners), while using pictures, diagrams, or videos (for visual learners) and creating opportunities for practice that allow students to engage their other senses (for kinesthetic learners).

Terms to know when serving students with diverse needs and abilities

Modifications: These are changes to the learning goal or objective. Modifications could change the instructional level, the content or curriculum covered, the performance criteria (objective), or the assignment structure.

Differentiation: This is when an educator uses a variety of teaching techniques, instructional modifications, and accommodations to instruct a group of students with different learning needs in the same course, classroom, or learning environment.

Accommodations: These are changes to the way a student receives information or is assessed on his or her learning without changing the learning goal or standard (e.g., reading instructions aloud for students who struggle with reading).

Assistive technology: This is any device, tool, or piece of equipment that increases the capacity of a person with disabilities to function independently.

Universal Design for Learning: This is an educational framework based on research in the learning sciences, including cognitive neuroscience, that guides the development of flexible learning environments that can accommodate individual learning differences.

Recommended Resources

- Center For Applied Special Technology (CAST) website: Resources related to Universal Design for Learning > Family and Advocates Partnership for Education (FAPE) School Accommodations and Modifications List
- Center For Parent Information & Resources: Resource Library
- "Disability Profiles" *Special Education Guide*
- **Recommended books for educators**
  - *Teach like a Champion* by Doug Lemov
  - *The Schools our Children Deserve* by Alfie Kohn
  - *Lost at School* by Ross W. Greene

Reframing Classroom Management

As a FoodCorps member, you can spend hours preparing to lead a creative, engaging, standards-aligned lesson, but that lesson will be of little use if taught in a chaotic or unsafe environment, be it the classroom, garden, or cafeteria. In fact, when anyone experiences others in an environment like a classroom that is inattentive or hostile, the body picks up that information through the autonomic nervous system and sends it up to the reticular activating system (the portal through which most information enters the brain) and amygdala (the part of the brain that processes memory, decision-making, and emotional response). There, the amygdala gets the information that it's not socially, emotionally, or intellectually safe and sends out a distress signal to the body. The body starts to produce stress hormones that make learning nearly impossible (Hammond 2015).

Effective classroom management is critical to supporting student engagement and achievement. This requires an understanding of what is realistic to expect of the children based on what we know of their personal circumstances, the message their behavior sends, and their developmental level. Children enter classrooms with unique personalities and challenges; these factors must influence educators' assessments of how to support student success within the school community.

This section is adapted from Patricia Belvel's Rethinking Classroom Management and the Reframing Classroom Management Toolkit developed by Teaching Tolerance. It is also informed by social emotional learning practices.

Respond to the Child, Not the Behavior

Responsive classroom management honors the whole child, respects his or her unique characteristics and experiences, and acknowledges the child's critical role in the class-room community. It also seeks to decode behavior rather than focus exclusively on power and control.

Returning the classroom to order by any means necessary may seem desirable in the short term, but harsh or punitive classroom management practices actually exacerbate behavioral problems by fostering resentment and humiliation; they also do nothing to change the environment or to address the underlying and unexpressed needs of the child. Students often lose respect for teachers who discipline them in a dismissive or punitive way and are also more likely to misbehave in their classes.

When teachers engage in dialogue with students and create spaces where it is safe to make mistakes and learn from them, students are better equipped to understand and regulate their emotions and improve their problem behaviors.

Functions and Explanations of Student Behavior

All behavior is communication. Social scientists view behaviors as serving functions or purposes. Each student's behavior is a puzzle educators are tasked with solving. As soon as we know the function or purpose of a behavior, we can design interventions that teach students how to meet their needs in more appropriate ways. You can remember the four most common needs driving student behavior by using the acronym **EATS.**

- **Escape:** Students engage in inappropriate behaviors to try to escape a task or situation they find aversive.
- **Attention:** Students engage in inappropriate behaviors to gain or escape attention from peers or teachers (this can include negative attention).
- **Tangible gains:** Students engage in inappropriate behaviors to gain access to a preferred activity or object.
- **Sensory needs:** Students engage in

STUDENT BEHAVIOR	EXAMPLE	POSSIBLE NEED
Distracting others; making unnecessary noise	Rashad is often disruptive during silent reading, making noises that make his peers laugh.	Attention
Not listening; not following directions	Savannah sweeps materials off her desk and stomps on the ground each time she is asked to transition from a workstation to independent seat work.	Escape
Talking back; being disrespectful	Each time Juan enters the classroom late, and the teacher tells him to go to the office for a pass, Juan argues with her, eventually calling her a name and slamming the door as he exits the classroom.	Attention, escape
Physical aggression	Eli struggles to make friends in class and often appears to be "pushing the buttons" of peers. It is not uncommon for him to push other students when in line, causing multiple children to fall.	Tangible, sensory
Fidgeting	Chris often drums his pencil on his desk. Sometimes he appears aware of this behavior, but other times he does not. The noise distracts his classmates and annoys his teacher.	Sensory

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https://www.learningforjustice.org/magazine/reframing-classroom-management

inappropriate behaviors to meet a sensory or internal need that may be difficult to detect from the outside.

Understanding the reasons behind behaviors also allows you to focus on prevention, as opposed to punishment. Properly understanding and distinguishing behaviors also reduces the likelihood that an educator will personalize student misbehavior. It is important to remember that each student is a dynamic, complex individual and that the same behavior may indicate different needs in different students. FoodCorps members will ideally work with a classroom teacher to determine the needs of a specific student and the appropriate intervention. The chart below shows some common student behaviors and the needs they function to address.

Managing Student Behavior: The 4 Ps

When we think of group management, we often think of enforcing rules or following through on consequences. The vast majority of an educator's work, however, is ideally done before any problem even arises. This is the art of prevention: how can we create the optimal conditions to bring out the best behavior in our students? These are the 4 Ps of prevention: personal relationships, perceptions, participation, and parameters.

Personal Relationships

Take time to get to know your students, and help them get to know one another. Students' behavior often improves when they know, respect, and feel comfortable with their peers and their leader.

Tips

- **Learn names:** When you are first working with a group of students, learn everyone's name. Remember and use their names throughout your time with the class.
- **Use icebreakers:** Include icebreakers in your lessons to help continue creating a sense of community in your group. You can find many icebreaker ideas by searching the term "icebreakers" online.
- **Show you care with the first assignment:** An early lesson in any group of students should involve explicitly getting to know each other—collages for writing journals, discussions about favorite foods at home, sharing personal food and garden knowledge, icebreakers, and opportunities for self-expression.
- **Interact with students at different times during the school day:** Sharing nonacademic experiences can help you and your students see each other as whole people. Eat lunch together. Invite them to the garden if they haven't been there yet. Watch their athletic or extracurricular events. Attend community events in their neighborhoods.
- **Listen to students:** What are your students saying—and what are they not saying? From the intricately detailed stories of some students to the quiet silence of others, listening to the message and reading between the lines will tell you a lot about them.
- **Model humility and fallibility:** We are all human, and we are all fallible. There are times when we will react to students in ways we wish we hadn't. It's OK to tell your students that you've made a mistake and that you will try to do better. This will help them know that it's OK for them to make mistakes as well.
- **Use "gifts without strings":** When teaching, use "gifts without strings," an idea from Patricia Belvel's Rethinking Classroom

Management. These are acts of kindness done with every student, not as a reward for good behavior, but just because every child deserves to be shown kindness. They might include the following:

- Greeting each student at the door with a high-five
- Smiling and making eye contact
- Asking students to share highlights from their weekends
- Talking one-on-one with a student about something unrelated to FoodCorps topics, like their favorite book, their hobbies, or their pets

Perceptions

How can you help your students perceive FoodCorps Time as fun, rigorous, and exciting? This can be tricky because FoodCorps classroom time might initially feel to students like a time for free play. After all, it's hands on, you may be outdoors or cooking, and it can happen outside of school time. Shifting their perception to understand FoodCorps classroom time as relevant to their learning, however, will help students be focused and engaged during structured activities.

Tips

- **Establish routines:** Establish, practice, and continually revisit consistent routines, such as gathering quietly whenever students hear the callback, putting on aprons or garden gloves when it's time to work, and doing a FoodCorps cheer at the end of a session.
- **Wait for quiet:** If students are having side conversations while you are addressing the group, stop and wait until they are quiet to continue. If it happens when another student is addressing the group, ask that student to stop and wait until everyone is listening.
- **Build in time for free play, if possible:** There's nothing wrong with play time! If you are leading an after-school session and sense that your students just came off a long day at school and need some time to run around and play before they can engage, make some time for that. Make sure that you clearly distinguish it from the other time: Let's go play on the field and unwind from our day, and then we'll come back here in about ten minutes when we're ready to learn about building compost.

Participation

Behavior issues often arise when children don't have a meaningful way to engage in a group activity. You can prevent many issues by creating as many opportunities as possible for all students to get actively involved in whatever you're doing.

Tips

- For hands-on activities, whenever possible, provide enough tools for everyone. For discussions, use the tips under "Structuring Student Participation" on p. 93 to maximize active participation.

Parameters

Give students clarity, and encourage them to feel bought into the rules of FoodCorps Time (see next section Developing Group Agreements). Work with students to establish clear, simple behavior expectations and consequences early in your time with them, before any issues arise.

Tips

- It is easier starting the year off being a bit strict than trying to be buddies with your students. Once you've developed strong

relationships and mutual respect with students and teachers, you can give your groups more freedom, but it's hard to get control of classes if you start out too loose.

- Familiarize yourself with existing behavior protocols in your school, after-school, or summer camp program.
- Describe consequences for when agreements are broken. These should be consistent with existing behavior protocols from your school, after-school, or summer camp program.
- Identify a "cool-off" space for students. This could be a corner of the classroom or garden with a few books, some paper and pencils, or similar materials.
- Provide consistent follow through on your consequences. If, for example, a student is calling another student names, offer a reminder for that student to stop. If it continues, remove the student from the activity, and instruct them to head to the cool-off space for a few minutes. If you are available, you can talk one-on-one with the student there about what's happening. If you're busy, explain that, and ask the student to write about what's happening and why. If you feel the student has calmed down, then he or she can rejoin the group. If, however, the problem persists, work with a teacher, who may set up a meeting with the student and his or her parents or guardians to problem-solve together.

Six Ways to Redirect Classroom Disruption

1. **Refocus the energy.** Instead of pausing your teaching to reprimand, ask the misbehaving student to answer a lesson-related question. This gets the student back on task and keeps the pace of the lesson moving forward without taking the focus off academics.
2. **Give students a break.** Have a disruptive student take a physical break or a break from the current assignment. Ask the student to move seats, or give the student a special responsibility or errand.
3. **Give nonverbal cues.** Eye contact and body language are effective nonverbal communication tools—if handled with sensitivity. A gentle hand on a desk, a silent tally on group points, catching a student's eye, and circulating throughout the classroom all have the power to help students refocus and stay on task. Open, nonthreatening body language tells students you are calm, in control of the class, and mean to be taken seriously, but it also tells students that you see them, care about them, and want them to do better. Be sensitive to the ways in which different communities view eye contact and physical proximity between adults and children.
4. **Address the disruption quickly and quietly.** Get the class focused on another task, and pull the disruptive student to the side. Start with a question that is not accusatory: It looks like you may have a question; or What's up? Then remind the student of the rules and assignment, and direct him or her back to work with an expectation. If a student is engaging in the behavior to seek attention, drawing focus away from the behavior will likely cause it to stop.
5. **Offer kinesthetic movement options.** Many students (and adults) benefit from some sort of kinesthetic movement while listening to instructions. If a student is squirming or making noise, hand him or her a stress ball, a fidget cube, Velcro, or other

sensory stimulus to reduce the desire to fidget and help the student stay on task.

6. **Give anonymous reminders.** "We are just waiting on two scholars to take their seats."

Recommended Resources

- *Conscious Classroom Management* by Rick Smith
- *Positive Discipline in the Classroom* by Jane Nelsen
- Reframing Classroom Management: A Toolkit For Educators by Teaching Tolerance: https://www.tolerance.org/magazine/reframing-classroom-management
- Rethinking Classroom Management by Patricia Belvel

Setting the Tone to Make FoodCorps Time Special

Tone-setting is an essential part of teaching. How can we create an atmosphere that encourages students to collaborate and focus on learning while also having fun and enjoying the experience? There are tone-setting strategies that are valuable at the beginning of the school year (or the beginning of your time with a new group of students) and also tone-setting strategies that are useful to incorporate throughout every lesson. As these tone-setting practices become routine, you and your students will often fall into a rhythm, and they'll become second nature.

Setting the Tone: Checklist

Percentage of students eligible for free or

- ✓ When You First Meet a New Class
- ✓ Build authentic relationships with and among your students.
- ✓ Make time for name games and icebreakers.
- ✓ Develop Group Agreements.

Every time you lead a lesson, use consistent and fun routines to do the following:

- ✓ Open each lesson with students sitting in a circle, if possible.
- ✓ Build anticipation with a quick, fun cheer or song.
- ✓ Provide an opportunity for students to share.
- ✓ Review Group Agreements, if needed.
- ✓ Gather the group's attention between activities.
- ✓ Structure student participation in discussions.
- ✓ Plan transitions between lesson activities.
- ✓ Be prepared with Back Pocket Activities.
- ✓ End with an intentional closing activity that allows students to reflect on what they learned and how they worked together.

Setting the Tone When You First Meet a New Class

As mentioned in "Managing Student Behavior: The 4P's," developing authentic relationships, or rapport, with and among your students is essential to establishing a foundation of trust onto which learning can build. When you meet a new class, make time to focus on getting to know one another, and let the teachers you are working with know you'll be starting with that. A few fun ways to get to know your students and, when relevant, help them get to know one another, are to play name games and engage in icebreakers, such as those listed below. Remember, knowing your students' names helps you build relationships with them and show them you care!

Fun Name Games

The following are games that can help you learn your students' names and, when relevant, help them learn each other's names. They are organized from the most low energy to the most high energy. Please remember that your students have unique and individual abilities,

and it will be important to adapt these activities to meet the needs of your students. Make sure you consider this before facilitating a specific activity, and consult with the classroom teacher if you need guidance/suggestions.

Low-Energy Name Games

Name Associations

- Suggested grade range: K–5
- Group size: Unlimited
- Time required: 5–15 minutes, depending on group size
- Materials: None
- Risk: Low

Everyone stands in a circle. Choose a topic such as vegetables, food, types of music, or colors. Each person introduces him or herself saying their name and their favorite food, for example, or what color they would be if they were a color.

Variation: Each person must repeat all the names of the people before them. At the end, the person who started must repeat all the names for the whole group.

Medium-Energy Name Games

Name Gestures

- Suggested grade range: K and up
- Group size: Unlimited
- Time required: 5–10 minutes, depending on group size
- Materials: None
- Risk: Medium

Everyone stands in a circle. Each person says his or her name and makes a gesture that expresses something about themselves, such as how they are feeling that day, a movement they like, etc. The whole group then repeats the name and gesture.

Variation: The same can be done by making a sound instead of a movement.

Name Race

- Suggested grade range: K and up
- Group size: Unlimited
- Time required: 5–10 minutes
- Materials: Stopwatch
- Risk: Low

Everyone stands in a circle. The goal is for each person to say their name as quickly and clearly as possible, one by one. Time the group to see how long it takes to get all the way around the circle. Participants cannot say their names until the person next to them has said theirs. Ask the group if they think they can do it faster. Repeat until the shortest time is reached.

Variation: Do the same, but have each person say the name of the person to their left instead of their own name.

High-Energy Name Games

Peek-a-Who

- Suggested grade range: 4th and up
- Group size: 10–30
- Time required: 5–10 minutes
- Materials: 1 large bed sheet
- Risk: Medium

This is a fun quiz once students know each other's names. Ask for two volunteers to hold the sheet up, with one person on each side and the sheet hanging vertically between them like a curtain. Divide the remaining students into

two teams. Send each group to opposite sides of the sheet so that the groups cannot see each other. Direct each group to silently decide, and send one person up to the sheet. On your count of three, the people holding the sheet will drop it. Then the two people on either side have to shout out the other person's name. The first person to shout it out gets a point for their team.

Variation: Send more than one person to the sheet at a time.

Race Around the Circle

- Suggested grade range: K and up
- Group size: Unlimited
- Time required: 5–10 minutes
- Risk: Medium

Everyone stands in a circle. Ask for a volunteer to be "it." They must walk around the outside of the circle and choose a person. Once they've chosen someone, both people must then introduce themselves and shake hands. Once they have both introduced themselves and shaken hands, they both try to run in opposite directions around the whole circle and get back to the original place before the other person. The person who did not get back quickly enough becomes "it," and the game continues.

Variation: This can also be done with specific questions rather than introductions, like favorite food, vegetables, colors etc. Instead of running, try hopping, skipping, running backward, etc.

Names in the Air

- Suggested grade range: 4th and up
- Group size: Best in groups of 8-12
- Time required: 10 minutes
- Materials: 3 or more soft bean bags
- Risk: Medium

Everyone stands in a circle (or circle of their group). One person starts with the ball, says his or her name, passes it to the person on their right, and continues around until it reaches the first person. Then the facilitator passes it to a person across the circle saying, "Here you go _____ ." That person catches the ball and says, "Thank you _____ ." That person then chooses another person and repeats the pattern until each person has had a turn, and the ball is returned to the facilitator. Ask each person to remember who they received from and threw the ball to. Repeat this pattern and dialogue a few more times, making sure people are saying names clearly. Add a second, third, or fourth ball into the mix.

Variation: For less of a challenge (e.g., for younger students), use a large beach ball. Have students sit down and roll the ball between people instead of tossing. For a greater challenge, use tennis balls instead of bean bags.

Icebreakers

The following are all games that can help you and your students "break the ice" and start interacting. Some icebreakers will focus on helping you and your students learn about one another, while others are just about building a sense of teamwork by accomplishing a shared task. The following icebreakers are organized from the most low key to the most high energy.

Low-Key Icebreakers

Sharp Eyes

- Suggested grade range: 4th and up

- Group size: Unlimited, even number preferable
- Time required: 5–10 minutes
- Materials: None
- Risk: High

Ask each person to find a partner. Ask each pair to examine each other's appearance carefully for a few seconds. When they feel that they have studied all the details, ask them to turn around and change three things about their own appearance. Emphasize subtlety (unbutton a sleeve, untie a shoe, move a ring to another finger, etc.). When everyone has changed their three things, invite them to turn toward their partner, and identify the three ways they have changed their appearance.

Wrap-up: Ask, When, in life, is it important that we notice subtle details?

Hula-Hoop Pass

- Suggested grade range: 3rd and up
- Group size: At least 5–unlimited
- Time required: 5 minutes
- Materials: Hula-Hoop (if the group is large, two or more Hula-Hoops)
- Risk: Medium

Stand in a circle holding hands. Put a Hula-Hoop between two clasped hands, and pass it around the circle by maneuvering but never letting go of hands (participants will step through it). Keep time to see how fast the group can complete it. Repeat to see if the hoop can be passed around the circle faster.

Variation: Try passing two Hula-Hoops around the circle.

Pull-Up Game

- Suggested grade range: 5th and up
- Group size: Unlimited, even numbers
- Time required: 5 minutes
- Materials: None
- Risk: Medium-high

Ask everyone to find a partner. Sit on the ground facing your partner with your toes touching. Hold each other's hands, and try to pull each other up to standing. Variation: Once pairs have pulled each other up, do this activity in groups of three or four. How many people can you add to successfully pull the whole group to standing?

Wrap-up: Ask, What were techniques that helped make each group successful? Can we use these lessons in any other part of our work or lives?

Medium-Energy Icebreakers

Zip, Zam, Boing

- Suggested grade range: 5th and up
- Group size: 5–15
- Time required: 5 minutes
- Materials: None
- Risk: Low

Stand in a circle, and pass an invisible object around the circle. Students say "Zip" to pass the object to the right or left, "Zam" to pass it to someone across the circle, and "Boing" reflects it back to the person who passed it.

Where the Wind Blows

- Suggested grade range: 4th and up
- Group size: Unlimited
- Time required: 10–15 minutes

- Materials: A place marker (such as an index card or wood chip) for one less than the number of students; a cup full of little statements that might be true for many of your students like, “Has brothers or sisters,” or “Speaks two languages,” etc.
- Risk: Low-medium

Ask for a volunteer to begin in the middle and everyone else to stand at a marked spot. The person in the middle will either choose a question from the hat or make up their own question beginning with, “The wind blows for me and all those who . . .” If the statement is true for any participant, they must run across the circle and find a new place to stand. If they are left without a new spot, they become the person in the middle.

Birdie Wants a Perch

- Suggested grade range: 4th and up
- Group size: Unlimited
- Time required: 10 minutes
- Materials: None
- Risk: Low

Have everyone stand in a circle with one person in the middle. The person in the middle approaches various people around the circle saying, “Birdie wants a perch,” and the person they asked must respond with, “Go ask my neighbor.” The person in the middle then goes and asks a new person. While this is happening, other people in the circle must make eye contact and try to switch places with other members of the circle. If the person in the middle notices a blank spot in the circle, they take it, leaving a new person in the middle. This person becomes the new “birdie” looking for a perch.

Earth, Eyes

- Suggested grade range: 3rd and up
- Group size: 5–12 Time required: 5–10 minutes
- Materials: None
- Risk: Low-medium

Stand with everyone in a circle facing each other. When the caller says, “Earth,” everyone looks down at the ground. When the caller says, “Eyes,” everyone must instantly choose a person and look them in the eye. If two people happen to look each other in the eyes, they must switch places in the circle. Play multiple rounds. End with some speed rounds—the caller speeds up the time in between each round.

Balloon Relay Race

- Suggested grade range: 4th and up
- Group size: Unlimited
- Time required: 10–15 minutes
- Materials: Balloons in different colors, one balloon for each person; yarn or chalk to draw a start and finish line Risk: Low-medium

Draw a start and finish line about 50 feet apart. Pass out balloons, and ask participants to find others with the same color balloon to form a team. Ask participants to blow up their balloons but to not tie them off. Instead, have them hold the end. One person from each team will begin at the starting line, pointing their balloon in the direction of the finish line, and let it go. The next person on their team will go to where the balloon landed and let their balloon go. The process continues until everyone has released their balloons. The team closest to the finish line wins.

Variation: Keep going with blowing up and releasing balloons until each team reaches the finish line. Or play without teams—each person blows, releases, blows, releases, etc.

Wrap-up: Ask, Was there a technique that worked best? How did you feel when you had no control over your balloon? How did you work as a team and encourage your teammates?

High-Energy Icebreakers

Blob Tag

- Suggested grade range: 2nd and up
- Group size: 15–unlimited
- Time required: 10–15 minutes
- Materials: None
- Risk: Low-medium

Designate the boundaries of a playing area. Ask for a volunteer to be "it." If 'it' tags anyone, they link arms and become an extension of 'it." Continue playing until everyone is in the "blob."

Variation: Break the blobs into smaller blobs when they have six or more people attached.

Lighthouse

- Suggested grade range: 3rd–5th
- Group size: 5–10
- Time required: 5–10 minutes
- Materials: Blindfold
- Risk: High

Designate an area to be a bay of water. Ask for a volunteer to be blindfolded. They are the "ship." Ask for another volunteer to be the "lighthouse," or guide. While the ship puts on the blindfold, ask everyone else to make themselves into a silent obstacle in the bay— bridges, logs, rocks, etc. Situate the ship at one end of the bay and the lighthouse at the opposite end. The lighthouse must then verbally guide the ship to the other side of the bay without hitting the obstacles.

Variation: If the ship hits an obstacle and "sinks," choose or ask for another volunteer to be the ship, and begin again, rearranging the obstacles.

Wrap-up: Ask, How did it feel to be the ship? What did the ship have to do to stay afloat? How did it feel to be the lighthouse?

Bee Race

- Suggested grade range: 4th and up
- Group size: Unlimited, broken into groups of 3–4
- Time required: 5–10 minutes
- Materials: 2–3 large pieces of paper for each group
- Risk: Medium-high

Split the group into teams of three-to-four people, with each group having equal numbers of people. Create a wide area that each group must cross. Tell students that they are bees. Give each group their "wings" (two pieces of paper for groups of three, three pieces for groups of four). Tell the group that their job is to get everyone to fly across this area without touching the ground so that they can deliver pollen and nectar to make honey in their home. If someone touches the ground, they must begin again from the start. The groups can race against each other.

My Biggest Fan—Rocks, Paper, Scissors

- Suggested grade range: 5th and up
- Group size: Unlimited (the bigger the better)

- Time required: 5–10 minutes
- Materials: None
- Risk: Low

This icebreaker is energizing and extremely loud! Choose your setting accordingly. Invite students to get in a circle. Stand in the middle of the circle, and give the directions. Ask if everyone is familiar with "rocks, paper, scissors" and then give a quick refresher—rocks wins over scissors, scissors wins over paper, and paper wins over rocks. Tell participants that, immediately following the directions, they will be asked to line up in two rows facing each other. They will have the opportunity to play a "best-of-one" round with the person facing them. The winner will go on to play another winner. The person who is not the winner gets to be the winner's "biggest fan" and gets behind them and cheers them on as they play the next person. Model this with someone. The winner of that round will go on to find the winner of another pair and play again. As people move through the rounds, they gather more and more fans from previous rounds. By the end of the game, there will be two people playing against each other, and the rest of the participants cheering for one of them. Explain that each time someone wins, they get all those "biggest fans" to cheer them on until finally there should be two students with huge "fans" behind them getting increasingly loud until there's one final winner! Then invite them to line up in two long lines with their partner on either side of you. Say, "Ready, set, GO!" and once this is in motion, as the facilitator, keep encouraging students to root on their partner and get hyped up!

Recommended Resources

- Playworks' Game Library

Developing Group Agreements

In addition to building authentic relationships with and between your students, as mentioned in "Managing Student Behavior: The 4P's," it is essential that children understand the behavior that is expected of them. Involving students in the process of identifying helpful behaviors allows them to express their own goals and expectations of one another and understand the rationale for these expectations. This increases their level of investment in following the expectations set by the class. One method to establish group expectations with students is to develop Group Agreements. This is best done with a class that you will be working with in an ongoing way or if you'll be with a group for an extended period of time. Follow these steps with your students:

1. Explain the purpose of agreements: *Let's talk about how we'll work together. To start, how do you want to feel when you're here?* Record students' ideas on chart paper or a whiteboard. Feel free to add your own ideas to this list. Here are some examples: safe, welcome, happy, relaxed, proud, excited, etc.
2. *Thank you! Next, let's brainstorm: What can we do to make people feel that way?* Brainstorm together. This list might include these actions: helping others, including others, using kind words, etc.
3. *Now we've talked about how we'll treat each other. Let's also talk about how we can treat the garden and classroom. The plants and animals in the garden are also alive, and we're going to be their caretakers. What can we do to keep them nourished and growing? The classroom is our shared learning space. What can we do to make it a comfortable place to learn?* Brainstorm together.

This list will probably include some site-specific things but will often include some or all of the following.

When we are in the classroom

- Clean up after yourself.
- Be respectful of materials that are not yours.

When we are in the garden

- Walk on the paths, not the beds.
- Only harvest ripe foods and only when you're going to eat them (or when the leader says it's time).
- If you find a beneficial insect, let it live.
- If you find a harmful insect, follow the group protocol. This is something else that will be site- and group-specific.

Record your group agreements, and post them in a place where you can refer to them as necessary throughout your time with that group of students.

Setting the Tone with Every Lesson

Let's imagine you've started out strong: You've built positive rapport with your students, and they work well together. You've established behavior expectations with them, and they are invested in following those expectations. Now we can turn our attention to how to set the tone within each lesson throughout the year. Whether you are teaching a lesson on worm bins or balanced food groups, the following routines will help you and your students get the most out of the experience:

Circling up for Each Lesson Opening:
Each FoodCorps lesson starts with whole class introduction. Whenever possible, we recommend that you gather students into a circle for the lesson opening. Opening each lesson in a consistent way builds routine and allows students to know what to expect and how to prepare for their time with you. In the classroom, this may often entail bringing your students to "the rug" or whatever space they have designated for whole class meetings, read alouds, etc. In the garden, this will entail bringing students to a gathering area that is large enough for them to circle up. Create and teach your students a special "circle up" signal to use in every lesson, such as calling out, "Magnetic Elbows," ringing a chime, or howling like a coyote. The specific callback you use will depend on what feels like a good match with your personal teaching style and with the culture of the school. You can observe other teachers in the school to get ideas. When students hear that sound, they'll have ten seconds to gather in a circle. Explain that you'll count down from ten, and once a student is in the circle, she or he can help you count down. Practice this with students right after teaching it, encouraging them to all make it back in before you finish the countdown. Once everyone is together, build anticipation by introducing a quick, fun cheer, such as, "We are, now in FoodCorps Time! FoodCorps Time!'" to the tune and beat of "We will, we will rock you"

Getting Students' Attention:
FoodCorps Lessons are very interactive. As such, they involve a lot of student conversations and movement. It is important to realize that if you talk to your students while they're busy talking with one another or doing things, they likely won't catch what you say. So how do you get their attention when you need it? Here again, the specific strategy you use will depend on what feels like a good match with your personal teaching style and within the local context of the school and community. You can observe other teachers in the school to get ideas. The following are some tried-and-true ways to get students' attention when they're all talking or doing something:

- Teach a call-and-response signal, and practice it with students, such as the following:
  - Call: "One, two, three, eyes on me!" Response: "One, two, eyes on you!"
  - Call: "When I say 'sun,' you say 'flower!' 'Sun!" Response: "Flower!" (You can change this one up to be relevant to what you're teaching, as in "When I say 'Fruit,' you say 'Smoothie!'")
- Say quietly, "If you can hear my voice, clap three times." Then clap three times along with the few people who heard you. Then say, "If you can hear my voice, clap five times," etc. Each time, more students should clue in to what you're doing. You can then add in fun ones like, "If you can hear my voice, point to the tallest tree you can see," or "If you can hear my voice, touch your nose," etc.
- Have a chime (or a bell, whistle, rainmaker, or gong) that you can use to gather everyone's attention. Explain that when they hear the chime, it's time to turn their attention back to you. When working outdoors, make sure your noisemaker is loud enough for students at the other end of the garden to hear.

Once students know your circle-up and attention-getting routines, you can use them regularly throughout all your lessons, every time you need them to come back into a circle or quiet down to hear what's next. Keep these routines consistent throughout the year, and, in no time, they will become second nature to you and your students.

Structuring Student Participation in Discussion

When facilitating a class discussion, it is ideal to hear from as many different students as possible, not just the few who feel the most confident sharing ideas in group settings. One of the most effective means of equalizing participation and engagement across a group is to provide a structure for response when you pose a question to your group. Use the tips below to create a rich and engaging discussion with students.

Think-Pair-Share: Explain to students that you are going to pose a question. Their job is to think silently to themselves about the answer and give a thumbs-up when they have thought of something; then, when you say it's time, they'll turn to the person sitting next to them and share their answer. After they've had a chance to share with their partner, you'll open it up to the whole group to share. To encourage active listening within the whole group, you can ask specifically for answers that pairs had in common or answers that students heard from their partners.

Toe-to-Toe: Have students stand up. Explain to students that you'll call out two body parts, like "toe-to-toe!" and their job will be to find someone silently and stand toe-to-toe with them. Once everyone is silently paired (if there's an odd number of students, you can play, too), pose a question for the pairs to discuss. After a minute, call out a new set of body parts, such as "pinky-to-pinky," "elbow-to-elbow," or "knee-to-knee." Their job is to find a new partner, connect silently, and then together with their new partner answer a new question posed by you.

Give One, Get One: After students think and journal about a topic, ask them to get up and find someone across the room with whom to share their thoughts or answers. The students will then move to another partner when prompted and will share both their own thoughts and those of their previous partner.

Hop and Find: Ask everyone to start hopping on one foot. Now their job is to hop around and find someone else also hopping on that same foot. If almost everyone has a partner, but you have two people left hopping on different feet, tell them they can be partners. Once they've found a partner, have them do something fun to connect, like give a high five. Then ask a question, and have them share answers with their partners.

In-Out Circle: Have students stand up in a circle. Ask every other student, going around the circle, to take a step into the circle and then make a half-turn clockwise so that they are now facing the person who used to be standing to their right. Now they have a partner (if you

have an odd number of students, you can play, too). Have them do something fun to connect, like have a thumb war. Then ask a question, and have them share answers with their partners. Next, tell the outside circle to move one person to the right, so each student has a new partner. Ask a new question for them to share, or ask them to share what they just learned about the first question from their last partner.

Pass the Ball: Gather all your students in one circle. Hold a ball, and explain that this is the "talking ball." Ask a question, and ask anyone who wants to answer to raise a hand. Toss the ball to someone with a hand up. That student can answer while he or she has the ball and then toss it to anyone else with a hand raised. Once everyone who wants to answer has had a chance, they can toss the ball back to you, and you can pose a new question.

Gallery Walk: Students work together in small groups as they walk around the classroom observing material at various stations. Each group starts at a different station and pauses to reflect on the content at the station. Students write reactions, questions, or comments on a worksheet, flip chart, or Post-its near each station. If cooperative learning techniques will be used, assign roles like leader, monitor, reporter, and recorder. The role should be alternated between each team member. As groups rotate through each station, students can read content left by the previous group and add their own. Students end at their first station to read what was added. The group wraps up with a final conversation about takeaways.

Recommended Resources

- The "BEETLES" Project Promoting Discussion Resources

Methods for Calling on Students Randomly

As an educator, it can be helpful to have a system for calling on students randomly, instead of always asking for volunteers. This can be helpful for equalizing participation in class discussions, assigning cleanup tasks, or other situations where you want to distribute the attention evenly and not be seen as picking favorites. If you are using these methods to call on students to answer questions publicly, ensure they've had time to prepare an answer they're ready to share, so they don't feel embarrassed or put on the spot. A great way to do this is to have them discuss the answer to a question in a group, letting them know this ahead of time: Make sure everyone in your group is ready to share what your group thinks because I'm going to call on someone randomly. This gives them a reason to feel accountable in their group discussion time and gives everyone time to prepare to be called on.

- **Popsicle Sticks:** Many teachers will have a cup with popsicle sticks in it. Each popsicle stick has a student's name on it, so he or she can say, Okay, today's sweeper will be . . . (pull a stick without looking) . . . Jennifer!
- **Spinners or Dice:** Inside a classroom, you can give each seat a number. If students are at shared tables, you can even number the tables and the seats. So then you can say, Okay, today person number . . . (roll the dice or spin the spinner) . . . four at each table will share the answer you got.
- **Train or Pass It On:** Students call on one another to answer and/or ask questions. Students should not raise their hands to be called on and should be encouraged to call on a variety of people in the classroom. Students can also "pass" on a question they

do not want to answer by calling on another student for help. This is called "Pass It On."

Recommended Resources

- *Tools for Teaching* by Fred Jones
- *Rethinking Classroom Management* by Patricia Belvel

Transition Strategies

Experienced educators will readily tell you that management issues often come up during transitions: those moments between activities when students are rotating between stations, stopping an activity and transitioning into cleaning up, moving from their desks to the carpet, or walking from the classroom to the garden. The following are a few effective strategies for making transitions smooth and structured. Always consider that students have different and unique mobilities and adapt as necessary. Ask a teacher if you have questions or need suggestions about how to best lead these activities with their students.

Walking Transitions:

These are great ways to engage a group while moving together from one place to another (e.g., walking from the classroom to the garden or cafeteria).

- **Buzz Like a Bee:** suggested for grades Pre-K–1—When walking from one place to another, invite students to "waddle like a duck," "buzz like a bee," or the like. This works best outdoors.
- **Follow the Leader:** suggested for grades Pre-K–2—When walking from one place to another, have the children follow you as the leader, and change up how you move (e.g., by walking, then skipping, then galloping, then hopping, etc.) If you have a fair amount of distance to cover, you can rotate leaders as you keep going, giving students a chance to lead the group.
- **Walk and Talk:** suggested for grades 3 and up—For this activity, get your students into two lines of equal length. Have one line face the other. Then have each student high five the student across from them in the other line. This is their partner. Pose a question, and have them talk about the answer as you walk together to your destination. If the walk is long enough, you can stop part way, and send one student from the front of one line to the back of the line. Have that line bump up, and everyone will have a new partner. Give these new partners a new question to discuss and continue walking. This activity works best with open-ended questions such as, "What are all the ways you can think of that nourishing foods help us in life?" or "What are all the ways you can think of that plants help animals?"

Other Transitions:

The following are effective ways to structure all the other transitions that happen in a class, such as when students are switching gears between an activity and cleanup. To begin, use your callback signal to get students' attention. Then explain what's next, starting with a phrase like, "In a moment . . ." or "When I say 'Carrots,'" to let them know not to start the transition until after you've explained it. So, for example, you might say, "When I say 'Carrots,' we're going to start cleaning up . . ." Once you've signaled for the transition to begin, the following structures can also help things along and make the transition its own small, fun, collaborative activity.

- **Transition Music:** suggested for all

grades— When you have a task that should take a specific, short amount of time, you can play a song for just that amount of time, and challenge students to complete the entire transition (rotating stations, cleaning up their supplies, whatever the task is) in that amount of time. They'll know their time is up when the song ends.

- **Visual and Audio Timers:** suggested for all grades—Display a large, visual clock or timer that older students can reference to see how much longer they have at a station or on a task. You can also create auditory cues for younger students such as, "When you hear my chime, you have one minute to wrap up. When you hear the double-chime, it's time to start cleaning up." Again, challenge your students to complete their transitions in the amount of time given.

Recommended Resources

- "Mastering Classroom Transitions," Edutopia

Back Pocket Activities: What to Do If You Finish Early

"My lesson went great, but now we're finished, and we still have ten minutes until I send them back to class. What should I do?!" "My students are working in groups, and one group is finished, but another group needs more time. What should I do?!" Everyone works at a different pace, and this means that situations like those described above come up all the time. Back Pocket Activities are activities that require little to no prep and can take up as little or as much time as you need them to. Here are a few Back Pocket Activities to get you started:

Indoor Back Pocket Activities:

- **20 Questions**
  - Suggested grade level: 1st and up
  - Materials: None
  - Activity: Think of something related to what you've been studying together. Invite your students to ask "yes/no" questions to figure out what you're thinking of. If they get it in fewer than twenty questions, they win. If not, you win! After one round, invite student volunteers to think of words, whisper them to you, and then they can lead the activity with the class, answering the yes/no questions from their peers.
- **Charades**
  - Suggested grade level: 3rd and up
  - Materials: A cup full of words related to what you've been studying together that could be acted out
  - Activity: Invite a volunteer up to choose a word from the cup. Their challenge is to act out the word, and have the class guess the word. Whoever guesses correctly first gets to be the next actor, if they want to. Otherwise, just ask for another volunteer.
- **The Word Game**
  - Suggested grade level: 4th and up
  - Materials: Chart paper or a whiteboard and markers
  - Activity: Divide the class into two teams. Ask each team to send up one volunteer. Have those two volunteers sit in front of the board, facing the rest of the class. Explain the way the game works: You'll write a word on the board, and the two volunteers will try to guess the word. Their team will give them one-word clues, which cannot be the word itself or anything that sounds like or rhymes with the word. Behind the volunteers, write a word on the board that is related to what you've been studying, such as "nutrient" or "pollinator." Ask Team A if anyone has a one-word

clue for their volunteer to start things off. Call on someone, saying "This team for ten points." They give the clue, and the person up front gets one guess. If they get it right, they get ten points. If they get it wrong, it goes to Team B for nine points. It keeps going back and forth, decreasing in point value each time as they gather more and more clues. If it gets all the way to zero, they can read the word and then start over with two new volunteers and a new word.

- **Research**
  - Suggested grade level: 4th and up
  - Materials: Books or computers with internet Activity: Establish a "Wonder Box" or other space where students can record and submit research questions throughout the year such as, "What is a carbohydrate?" If a student finishes their work early, they can pull out a question, research an answer, and then submit it to you. If you approve it, they can present it to the class for extra credit. (You can also plant questions in the Wonder Box to get things started, or encourage them to research things you think would be of interest.)
  - Games/Icebreakers—You can also use any of the Name Games or Icebreakers listed above as Back-Pocket Activities.

Outdoor/Garden Back Pocket Activities:

- **Digging in the Digging Bed**
  - Suggested grade level: Pre-K–1
  - Materials/: Trowels
  - Preparation: Designate a bed or area in your garden where students can freely dig.
  - Activity: This is as simple as it sounds! Just let "early finishers" dig in the "Digging Bed." Kids this age love to dig! They can look for insects, mix water with soil, or just dig holes.
- **Finding Insects**
  - Suggested grade level: K and up
  - Materials: A piece of plywood (optional: art supplies) Preparation: Lay a piece of wood or plywood on the ground, and leave it there for a while. Insects and other critters will start to live underneath it!
  - Activity: Send students to the piece of wood to look for insects and other critters. Have students observe the insects and other critters. If time allows, each student can illustrate a critter they saw.
- **Snail Patrol**
  - Suggested grade level: K and up
  - Preparation: Decide what to do with snails. Some schools feed them to the chickens. Some create "Snail Havens" where they can live their lives in peace without eating all the crops. Some kill them.
  - Activity: Have students gather snails off of plants, and do whatever you and your class have decided to do with them.
- **Garden Tasks**
  - Suggested grade level: K and up
  - Materials: Garden tools
  - Activity: Have students help with basic garden maintenance by weeding, deadheading, flipping compost, or watering plants.
- **Rainbow Chips**
  - Suggested grade level: 1st–5th
  - Materials: A variety of paint chip samples from a local hardware store
  - Activity: Give each student a paint chip and have them look for an exact color match in the garden. When they find it, they can show you (or show a buddy) and then trade in for another color.

- **Flower Bracelets**
  - Suggested grade level: 2nd and up
  - Materials: Blue painter's tape
  - Activity: Give each student a piece of blue painter's tape, and have them wrap it around their wrist, sticky-side out. This is easiest if you work with a friend to wrap each other's. Let them know which flowers and leaves they can pick, and then let them pick and add flowers and leaves to their bracelets.
- **Sheet Shake**
  - Suggested grade level: 3rd and up
  - Materials: A sheet you don't mind getting dirty; magnify glasses or bug boxes;
  - Activity: Have student place a sheet on the ground underneath a shrub. Have them gently shake a branch of the shrub, and let the insets fall out. Then have students observe the insects using magnifying glasses or bug boxes. If time allows, each student can illustrate an insect.

Recommended Resources

- Life Lab's Back Pocket Activity Videos

Lesson Closing and Reflection

Leading Reflection Sessions

For new knowledge or concepts to sink in, it is critical for students to have time to reflect on their learning. FoodCorps lessons include prompts for students to reflect on both the content of the lesson and the process of learning together. Here are some tips for leading reflection sessions effectively.

Ask Broad Questions

Conclude your lessons by asking one or more broad questions that connect back to the essential question that guided the lesson. With a broad, open-ended question, you're not trying to get the students to fill in the blank or guess what you're thinking. What do we call the part of the plant that grows under the ground? is not a broad question. Instead, inspire students to think deeply about the topic and consider how it is relevant to them.

According to the Lawrence Hall of Science's "Beetles" project, broad questions achieve the following:

". . . allow the student to make sense of and explore their own ideas freely, in their own terms, often without restrictions and with only minimal guidance from the instructor. These questions are useful to encourage students to synthesize ideas, extend ideas, deduce and predict, organize elements of what they've learned into a fresh pattern, and make learning relevant to their own life experiences. Broad questions encourage students to share various ideas during a discussion and to value other students' ideas as they are expressed" (Lawrence Hall of Science 2018)

Here are some examples:

- What did you learn about today? (where food comes from, how people prepare nourishing food, etc.) How might you use this knowledge in your life?
- What surprised you about this activity?
- What other questions do you have about this?
- How would you explain this (the topic of today's lesson) to someone else?

Inquire about Students' Personal Viewpoints

It is also valuable to ask your students probing questions that allow them to explore their viewpoints to honor their personal curiosity and connection with food. Questions that begin

with certain phrases that move beyond “yes” or “no” answers and support the expansion of their curiosity beyond the classroom are key.

Here are some examples:

1. How do you feel about . . . ?
2. What would you change if you were to do this on your own? (e.g., if you were to recreate this recipe, plant your own garden bed, etc.)
3. How would you describe your experience with . . . ?

Invite Students to Reflect on Their Learning Process

In addition to reflecting on what they learned, it is valuable for students to reflect on how they learned it. These questions might focus on how they took in new information or how they worked with others.

Here are some examples:

1. What strategy did you use to figure that out? Did anyone else use a different strategy?
2. What did you or other members of your team do that made it fun and productive to work together? What do you think you and your team can work on to work better together in the future?

Your reflection sessions can take many forms. You might discuss as a whole class, have individuals write responses, or even just have students think quietly about answers to the questions. The most important thing is to protect some time (usually about five minutes) at the end of your lesson to do this reflection so that the learning can sink in.

Tips for Improving Your Teaching Practice

Your Teaching Style

Developing and refining your teaching style is important to feel confident and secure when leading hands-on lessons with students and is a great way to build confidence and gain tools for group management. Although it's important to always keep general teaching best practices in mind, being a successful educator looks different depending on the person who is teaching. What's key is to facilitate learning experiences that work for students while building safe, and thoughtful relationships with your students. Here are a few suggestions about how to develop and hone your teaching style.

Shadow Experienced Educators

We strongly recommend that FoodCorps members observe several classes taught by experienced educators at your school(s) before teaching their own classes. Shadowing educators who teach a variety of subjects is a great way to observe how others teach and determine whether any of their techniques might be a good fit for you. It is also a great way to learn about schoolwide systems and teaching practices. Start by asking for permission to shadow another educator's class. This could be a classroom teacher, a coach, an enrichment teacher, or even a fellow member. To get a good sense of the lesson structure and student learning try to observe for at least thirty minutes. Observe how that educator creates a positive classroom environment, ensures student safety, engages students in the lesson, facilitates the learning of new concepts, guides reflection, and assesses student learning. It can be helpful to have a specific focus when observing another teacher's practice. For example, in anticipation of working with students with special needs, you might want to learn how they teach students with varied skills and abilities. You can let the teacher know what you're focused on observing; he or she might have some great suggestions to share. As you grow more comfortable with teaching, you might even ask that teacher to shadow one of your classes and offer feedback. Shadowing allows you to consider different teaching strategies and adopt techniques that will work best for your teaching style.

Self-Reflect

Taking time to reflect on and assess your own teaching practice on a regular basis is necessary for continued growth and improvement. You might consider recording notes in a teaching journal on what went well and what was challenging about a particular lesson. Videotaping a class is another great way to assess your own practice because it allows you to observe details about your teaching and your students' responses that you might not have noticed in the midst of delivering the lesson (make sure you have permission to

videotape students if they are included). You can record notes on what went well and areas for improvement, and list what resources or supports you might need to continue improving your teaching practice.

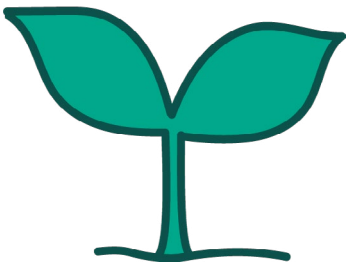
Ask for Feedback

Asking for honest, constructive feedback from trusted individuals is a great way to hone your teaching style. Start here:

1. Check in with an educator whom you admire, and schedule a time to be shadowed. Allow the educator to give you constructive feedback on your strengths and weaknesses as well as action steps for improvement. If you are working on a specific aspect of your teaching (e.g., keeping students engaged), ask the educator to pay particular attention to that component.
2. FoodCorps staff will visit multiple times per year to observe your programming in action. This is a great opportunity to get feedback on your lesson plans and delivery. If there are particular instructional strategies or concepts that you are working on, share these with your observers in advance so they can be sure to provide relevant feedback.
3. Students often recognize great teaching, and student surveys can be one of the most accurate predictors of achievement gains. Asking students to reflect on the quality of your lesson, either by asking informal questions or by having them complete a survey at the end of class, can be a great way to hone your teaching skills while building strong relationships with students.

Recommended Resources

- Hanover Research "Student Perception Surveys and Teacher Assessments"
- Tripod Project Survey Questions



Safety With Students

As a FoodCorps member, an important part of your role is ensuring students are safe—in the classroom, garden, kitchen, or wherever you are with students. Please review these safety guidelines in the "Cooking with Students" and "Gardening With Students" sections below, and be in touch with your supervisor if you have questions or need additional information.

To protect you and your students in case of an accident, injury, or other emergency, you should always follow the protocols of the school that you are serving. Schools have safety protocols, and it's important that you know these and can follow them closely in case of an emergency. Additionally, your role as a FoodCorps member requires you to be a mandatory reporter if you have reason to suspect child abuse or neglect. Learn the protocols regarding mandatory reporting at your school and site, and ensure you have the information and training you need.

Tips for Keeping Students Safe

- **Proper adult supervision is key to running a safe program.** Always keep students in sight and in areas that have been designated as safe spaces for students. Be consistent with your expectations, and openly communicate the importance of the group sticking together. Bathroom breaks and pick-up times are especially important times when you should be extra vigilant about knowing where your students are. Always have a watchful eye on where and when students leave your side, especially before moving to a new location.
- **Follow school protocols regarding allergies and other important issues.** Keep this information in a place that is easy to reference, like a chart or spreadsheet. Ensure that other adults working and volunteering with you are aware of allergies as well. Common food allergens include the following: tree nuts, seafood, dairy, wheat, and soy. These ingredients are limited in FoodCorps lesson recipes to prevent exposure. Be sure to identify and understand potential health issues before making substitutions and before preparing or serving any food with students. Consider having an additional adult present when cooking with students who have severe allergies. The safest approach is to exclude using ingredients to which any student might be allergic.
- **Expectations and parameters should be clear to all participants.** To ensure everyone's safety, it's important that you set clear rules and guidelines from the beginning of the program. Students should understand not only what the safety parameters are but also why they are important. See the "Developing Group Agreements" section on p. 89 to learn how to set expectations and parameters for student behavior.
- **Be prepared for anything!** Any seasoned educator knows that when teaching, anything can happen. Come prepared for any and all scenarios, and always have a backup plan. It's important that you have a well stocked first-aid kit or know where this is kept in the school/classroom. Remember to

follow school protocols for treating injuries.

- **Foster space for emotional and mental wellbeing.** It is your responsibility as a FoodCorps member to foster trust and connection with and amongst your students. Bullying, clique behavior, and discrimination should never be allowed. By making team agreements as a group about expected behavior toward one another, teamwork and collaboration will be stronger among the group.

Building & Maintaining School Gardens

With permission, FoodCorps has adapted this information from Life Lab, lifelab.org.

School Gardens: Getting Started

As a FoodCorps member, you will be working with your school community to support school gardens. This may mean building a garden from scratch or maintaining or enhancing an existing garden. The tips in this section will help you in this effort while you're at your school and help you plan for a garden that will thrive even after your FoodCorps term has ended.

School gardens have succeeded in all kinds of places—in both cold and warm climates and in urban, suburban, and rural communities. School gardens exist in schools with no bare ground and in schools with acres of land. Schools of all types have adapted strategies that work for them, tailoring gardens to fit their needs. The crucial ingredient is a core of passionate people invested in seeing the garden succeed over time.

Building a Garden Team

Teamwork is essential to a thriving school garden program. Consider involving the following people in your garden support efforts: teachers, parents, community members, local businesses, and—of course—the students themselves! See the "Key Relationships with FoodCorps Partners" section of this guide for tips on connecting with these key players.

Setting Your Garden Goals

Establishing a Common Vision

Before building a garden, it is important to recognize that gardens require a long-term commitment. Gather the people interested in developing or maintaining a garden, and ask yourselves the following: What, ultimately, do we want this garden to be? What is its purpose? How will it connect to the goals of FoodCorps, the school, the students and families, etc.? How will students and staff use and care for it? What will it look like at the end of this year? What will it look like in three to five years? How will we get there?

Dream Big; Start Small

It is ideal to start with a vision that excites all stakeholders and is also manageable for you as a FoodCorps member and for any other people involved. Although you may have visions of a mini-farm or a greenhouse, the best way to realize your dreams may be to start with a single garden bed and a compost bin. Remember, a tremendous amount of learning and discovery can happen with just a few seeds, a watering can, and small patch of earth.

Choosing a Site for a New Garden

Thriving school gardens come in all shapes and sizes, from a planter box outside the classroom to a sprawling mini-farm overtaking the corner of a field. A dedicated team can transform almost

any site, from a dirt parking lot to a school courtyard, into a flourishing school garden. Whether large or small, here are a few things to consider when choosing your garden site:

- **Sunlight:** Most vegetables, herbs, and flowers need a minimum of six hours of full sun. Check possible garden sites for sun exposure at different times of the day, and take note of objects (such as buildings or trees) that might block light in different seasons when the sun is lower or higher in the sky. If you decide to include shady spots in your garden, you can use them for shade gardens, wildlife habitats, or teaching areas for hot, sunny days.
- **Water:** The garden should be close to a water spigot.
- **Drainage:** Both slope and soil type affect drainage. Avoid steep slopes. If that's not possible, consider terracing or raised beds. Also, try to avoid planting a garden in a low spot where puddles form in wet weather.
- **Soil:** If you are building in a space that has been developed in the past, it is essential to test the soil for lead contamination. Soil naturally contains low levels of lead, but exposure to paint or other building materials predating 1978, or exposure to runoff from roads or parking lots, can increase lead to harmful levels. To be safe, it's best to test any potential school garden site. Contact your county health department or Cooperative Extension office for information on testing. If your soil is toxic, it will be important to keep the entire garden in containers, where the toxins from the ground cannot leach into the garden soil. It's also a good idea to test your soil for nutrient content, pH, and texture (sand, silt, and clay content). You can buy a do-it-yourself soil test kit at a garden center, or contact your local Cooperative Extension office for information on where you can send your soil for testing. This information will help later in determining what, if any, amendments you should add when preparing to plant. Local County Master Gardeners are a great resource for helping new gardeners figure this out.
- **Accessibility:** Generally, if your garden is a short walk from the classroom, there will be more teacher involvement than if the site is a long trek across the school grounds. A garden close to the classroom makes it more convenient, more visible, and easier to incorporate into the curriculum on a regular basis. For the early grades, garden beds or planter boxes right outside the classroom work especially well. "Out of sight, out of mind" can apply to gardens that aren't in a central, visible location.
- **Security:** If possible, it can be useful to locate your garden in sight of classrooms and neighbors. Fences and natural borders of plants, if they don't obstruct visibility and hide intruders, can also provide security. Make use of existing fences, trees, and hedges in selecting your site.

Designing a School Garden

Once you have selected the garden site, it's time to design the garden itself. You can organize your garden in a variety of ways. Many school gardens have individual beds for each class to plan, plant, care for, and harvest together as well as communal areas (such as a pumpkin patch) for the entire school to develop together. In addition to planting areas, many school gardens include sinks, tables, gathering areas, and other components.

Garden Components

Possible School Garden Elements

Outdoor class meeting area: Designate a shaded area with adequate seating for class discussion, writing, and drawing. An area with deciduous trees works well—in winter, you have light and warmth; in summer, you have shade!
Small group gathering areas: If possible, leave some spaces open in the garden so that you have room for students to gather in small groups at activity stations.

Bed(s) for each classroom: Make beds no more than three feet wide so students can reach into the center of the bed and work without stepping on the plants and compacting the soil.

Community growing area for schoolwide projects or plantings: These can include a cut-flower growing area, herb garden, market garden, and specialty areas such as a pumpkin patch or plantings that attract butterflies and birds.

Compost area: Composting is a great way to turn garden waste into valuable soil amendments and teach about decomposition. If possible, set aside an area for collecting compost materials and building compost piles. You can never have too much of this important garden ingredient.

Tool shed or storage area: A tool shed or storage area provides a central location where you can clean, organize, and protect tools and equipment. If you plan to build a shed or other structure on your site, be sure to consult whoever in your district oversees building for information about any building codes relevant to your plan. Make sure all projects meet fire and electrical safety code requirements.

Sink(s): A sink in the garden makes washing hands and produce much easier. Make sure the water is potable (drinkable). Some school gardens use an old donated sink and build a stand for it with two-by-fours with a drainage pipe running under the nearest tree.

Garden signs: No matter what size your garden is, make a sign to give it an identity within the school and neighborhood. Signs help identify your school garden as an outdoor learning center, announce times the garden is open, and provide rules and guidelines for using the space. Ask students to design the logo or drawing that will appear on their sign. Let a student construction committee make the sign. In addition to the overall garden sign, have your students design a sign for their class bed.

Work tables: Tables are essential for many garden lessons and projects.

Other Elements You Might Include Food-prep area: An outdoor table or counter and sink can make it much easier to harvest, wash, prep, and enjoy foods together in the garden. If power is available, you can add blenders and other appliances. If possible, you can also add a gas stove for cooking on site.

Greenhouse or cold frame: A greenhouse or cold frame is a protected place for starting seedlings in a controlled environment and helps extend the growing season, particularly in cold climates. You can also set up an indoor growing area in your classroom.

Theme beds: Theme beds can include all the ingredients for a recipe (e.g., a salad bed, salsa bed, or pizza bed), or they can contain plants that have something in common, such as a bed of butterfly attracting plants or a bed for tea plants. Specifically, nutrition-themed beds could include an Eat-the-Rainbow bed or a MyPlate.

Animal habitats: Including elements such as bird baths, bird houses, native shrubs, trees, or a pond can welcome beneficial wildlife to your garden as well as provide an opportunity for your students to observe ecological interactions.

Elements of whimsy and play: Students easily connect with a garden that includes unique and kid-centered elements such as animal footprints in a cement path, wind chimes, suncatchers, a tunnel covered in vines, a special spot reserved for digging, or a tree with musical instruments hanging from its branches.

Involving Students and Community

As a FoodCorps member, you can facilitate a team of students and community members in designing the garden together. This approach maximizes student ownership and buy-in and ensures that the garden reflects their ideas and perspectives. Many schools encourage each class to design their own vision of the garden, and pick the best elements of each for the final plan.

When planning your site, be sure to seek out parents or other community members who will lend their expertise to your projects. Among them you may find a local garden supply store owner or garden club member who will volunteer to assist you in laying out the garden plan. You can find a parent who is an irrigation expert willing to make suggestions about the garden's water needs and systems or a carpenter who can help you build a tool shed.

Container Gardens

Outdoor Container Gardens

If your school doesn't have a large, unpaved space for a garden, you can create a productive outdoor garden using containers filled with soil. These container gardens can provide herbs, vegetables, and flowers for your students all year long and can be set up over soil or pavement.

A wide variety of containers can be used, including fruit crates, wine barrels, cement blocks, buckets, trash cans, old baskets, bathtubs, coolers, wheelbarrows, and even old boots! You can brainstorm possibilities and gather supplies with your students and community members. Here's a note about tires: Tires are a popular type of container for growing flowers but should not be used to grow food because they can leach harmful chemicals into the soil.

If the containers you're using have solid bases, punch or drill holes in the bottom for drainage. Fill containers with a light planting mix rather than soil. You can purchase planting mix at garden centers or make your own by combining equal parts sterilized loam soil; peat moss; and coarse sand, perlite, or vermiculite.

Choose your plants carefully. Consider small plant varieties that are suited to containers. Think about how big the mature plants will be when deciding how many to plant per container. Large plants, such a tomatoes or squash, should be grown in containers that hold over 4 gallons of soil. Small containers are suitable for shallow-rooted crops such as lettuce, spinach, onions, strawberries, and herbs.

Indoor Container Gardens

If space issues or climate make it impossible to set up an outdoor garden, consider gardening in the classroom. An indoor garden has the advantage of being accessible to students even when time is short or weather is uncooperative. Consult a manual such as the National Gardening Association's GrowLab: A Complete Guide to Gardening in the Classroom for detailed information and design ideas, or visit its website at gardeners.com for information on premade indoor garden setups.

Delivering enough light to your plants is the primary consideration in designing an indoor garden. Most windowsills don't receive enough light to grow vegetables but may be able to successfully grow a variety of houseplants. If you want to grow vegetables, flowers, or herbs, hang fluorescent lights over your indoor garden.

Outdoor Safety

If you are working outdoors in the sun and in warm temperatures, keep the following in mind:

- ✓ Students should wear sunscreen and sunglasses.
- ✓ Ensure students have sun protection like hats with brims.
- ✓ Light colored clothing will help repel the sun.
- ✓ Make sure students have regular access to water.
- ✓ Allow students to regularly rest in the shade.
- ✓ Monitor students for signs of heat stroke or exhaustion: fatigue, weakness, irritability, sweating, or fever.

If you are working with students in cold temperatures, be sure that they have plenty of warm layers, proper insulated or waterproof footwear, and a warm hat or rain gear. Allow students to go inside if they are cold, with adult supervision and a preplanned backup activity.

General Garden Safety

- Become familiar with poisonous plants, insects, and animals in your area. Monitor for these in the garden, and remove them when necessary.
- Keep an eye out for fungus, mold, or dust that can irritate students with allergies or asthma and remove these when necessary.
- If you plan to use manure to amend your soil, purchase only manure that has been sterilized or fully composted (not just "aged"). Manure can contain E. coli or other disease-causing pathogens if it hasn't been sterilized or fully composted.
- Ensure students wash their hands after handling compost, worms, other animals, soil, or the like.
- Check with the grounds and maintenance staff to see if any pesticides or nonorganic fertilizers are used on the school grounds. If so, find out what they are, and check for "Keep out of reach of children" labels. Students should not be allowed in areas where these have been applied.
- Monitor the garden for signs of pests, like rodents, or pets that may visit unobserved. These animals can leave unwanted waste behind.
- Be aware of the water quality you are using to rinse produce and clean children's hands.
- Don't use treated lumber, granite, or rubber tires for raised garden bed borders because they often contain toxins that are dangerous for human ingestion or contact.

Gardening Tool Safety

Before students use any garden tool, whether it's a shovel, spade, or rake, demonstrate how to use your arms to make sure you are at least one arm's length away from all other people when using the tool.

- **Tools with sharp ends:** Demonstrate how to hold the tool by the handle with the sharp end down, ensure that the sharp end is far from your toes, and then push the sharp end into a green plant to chop it up to show the sharpness of the tool. For tools like hand shears, demonstrate how to unlock and lock the shears. Also model how to hold only the handles and keep both hands (as well as all parts of your body!) away from the sharp parts at all times. Also model how to keep your eyes on the area where you're working. This will help you avoid accidentally hitting someone's hand with your trowel or flinging soil into anyone's eyes.
- **Tools like digging forks:** Demonstrate how to lift the tines of the digging fork to the top

of the pile that has been dug, but no higher, emphasizing that these tines are hard and sharp and belong far away from our heads, faces, etc.

- **Hammers:** If students are using tools like a hammer, emphasize that this tool is heavy and that it's important to remain focused on the object being hammered. Demonstrate how to hold the tool with both hands to avoid hammering fingers.
- **Tool storage:** Always be sure that your tools are stored in a secure location. This will prevent them from disappearing or from being used inappropriately.

It is best to have students wear protective equipment.

- ✓ Wear clear safety glasses (or sunglasses) on projects where eyes need protection.
- ✓ Wear covered shoes while working in the garden.
- ✓ A dust mask should be on hand for use during potentially dusty jobs, such as turning compost. Have water on hand to flush eyes, if necessary.
- ✓ If possible, have sturdy work gloves available for use with tools such as shovels and rakes.

Harvesting Safety

Before students harvest any plants for eating, be sure to instruct them in how to identify the plant, and emphasize that they only harvest plants that they can identify. If they aren't sure what the plant looks like, they should check with an adult first. Always ensure that students are eating a plant that can be identified as edible (and not a weed that snuck into the garden, which can potentially be poisonous). Also be sure to check that students are eating the part of the plant that is supposed to be eaten (e.g., the rhubarb stalk is edible, but rhubarb leaves are poisonous). Have students wash their hands before harvesting and collect items in a clean container.

Sourcing Equipment and Supplies

Basic Garden Tools and Supplies

- *spades*
- *long-handled shovels*
- *digging forks*
- *hoes*
- *rakes*
- *buckets*
- *trowels*
- *hand rakes*
- *hula hoes*
- *clippers*
- *loppers*
- *wheelbarrows*
- *watering cans*
- *hoses/nozzles*
- *other irrigation supplies*

The quantity of each sort of gardening tool you buy will depend on your budget and the scale of your program. Quality tools, even though they cost a little more, will hold up under the wear and tear youngsters often give them. If possible, acquire child-size tools, along with full-size tools for teachers and parents to use.

A local garden supply business or a local charitable organization may donate tools. Schools have had success using tools such as Freecycle, a network connecting people who have a need with people who have an item to give away. Visit freecycle.org/ to find a Freecycle group in your area. You can also consider borrowing or renting items you will

only need once, such as a rototiller or a post hole digger.

Lumber and Other Building Supplies

You can approach a local lumber company about providing materials or offering a discount on materials for fencing, raised beds, or a tool shed; a parent may have the skills needed to design these elements and/or lead a volunteer work party in construction.

Seeds and Plants

Seeds are an ongoing need for a school garden. Many seed companies are happy to give away expired seeds to school gardens, and most seeds are still viable the year after they expire. Some are viable for many years. You could initiate a letter-writing campaign with your students to contact seed companies requesting donations.

Sometimes you will want to acquire plants for your garden instead of sowing seeds yourself. Garden centers may be willing to donate seedlings.

Compost

Check with your local waste management department; where green waste is collected, it is often composted and distributed for free or at a low cost. Mulch, in the form of wood chips, may also be available.

Keeping the Garden Growing

Growing and Maintaining the Garden with Students

Preparing the Soil for Planting

Bed preparation is one of the most important steps toward a thriving garden. Living soil will produce plants less prone to pest and disease problems. Your primary goal in bed preparation is to loosen the soil so that roots, water, and air can easily penetrate it. Bed preparation also includes mixing in compost or other soil amendments.

Before you start breaking ground, check the soil moisture by squeezing a handful of soil into a ball in the palm of your hand. The soil should keep its shape when you open your hand but crumble when touched. If soil sticks to your shoes or tools, it is too wet to dig. Digging wet soil will damage the soil's structure and leave you with huge dirt clods instead of the crumbly texture ideal for gardening. If your soil is dry and dusty, water it thoroughly, and let the area sit for a few days to attain the moisture level described above.

If you tested your garden soil for nutrient content and texture (sand, silt, and clay content) when planning your garden, use this information to decide what, if any, amendments you will add. Adding organic matter can improve the fertility and texture of any soil and is especially helpful if your soil has a high clay or sand content. You can add organic matter in the form of compost, sterilized manure, mulches, or cover crops. As these materials break down in the soil, they slowly release a wealth of nutrients to your plants. When you harvest, you remove those nutrients, so it is important to add organic matter each time you plant.

If your site is small, and the soil is not too compacted, you can turn the soil using spading forks and shovels. This method gets more people involved and is less expensive and more energy efficient than using machines. But if your soil is compacted, it may be best to turn it initially by machine. Rototillers are a good solution for sites that are less than an acre. For larger sites, you might consider using a small tractor with plowing attachments.

Tips for working the soil with students

- When using tools, always review safety measures first, such as keeping metal parts of tools below the hips.
- Demonstrate how to accomplish the task at hand before having students get their tools.
- Break large tasks into small tasks, and give everyone a job.
- Consider using trowels instead of large tools to prepare the soil. This will allow everyone to participate simultaneously.
- Students can add a layer of compost to

the soil by scooping handfuls from a pile or wheelbarrow and sprinkling them over the bed.

Planting with Students

Starting seeds indoors

Starting seeds indoors allows students to observe germination and provides a controlled environment for young plants. By starting plants indoors in spring, you can give your garden an early start while the weather is still cold. Start your seeds in any container that is 2–3 inches deep with drainage holes. Yogurt containers, small milk cartons, and similar small containers work well. Old six-pack seedling containers are ideal, and students can bring them in, or nurseries can donate them. Fill your containers with seed-starting mix. You can purchase this at garden centers, or make your own by mixing equal parts horticultural sand, compost, and coco pith fiber.

Before planting, wet the soil mix so that it is as damp as a wrung-out sponge. Fill your containers, then lightly tap them on a surface to settle the soil. Fill in with more soil if this process reveals that they are not full enough.

A good rule of thumb is to plant seeds about two to three times as deep as they are wide. Check the Vegetable Planting Guide or seed packet for specific guidelines. After planting your seeds to the appropriate depth, water them with a gentle spray of water, let the water soak in, and repeat until water has penetrated to the depth of the seeds.

Tips for sowing seeds in containers with students

- ✓ Enlist your students to help collect and wash out containers such as empty yogurt containers, small milk cartons, etc.
- ✓ Choose the space carefully where students will be filling their containers with seed-starting mix. This works well outdoors where it is okay to spill soil; it can also work indoors if you cover the ground with a tarp, or teach students to carefully fill containers over the top of a wide-mouthed container of soil.
- ✓ Use large seeds, like beans and peas, with young children who are developing their fine motor skills.
- ✓ If watering indoors, you can use a spray bottle on a mister setting to avoid children overwatering.
- ✓ You can create fun containers such as root-view cups, wheat heads, or newspaper pots, all of which are described in Life Lab's The Growing Classroom (lifelab.org).

Sowing seeds directly in the garden

Some crops grow better when they are started directly in the garden. Root crops such as carrots, radishes, and beets don't transplant well; crops such as corn, beans, peas, squash, melons, and cucumbers don't transplant well either. A seed packet will have information about whether the seed does best when started in a container or when direct sown. To direct sow a seed, prepare your garden soil. Then refer to the seed packet for instructions on how deep and far apart to plant your seeds.

After you have directly sown your seeds in the ground, it is important to keep them moist until they germinate. Water with a watering can or hose attachment that delivers a gentle sprinkle. You may have to make many passes of light sprinklings to be sure the soil is moist beyond the depth of the newly planted seed. Avoid flooding your newly planted area; this

can wash away seeds and/or cause your soil to form a crust on the top, which makes it difficult for some seeds to push through the soil. Keep an eye on your seedbed, and keep it constantly moist. Depending on the weather, you might need to water it daily.

Young sprouts are often tempting to birds and other critters! Try covering your seed beds with floating row cover, bird netting, or upside down strawberry baskets, or hang bird flash tape over your bed.

Tips for sowing seeds directly with students

- ✓ For seeds that are to be planted less than an inch, help students dig a small furrow to the appropriate depth, space seeds down that furrow, and cover with soil.
- ✓ For seeds that are to be planted an inch deep or more, have students space seeds along the top of the soil and then "drill in" each seed using their fingers. They can measure their finger to find an inch (i.e., up to the second knuckle) and then drill each seed down to that depth.
- ✓ For spacing seeds, students can make and use a sowing string, which is a string with stakes on either end and colorful tape spaced evenly (e.g., every 4 inches). You can connect with math by asking students questions: If I am supposed to plant these plants 12 inches apart, how can I use this string to space them accordingly?
- ✓ Alternatively, for spacing seeds, you can bring out rulers, and have students measure the distance from one planting hole to the next by using rulers or using their "farmers' measurements," such as the width of their fist or the distance from their thumb to their pinkie on their open hand.

Transplanting Plants

When are your plants ready to transplant into the garden? When seeds that were started in containers have at least two sets of true leaves, and their root systems are established enough to hold soil around them, then they are ready to be transplanted or moved from their containers into the garden. You can transplant young plants from seeds you and your students started yourselves, or you can purchase young plants (also called seedlings or transplants) at a garden center to plant in your garden.

To transplant, dig a hole in your soil about the same size as the container your seedling is in. Then remove a plant from its container by turning the container on its side and squeezing the sides of the container gently to wriggle out the plant. Make sure not to remove the plant by pulling hard on its stem. Then place it in the hole you made in the soil, and fill it in to the same depth that they were in their containers. Refer to a planting guide or seed packet for spacing information.

After transplanting, water transplants with many passes using a gentle spray, letting the water seep in between passes or by trickling water directly around the transplant's root zone. Use your finger to make sure there is moisture at the depth of the roots.

Protect your transplants from pests, like birds, by covering the young plants with upside down strawberry baskets, netting, or floating row cover (thin, lightweight fabric available at garden centers).

Tips for transplanting with students

- ✓ Have your students mark out the spacing of the transplants before planting them in

the bed. First, help them find the spacing information on a seed packet or plant reference guide. Then they can mark the spots to be planted ahead of time by using rulers or "farmers' measurements" to measure the appropriate distances and then sticking trowels or plant markers into each spot where a plant should go.

- ✓ For younger students, wriggling the plant from the container can be tricky. Instead, have them dig the hole. Then you can place the plant in there, and the student can fill the hole in.
- ✓ Teach students to "tuck in" their transplants with a gentle pat on the surrounding soil or by using their thumbs and index fingers to create a triangle around the stem and give their plant a "triangle hug."

Watering

Water is the most basic plant growth requirement: without enough water, garden plants will ultimately die. Therefore, it is essential to work out a system to get water to your plants regularly.

Some school gardens are watered by hand, and you can see tips below for involving students in watering. The challenge with hand-watering, however, is the sheer amount of time required (with or without students). For this reason, many school gardens use drip irrigation. Drip irrigation refers to systems that slowly drip water onto the soil surface at roughly the same rate as it soaks into the ground. This method effectively meets most watering needs in garden settings. It is water-saving and time-efficient, and it allows for thorough irrigations for both seedbeds and mature plants. Systems are easily designed to keep water out of non-crop areas and to prevent future weed problems. Visit savingwater.org for information on effective irrigation or dripworks.com for irrigation supplies. Dripworks provides a 10 percent discount and a free irrigation system design service for school gardens!

Tips for watering with students

Watering is a garden activity that many students enjoy. Your students might not deliver all the water the plants need consistently, but it is still a great idea to involve them in watering and caretaking sometimes. As with any gardening task, students are most engaged and learn the most when everyone has a job to do:

- ✓ Give each student their own "watering can," which can be an empty, washed milk jug with holes poked in the lid; or a small yogurt container with holes poked in the bottom nestled into a second, solid yogurt container. When they arrive at the plant, they simply lift the cup with holes, and let it drip over the base of the plant.

Before sending students out with a watering can or hose, make sure they understand a few watering basics:

- ✓ It's best for the plants if students make many passes with a gentle spray of water, rather than flood an area, especially when there are newly planted seeds in the soil. Teach them to make a pass with the water, wait for it to completely soak in, then make another pass, wait again, etc.
- ✓ You can check that you have watered to the level of the roots, rather than just the surface, by poking a finger down into the soil to root depth and feeling for moisture.

Mulching

Mulching is the practice of adding a layer of

material to cover the soil, such as straw, leaves, or other organic materials. Mulching can benefit your garden by reducing weed growth and keeping moisture in the soil. When choosing a mulch, consider availability, possibility of weed seeds, and possibility of plant-discouraging qualities. Finding a local, abundant source of mulch saves money and resources. Collect leaves from a tree at your school to use as mulch, or ask parents to send their old newspapers or cardboard boxes to school. Straw is a great mulch and is inexpensive; one bale goes a long way.

Tips for mulching with students

- ✓ Mulching is an ideal task for a large group of students. Many small hands can easily do the work of tucking handfuls of straw around and between plants.
- ✓ You can teach students to fill in around plants with a thick layer of mulch, lightly pressing it down to create a compact layer, and tuck it neatly into the edges of the bed, as if they were tucking the plants in for bedtime!

Cover Cropping

Cover cropping is the practice of planting an area with a crop that covers the soil surface to prevent or reduce erosion, and then, once turned under the soil, improves soil structure and fertility. This is a way to enrich an area of the garden that is not currently being used for harvestable crops (e.g., a bed that will not be used for the summer). This practice has many benefits for the soil as well as potential benefits for pest management. Cover crops increase soil organic matter, fix atmospheric nitrogen into a form that plants can utilize, improve soil structure and soil-water relations, prevent erosion and nutrient leaching, and help minimize weed growth. Most cover crops are relatively easy to grow and can be interesting, low maintenance annuals in the school garden. Cover crops can be chopped into the soil or can be removed and turned into compost, which can then be added back into the bed. Ideally cover crops are cut down before they set seed, so they don't sow a new (undesired) crop. If you turn them under the soil, wait two to three weeks for the cover crops to break down before planting in the bed. For information about specific cover crops that work well in your area and when to plant them, contact your local Cooperative Extension office or garden center.

Tips for cover cropping with students

- ✓ Many legume (bean/pea) cover crops have large seeds that are easy for students to plant by "drilling" them into the ground with their fingers and then covering up the hole.
- ✓ Grass cover crops have small seeds that are fun to broadcast (or scatter) and then lightly rake into the soil.

Weed Management

One of the never-ending garden maintenance tasks is weeding. On the one hand, weeds are problematic in gardens because they compete with crop plants for sunlight, water, soil nutrients, and space. They can also serve as habitat for garden pests, or make the garden look untidy. On the other hand, sometimes weed species play a beneficial role in the garden. Weigh the potential benefits against problems they may be causing. They can improve the soil through root penetration and increased organic matter; they can provide a habitat for birds, worms, insects, and other animals; and some are edible or can be used as medicinal plants. Weeds are also useful for student investigations (e.g., students studying roots can pull up a

variety of weeds and compare and contrast their root structures).

Weed Prevention Strategies

To prevent weed problems:

- Water only where you want to see plants growing. As much as possible, keep water off non-crop areas such as paths.
- Mulch paths heavily with a material that keeps weed seeds from germinating and seedlings from emerging. A good choice is cardboard or landscape fabric, covered with wood chips.
- Eliminate weeds when they are small; it's easier than removing big weeds later.
- Remove weeds before they go to seed or otherwise spread.
- If you have many weeds and few helpers, decide which weeds should be given highest priority and tackle those first.

Weed Elimination Methods

When choosing a method for weeding an area of the garden, consider which will work best with your weeds, your students or volunteers, and the current conditions in your garden, such as soil moisture and weather. You may want to use different methods in different areas of your garden.

- Hand pulling
- Digging (for big weeds with deep roots)
- Hoeing
- Mulching (with some species this works even once weeds are growing if you mulch thickly enough)
- Mowing or using a weed whip
- Solarizing (covering with clear plastic for several weeks during warm weather to let heat kill weeds)

Tips for Weeding with Students

- ✓ Before weeding with students, water the weedy areas well so that the weeds come up more easily. Students get frustrated if they can't pull the weeds out but feel great satisfaction if they can!
- ✓ Before weeding, clearly mark any plants to keep so they don't accidentally pull out your best crops.
- ✓ Have student count their weeds; make a weed chart.

Pest Management

Healthy plants have fewer pest problems. Keeping soil fertile and irrigating adequately will prevent many pest problems from occurring. Follow the guidelines below for ecologically sound pest control.

- **Look for disease-and pest-resistant varieties:** Many crop varieties are less susceptible to disease and pest problems. Information on resistance is often available in the variety descriptions in catalogs and on seed packets.
- **Choose appropriate crops for your region and season:** Many plants will succumb to pest attacks if they are grown in the wrong climate zone or during the wrong time of year. You can avoid pest problems if you start by doing your research and making careful choices.
- **Clean up your garden:** Diseases and pests can remain on infected and dead plant material where they can survive until attacking another host crop. Remove infected plant leaves, keep weeds to a minimum, and clean up the garden regularly.
- **Encourage beneficial organisms:** Make the garden inviting to beneficial species such as ladybugs, wasps, lacewings, and birds

that are known to feed upon pests. Plant appropriate habitat species, choosing perennials that have consecutive flowering periods and limiting the use of insecticides that can kill beneficial species as well as pests. Adding a birdhouse or a water feature, such as a fountain or bath, can also help attract birds.

- **Practice crop rotation:** Pests and diseases that affect certain crops build up in the soil if the same crop is grown in the same location repeatedly. By planting a different crop each year in any one location, on a three year cycle, you can avoid many disease problems.
- **Use physical barriers for pests:** Often the most damaging pests to our gardens are rabbits, squirrels, and gophers. When properly secured, row cover (available at garden centers) is an effective barrier to nonburrowing vertebrates. Gophers and other burrowing pests can be kept out of beds lined underground with gopher baskets or hardware cloth (wire screen). Most traps and poisons are potentially dangerous to children and other species and must be used with discretion. Check regulations at your school and district to find out what is allowed.

Tips for Controlling Critters with Students

- ✓ Hand-picking pests is a method that is rarely viable in commercial operations but effective when you have twenty students eager to help out. If you have chickens, you can feed snails and other pests to the chickens. Note that moving them to an area near the garden will not be effective because they will work their way back in.
- ✓ Involve students in using rolled up newspaper or boards to capture critters. A board on the ground will attract snails and slugs. Students will enjoy turning over a board to find creepy crawlies.
- ✓ Let students research and identify beneficial insects and pests. The more they learn, the less likely they will be to indiscriminately squish insects.

Sustaining Community Engagement in the Garden

As a FoodCorps member, it can be really exciting to think about designing and installing a new garden. A little less flashy, but no less important, is the plan for maintaining that space once it's built. To avoid building something that, over time, will become an abandoned, weedy 109patch, it is essential to think through what a garden will take to maintain at the outset.

Making a Garden Maintenance Plan

As a FoodCorps member, you may only be at your school for a year or two, so it is essential that you only install elements that you have strong reason to believe will be cared for over time. The best way to achieve that goal is to make a garden maintenance plan together with other garden supporters at the outset. An overall plan for maintaining your garden might include the following:

- A schedule for class use of the garden (if it is a shared area)
- A volunteer work schedule
- A watering schedule
- A plan for weeding, fertilizing, and composting
- A supply-ordering system
- A summer maintenance program

Ideally, students will do much of the garden maintenance (weeding, watering, and composting) as part of their activities in

the garden. For any remaining maintenance, you can make a task list that rotates among participating classes, parent volunteers, or other garden supporters.

Summer Garden Maintenance

Here's one tricky thing about school gardens: Summer is generally the most productive time in a garden but the quietest time in a school! Here are some ideas to keep your garden going during the summer so that in the fall it will be full of treats to harvest instead of weeds.

Prepare Your Garden for the Summer

Here are some things you can do before the end of the school year to encourage garden health and growth over the summer:

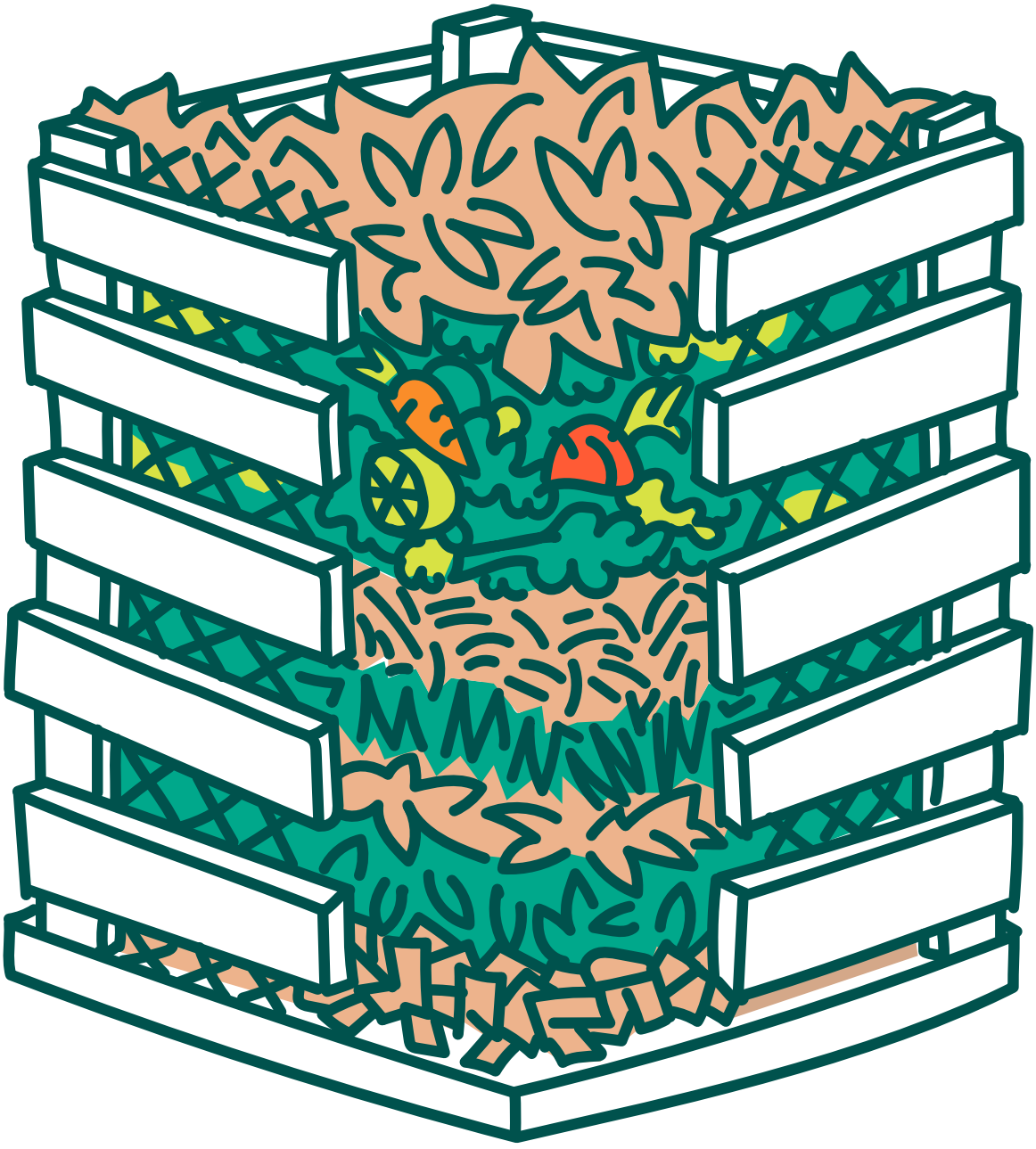
- Weed thoroughly!
- Install drip irrigation on a timer so that the garden gets watered over the summer.
- Plant crops that can thrive on a plant even after they've matured as well as crops with long days to harvest. This way your students can come back in the fall to tall sunflowers, popcorn, and winter squash, for example, instead of zucchinis the size of baseball bats.

Garden Guardians

You can ask families or neighbors sign up to "adopt" the garden for a week or two during the summer. Leave simple directions on where to water and weed, and encourage your Garden Guardians to harvest the veggies and flowers that are ready for picking. This will not only serve as a simple thank you but also encourage your plants to keep producing fruit and flowers. Make a schedule for the summer, complete with phone numbers of the weekly caretakers so that they can find substitutes if summer plans change. Host a brief training to show each volunteer what to do during their week.

Host a Summer Program in the Garden

If possible, sign up to lead a summer school group, Sprout Scouts Club, or summer camp, and incorporate maintaining the garden into your activities with students.



Working & Learning in the Garden With Students

Below are some specific tips for applying the general principles outlined in the Reframing Classroom Management section of this guide within a garden setting. Please refer to page p. 79 for an overview of the 4 Ps.

Personal Relationships

Depending on the location, some gardens can offer big open spaces for physical team-building or icebreaker activities, such as Extreme Rock Paper Scissors. This and many other icebreakers are described at icebreakers.ws.

Perceptions

Students will be more focused in the garden if they genuinely understand that the garden is a classroom. Consider calling it an outdoor classroom or garden classroom.

Just like inside the classroom, students respond well to consistent routines. Here are a few examples that many veteran garden educators use every time they head out into the space:

- Before heading out to the garden (or at the garden gate), review the Garden Agreements or behavior expectations.
- Before sending students out to explore in the garden, establish clear physical boundaries and teach a "callback." This could be a bell or chime that you ring, a coyote howl that you call out, or the like. When students explore, they are expected to stay inside the boundaries, and when they hear the callback, they are expected to come back together.
- Start every garden lesson with a brief, exploratory activity. This can often serve as the Engage and/or Explore portion of a 5-Es lesson plan. It can be as simple as sending students out to look for three things that have changed since the last time they were there. When students arrive in the garden, their attention is naturally drawn to the surroundings, so it makes sense to capitalize on that rather than trying to resist it.
- When you're ready to engage in a whole group discussion, take the time to gather in a circle (ideally in an established gathering area), and wait until it is quiet so that everyone can see and hear one another. You might do this to go over the plan for the rest of the lesson with your students, have them share discoveries they made, ask thought-provoking questions, introduce new concepts or vocabulary, explain the flow of stations, or that kind of thing. This will often be relevant during the Explain portion of a 5-Es lesson.
- At the end of the lesson, during the Elaborate and Evaluate portions of a 5-Es lesson, you will often be asking questions about both the content of the lesson (e.g., Why are flowers important to plants?) and

the experience (i.e., How did we work well together today? What can we work on in the future?). For this conversation, gather again in a circle, and, again, wait until it is quiet to begin so that everyone can see and hear one another.

Parameters

On the one hand, working with students outside in a garden setting can be wonderfully engaging, invigorating, and heartwarming. On the other hand, it can also be tremendously challenging. In part this is because students usually go outside during the school day for recess, so their idea of behavior expectations outdoors are quite different from inside the classroom. It is essential to establish clear behavior expectations with students for their garden or outdoor classroom, which is different from the indoor classroom but also different from the playground.

When you first meet your students, we recommend establishing a set of behavior expectations for the garden. When students are part of the process of establishing these expectations, they are more likely to understand and uphold them. See the "Developing Group Agreements" section of this guide for strategies on establishing behavior expectations together.

The following is a set of behavior expectations commonly used in school gardens:

- Respect the plants, the animals, the nonliving things, and the people in the garden.
- Ask before using any tool or picking anything.
- Walk on the pathways in the garden. In addition, if relevant, you and your students can create specific expectations for using garden tools, such as the following:
- Use tools for their intended purpose only.
- Keep the sharp end below the knee.
- Walk with tools.
- Always put tools away when finished. If you post a list of your Garden Agreements prominently, then all students, teachers, volunteers, and visitors to the garden can see them and review them regularly.

Participation

As with any activity, your garden lessons will be more engaging and less chaotic if everyone has a meaningful way to contribute and participate. We often engage in "inefficiency by design." For example, a home gardener would never water her garden by filling a little yogurt container at the kitchen sink, walking outside to pour it onto a plant, and then returning to the sink to refill her cup. That would be incredibly inefficient! If you have thirty little students, however, all eager to help water, this is a great way to give everyone a chance to get involved. These are other similar examples: Preparing the soil in a garden bed with a whole class of students by using trowels instead of large spades and rakes or delivering compost by small buckets instead of using a wheelbarrow.

In addition, FoodCorps members can use a variety of creative strategies to make their class sizes more manageable in the garden, including bringing in additional adults, using small-group cooperative learning, and rotating activity stations.

Many members manage class time in the school garden by increasing the adult-to-student ratio. Enlist the support of the

classroom teacher during your garden lessons. In addition, if possible, ask a volunteer who is trained and comfortable working with students to help regularly. While the classroom teacher and/or volunteers help manage gardening activities, such as weeding or watering with part of the class, you can present a more complex garden lesson or activity with another, smaller group, and then invite students to rotate through the stations. In addition to supervising garden tasks, classroom teachers and volunteers are often easily able, with minimal prep, to jump into reading a story aloud or supervising scavenger hunts or observation activities, so these all make good station rotations for small groups.

Small-group cooperative learning and station rotations are especially effective in the school garden setting. For example, in the fourth grade Garden Grids FoodCorps lesson, there are three groups working simultaneously: one is planning a square foot garden on a worksheet, one is planting a square foot garden, and one is working on a garden chore such as weeding.

Providing for Students' Physical Comfort

Students will have an easier time focusing on lessons and garden tasks if they are not distracted by physical discomforts. For instance, it will be much easier for them to look at you and listen to you if you stand so that the sun is in your eyes, not theirs. This means that, when you circle up, you should be looking into the sun to ensure that the students don't have to (of course, you can wear a sun hat to protect your eyes).

Making sure students are warm enough or have a shady spot to retreat to in hot weather can make a big difference too. Bring out a first-aid kit with Band-Aids and sunscreen and a water cooler where students can fill water bottles, cups, etc. Provide clipboards when students will be writing in the garden. All these measures will help students engage in learning in the garden.

Recommended Resource

The Growing Classroom, lifelab.org

Cooking With Students

The experience of cooking with students can range anywhere from a life-changing, rewarding class to a giant mess of yucky food. The most successful lessons take into account timing, minimize transitions, and maximize student-guided learning. Some best practices for cooking with larger groups of students are as follows:

Cooking Safety

Handwashing

Getting a large group of students to wash their hands is a time-consuming task. If there is not ample time in the lesson to allow for sink washing, consider hand sanitizer or wet wipes. Handwashing is the most important thing you can teach and enforce to cook and eat safely with your students.

Demonstrate handwashing, emphasizing the importance of removing all food from hands, washing every surface with hand soap for at least fifteen seconds, and rinsing thoroughly. A fun way to make sure students wash their hands long enough is to use a song: Scrub your hands with soap while singing "Twinkle, Twinkle Little Star" or "Happy Birthday" twice through. Then you're ready to rinse! Demonstrate to students how to maintain clean hands while preparing food, such as "sandwich hands" (once clean, students must clasp their hands together until the directions for the lesson are delivered). For young students, explain that we do not touch the holes in our head—eye holes, nose holes, mouth hole, and ear holes.

- **Dish washing:** Demonstrate the process of dish washing, emphasizing the importance of removing all food, washing every surface with dish soap, rinsing thoroughly, and, if relevant at your site, sanitizing equipment with a quick dip in water with an extremely dilute amount of bleach (one-half fluid ounce of bleach per gallon of water—check with school policy to ensure you can use bleach in the classroom). Leave dishes to air dry because wiping dry with a cloth contributes a greater risk of cross-contamination.
- **Food storage:** Follow ServSafe® food handler guidelines to avoid cross-contamination and foodborne illness. Most important, this includes time and temperature control to keep cool foods cold below 40 degrees and hot foods hot above 140 degrees. Store food in see-through containers so that you can remember what you have on hand. Label food by expiration date as well as the class that you plan to use it for. Do not use glass containers for cooking or storage; glass is a physical hazard for cooking with students because it may shatter and is often heavier than metal or plastic alternatives.

Cooking Safety

- **Allergies:** Always inquire about an updated allergy list to keep abreast of student food allergies. Ensure that other adults who will be assisting you are aware of these allergies. Do not cook with ingredients to which any of your students may have an allergic reaction

(see p. 101 for details about handling allergies).

- **Cooking with heat:** Be sure to take precautions when cooking with heat, including setting up the burner in a safe space. Keep an eye out for cords that students may trip on. Turn pot handles inward as you cook so that students don't bump the handle and spill a hot pot of food. Consider age-appropriateness when involving students. It may be a good idea for you to remove the pot from the burner and transfer it to a cooler container before serving from a hot pot. Always make the transfer of hot foods an adult responsibility instead of having a student do this task.
- **Aprons:** Encourage students to wear an apron when possible; this will help protect skin and clothes from spilled hot water or splattered oil.
- **Knives:** If students are using knives, consider doing a skill assessment to see how well they know how to use them before you start your lesson. Always consider the skill level of the group and age appropriateness of what you are asking students to do. Also consider class size and your ability to monitor each student and provide feedback and advice. Children are often capable of more than we give them credit for, and they can only learn a skill by trying it! However, safety is the top priority when using knives with students.

Knife safety rules

1. Keep the tip of the knife on the cutting board.
2. Go slow and stay low.
3. Make a bear claw with the hand holding the food.
4. Stay focused with your eyes on the job!
5. When you are finished using a knife, place it in a Dirty-Knife Bucket, or lay it on your cutting board, aiming the tip away from yourself.
6. To give a knife to someone else, put it down and ask them to pick it up.

NOTE: Keep knives in a container apart from other kitchen tools with a lid that snaps shut. It's also good practice to count your knives before and after a lesson as an extra safety precaution.

Knife Safety Tips

- **Knife safety demo:** Show students the chart of rules and go over each one. Create a gesture for each rule that students can mimic. For example, have them growl like a bear when they make their bear claw, or bug out their eyes when you talk about staying focused. Unless you are working with round tipped knives, dull knives are more dangerous than sharp knives. Consider if the knife type and sharpness are proper for the lesson.
- **Knife demonstration:** Model how to cut each vegetable students will be working with. Ideally the cutting surface is waist high. Students should be able to clearly see what they are cutting. Be sure to go slowly and exaggerate and highlight the proper techniques you wish to see from them. Emphasize a solid hold on whatever is being cut, consider the thickness of the food, and demonstrate the appropriate size piece that you are aiming for. Say things like, See how I keep the tip on the cutting board the whole time, and I just rock the knife back and forth. See where my other hand is when I'm cutting. If your classroom has a document camera, project your demonstration so all students can easily see. Put your finished samples into small bowls,

and give them to students for comparison when they're cutting.

- **Safety monitors:** Distribute trays to groups of students. Assign students pairs, and explain that each pair will have a chopper and a safety monitor, and they will be trading off halfway through. Say, It is the job of the safety monitor to make sure that knife safety guidelines we discussed are being followed. Then pass around knives individually. If you have other adults present, designate each to supervise one or two groups. Circulate through the room, guiding students to be safe and use proper technique. Give students a two-minute warning; when time is up, collect all knives, and have students clean their spaces.

Recommended Resources

- *Garden to Cafeteria Policies and Protocols* by Life Lab
- ServSafe® Certificate Course
- Institute of Child Nutrition Food Safety Resources
- Emergency and Accident Procedures in the FoodCorps Handbook

Cooking With Students Basics

Minimizing Mess

One trick to creating less of a mess during a lesson is to pass out small amounts of food and ingredients. It seems simplistic, but a large part of the waste after a large class is excess ingredients and wasted food. Students can share tools, and not everyone in the class needs to be doing the same task (i.e., not everyone needs to use knives; different tools can be allocated to different groups). Keep reusable dish towels or paper towels on hand to wipe down tools and equipment like bowls and pans before taking them to a sink. With a large group of students, assign "materials management" roles—these students will be the only ones who pass out materials and help clean up as you go (great for the wiggly ones who can't stay in their seats!). When preparing recipes with small tastes, always try to scale down materials (i.e., napkins or wax paper pieces instead of plates and paper sample cups for a utensil-free bite of food).

Managing a Group

The expectations for a large group of students are different from those of a small group of ten to fifteen. First, all students will not do every task; instead, divide and conquer. Split into teams or pairs to learn new skills or execute multiple parts of a recipe. When planning for a larger group, think of a recipe that will provide enough roles for everyone, and each role should take about the same amount of time. At the beginning of class, introduce a clear signal for getting everyone's attention—ringing a bell or a call and response—so that voice-raising is minimal. Address misbehaviors immediately with a no-nonsense tone and appropriate consequences, ideally based on existing classroom expectations. Positively reinforce excellent behavior loudly and often.

Making Cleanup Easy

Make cleanup easy by breaking your class into weekly rotations and assigning each group age-appropriate tasks that emphasize cleanup as a fun group activity! The "sweepers" can sweep the floor, the "washers" can wash dishes, the "dryers" can dry dishes, and the "trash crew" can dispose of waste or recycle. Make sure to build enough time into your lesson plan to allow for cleanup to be part of the activity.

Sourcing Food

When working with a small budget, sourcing food requires a bit of creativity and imagination. Consider exploring the following sources:

- **Donations and/or gleaning:** It is important to prioritize paying farmers for the fresh foods they can provide for your programming, if possible. However, local farms and gardens may have produce "seconds" that they offer at a reduced rate or offer opportunities to glean produce from their fields for your classes.
- **Cafeteria:** Your cafeteria may have leftovers that are salvageable for your recipes. Make sure to check expiration dates, and store your leftovers appropriately to follow ServSafe® safety protocol!
- **Check with your food service director to see if your school participates in the USDA Fresh Fruit and Vegetable Program.** This program provides funding for fresh fruit and vegetables to be served outside the National School Lunch Program and School Breakfast Program meal service times such as for snacks, demonstrations, and education (with some restrictions). If your school is participating, it submitted an application that includes an implementation plan you should inquire about and refer to in planning to connect with this program.

Considering Students' Access to Food

Before introducing a new food to your students, consider the following questions:

1. Can students or caregivers access the food fairly easily on foot, by public transportation, or with a short car ride?
2. Can students' caregivers adapt the food into existing recipes and meals they create at home?
3. How will recipes you share with students be shared with caregivers or families?
4. Is the food accessible in canned or frozen form? Both of these options can be considerably more affordable.
5. Can the food round out a meal and provide dense nutrition for an affordable cost?

Selecting Recipes

1. **Prep time and cook time:** Think about what produce may need to be washed and peeled before class. Consider how long it takes to set up your cooking stations. Additionally, take into account the amount of time it will take to prepare a recipe, considering the scale of the tools available to you; most recipes are designed to be used in full-scale kitchens.
2. **Accessible ingredients:** Always keep your student demographic in mind. Consider budget-friendly options that your students and their caregivers can access within a short walk, bus ride, or drive.
3. **Student interest and growth:** Checking with students to find out what types of recipes interest them is an excellent way to begin your search. Feel free, at your discretion, to search for recipes that challenge students' taste buds, too! Administering student surveys helps determine how to pinpoint the best recipes for the future.
4. **One old, one new:** The "one old, one new" guideline allows students to try a dish that features "one old" food (a food they might already be familiar with) in the same meal that they try "one new" food (a food that is unfamiliar). You can also say "bridge foods" for old foods because they help move from old foods to new foods. Look for recipes that feature familiar and unfamiliar foods to

support and challenge your students!

5. **Community-rooted:** Ensure that the recipe is appropriate for your student group. Some families do not eat specific meats or have a high number of community members who are lactose intolerant. Although it is important to introduce students to new, nourishing foods, remember to consider how their family and upbringing informs what foods are selected.

Activities to Engage Students in the Cafeteria

Overview

FoodCorps seeks to build a movement that helps inspire schools across the country to reimagine school cafeterias. We believe all cafeterias have the potential to be powerful educational and community spaces, where students learn social skills, develop a sense of community, and have the opportunity to eat a nourishing meal. The goal of this guide is to support FoodCorps members in having a positive, transformative, and regular presence in the cafeteria. Here you will find quick, easy, and adaptable activities that you and your school community can do to create a safe and joyful dining experience where making the nourishing choice is the easy (and cool) choice.

Regular FoodCorps Member Cafeteria/ Mealtime Presence

We know that a student's cafeteria or mealtime experience can get them excited about trying new foods and steer them toward the most nourishing options. Although all school cafeterias and mealtime environments have the potential to be spaces that positively influence health and education, that is not the current reality for far too many schools. Every school experience is different, and although some schools have wonderful, joyful mealtimes, many schools across the United States experience lunch as a time of stress. Cafeterias can be extremely noisy and chaotic for students and adults alike, short lunch periods can mean students don't have nearly enough time to finish their meals while also socializing with friends, limited staff capacity can result in schools implementing restrictive policies to manage behavior (e.g., not allowing students freedom of movement or enforcing silent eating time), and the physical environment may feel unfriendly and unwelcoming. Some students may not eat and remain hungry due to limited time to eat, the social stigma of school lunch, or a general dislike of school lunches. Schools often see an increase in bullying, social isolation, and disciplinary action during mealtime as well.

That's why FoodCorps members play an important role in this area by having a regular presence in the cafeteria or mealtime environment and engaging students through these activities. This section of the guide is intended to support members in identifying simple activities they can start doing this year.

Additionally, it is important to connect what happens in the cafeteria with what happens in the classroom. In the FoodCorps Lessons Book, you will find lessons that provide opportunities to connect cafeteria and classroom learning. Additionally, the Lessons Book includes several charts that specify lessons that highlight cooking and tasting activities. Although we have developed many of these lessons for a

classroom setting, consider how these activities connect to cafeteria efforts or could even be modified to lead in the cafeteria setting.

Finally, at the end of this section you will find selected resources for procuring local foods that can be served to students in the cafeteria. This includes FoodCorps-developed webinars and important USDA resources.

Activity Ideas

We adapted these ideas from FoodCorps member ideas and existing best practices.

Entering the Cafeteria

What is this experience like for students? Do they trickle in, or are they required to enter in straight, silent lines? Is there someone welcoming them to the cafeteria and making this time of the day feel special?

- **Cafeteria greeting:** FoodCorps member with selected students form a welcome tunnel and high-five students as they enter the cafeteria. Along the way they share positive, encouraging words: *Welcome to lunch; Awesome seeing you; etc.*
- **Post positive messages:** Post visuals with cafeteria rules and expectations as well as other positive and encouraging messages.

Waiting in the Meal Line

What experiences do students have in line? Does it move quickly? Are they socializing, or is the line supposed to be silent? Are there opportunities for students to engage in any activities related to the cafeteria such as tastings of the day's meal, voting for their favorite harvest-of-the-month ingredient, or creating names for new menu items?

- **Menu emcee:** Get on a microphone, or use your outdoor voice to show excitement about today's meal by giving students an overview of the menu and highlighting any local produce/farms where the food might come from.
- **Student voting:** Place a flip chart, easel, markers, and stickers for voting at the cafeteria line with a vote of the day or week that students can answer, as a way to elevate their voice. For example, you can have students vote for their favorite seasonal vegetable (e.g., squash vs. carrots). Or you can have students suggest and/or vote on cool names for common menu items (e.g., renaming macaroni and cheese) in partnership with cafeteria staff.
- **Meal samples:** In partnership with cafeteria staff, bring samples from the meal line out to students to highlight and build excitement for that day's meal.
- **Mystery fruit or veggie or grain:** As a way to get to know students, circulate through the meal line with an unusual fruit or vegetable—something not commonly seen by students, like kohlrabi. Allow them to take a look and smell/feel the item to discover what it is. Consider an herb like lemon balm that has a strong scent. Or a "guess the grain," where students can feel the difference between a grain being served at lunch or something more unusual, like quinoa. Use this interaction to get to know students and provide a hands-on learning opportunity.

Selecting and Choosing a Meal

What do students see and experience while they are getting their meal? Is the food

promoted, displayed, and plated in a way that is fun and compelling to students? Are local ingredients celebrated through signage that helps students see the connection between local farms and what's on their plate?

- **Positive food advertising:** Create signage that celebrates local food/farms on the menu for the meal line to help students understand the connection between growers/ producers and their meal.
- **Serve lunch and celebrate offerings:** Help cafeteria staff serve lunch, or assist at the salad bar to help young students make choices.
- **Remind students about the salad bar:** If your school has a salad bar, stand at the end of the meal line, and ask students if they think they might enjoy a salad with their meal. (Students often turn around and head to the salad bar!)
- **Salad bar support:** If your school does have a salad bar, use this as an opportunity to engage students. Young students may need support learning about ratios (refer to MyPlate and Eat a Rainbow concepts) when they are building their own salad. You can develop a "model plate" to help them understand the right balance of foods. This can be a real plate of food (if available), or you can print color images of salad bar items and move them around on a real plate. Help them use the tongs and understand the options being offered as well as "salad bar etiquette." Offer assistance for putting dressing on their salad. Consider adapting the FoodCorps lesson, Salad Dressing Challenge, with students using the salad bar. You can also develop a "Salad Bar Wall of Fame" by giving students who use the salad bar a sticker to add to a "Wall Of Fame" poster with their names. (Recommended Resource: The Lunch Box Salad Bar Tools and Resources).
- **Prepackaged salad support:** Instead of a salad bar, some schools have prepackaged salad as an alternative. You can engage students about this nourishing choice by drawing attention to the salad with a "Lucky Salad Tray Day." On this day, you can add a sticker to random prepackaged salads or veggies. Students who pick up a salad with a sticker win a prize!

Eating at a Table

Do students have assigned tables? Do all students feel safe and included in the cafeteria? Are students expected to eat silently, or are there opportunities for socializing and learning?

- **Daily table topics:** Identify several age-appropriate table topic conversation starters for each table. Share with students the societal importance of conversation during a meal. It helps people learn about each other, connect, make friends, and build positive relationships. Help facilitate a conversation based on the table topics. Here are some suggestions: *What is your favorite fruit and vegetable? Why? What makes a fruit a fruit and a vegetable a vegetable? Is there a fruit or vegetable that you've never tried but would like to? Have you ever grown a fruit or vegetable? If so, what did you learn? What is your favorite food that you eat with your family?*
- **Plate waste captain:** Select a weekly captain who is responsible for helping his or her table reduce plate waste. The captain could be a part of the "green team" (see details below), armed with knowledge about how much

waste the school is creating and how to prevent this through student serving choices.

- **Food trivia:** Develop a trivia game that asks students to identify fruits and vegetables. Ensure that you lead this game only if students have previously been introduced to the fruits and vegetables highlighted in the game so they are set up for success. You can put trivia questions on cards placed at tables or on a poster at a taste test station. Another approach would be to get all the ingredients in the meal from cafeteria staff, and ask older students to identify specific ingredients in their meal (corn, wheat, ketchup in the tomato sauce, etc.). Offer prizes for trivia winners!
- **MyPlate challenge:** Lead this activity after students are familiar with MyPlate (for example once they've learned about it during classroom lessons). Plan random days to show up in the cafeteria and walk around to see if students have servings similar to MyPlate. Consider setting grade-level appropriate expectations: grades K–1 need a fruit and veggie, older grades need a balance of grains, etc. If they meet the requirements you've discussed in class (and set by grade level), they get a sticker to put on a MyPlate poster in their classroom!
- **Encourage positive behavior:** Give respect to students eating nourishing meals and trying new things, while supporting cafeteria staff in positive behavior management. One approach could be to create a "superfood wall of fame." Pick the superfood that day (a fruit or veggie being served), and students who choose to eat that superfood get to write their name on a laminated cutout "certificate" of the fruit or veggie. Tape the certificate to the "superfood wall of fame," and reuse the certificates in the future.
- **Lunch Detective:** Walk around the cafeteria as a "Lunch Detective," and when you find someone eating a fruit or vegetable or the Harvest of the Month, offer a "I tried it!" sticker. Consider offering a reward to students who receive the most stickers. Or start a raffle and honor the winner at a school assembly. Include school staff in the challenge, too! Use this club to engage other adults to become Lunch Detectives. Engage parents and teachers as detectives!
- **Creative worksheets:** Have worksheets with fruits and vegetables to color (for young students) and food facts at the table. Allow students to get creative coloring the worksheets or discussing the information on the worksheet.
- **Eat and talk with students:** Eating lunch with students shows them that you're interested in who they are as people and models positive eating habits. You can do the following:
  - Eat school lunch and sit with students. Use your Supply Fund to purchase school meals once a week. Include all the fruit or vegetables that are being offered in the meal line. Share with students and staff how much you appreciate the cafeteria staff offering these choices.
  - If you bring your own lunch, highlight what you're eating that is nourishing and delicious. You can also point out what might not be familiar to students.
  - Create positive social norms that make fruits and vegetables "cool." Encourage students to eat their fruits and vegetables.
  - Make things fun, and promote a positive environment where conversation is encouraged. Connect with students individually in a way you can't in a classroom setting.

- Dress up like a fruit or vegetable, and make people laugh.
- Learn about student motivations,interests, background, and family. Ask students what they enjoy eating and why. Learn about what motivates them to make specific food choices. Encourage them to share how their families cook specific fruits and vegetables. Pay attention to special local food recipes and customs. Share this information with the school chefs to inform food preparation and presentation.
- Remember to connect with students who sit alone during lunch.
- Reward students who are eating nourishing cafeteria foods with opportunities to get involved with special FoodCorps activities, (e.g., helping out in the garden or working alongside you to run a future taste test).

Exiting the Cafeteria

How do students exit the cafeteria? Is there a ritual to ending meal time, such as daily announcements? Is there a way to make the end of the meal celebratory and provide appreciation for the cafeteria staff?

- **Closing cheer and appreciations:** Lead a closing cheer celebrating a great meal and appreciations. (e.g., you can have students give an appreciation "clap" to cafeteria staff).
- **Waste station and goal setting:** Have students weigh total waste from their lunch, track it on a graph (an opportunity for student engagement and math connections), and set a goal to reduce waste as a community. And even simpler, stand next to the waste station to discuss plate waste as students clean up their places.

Cafeteria Team/Club Ideas

Are there student clubs or teams that can broadly support the cafeteria experience of peers?

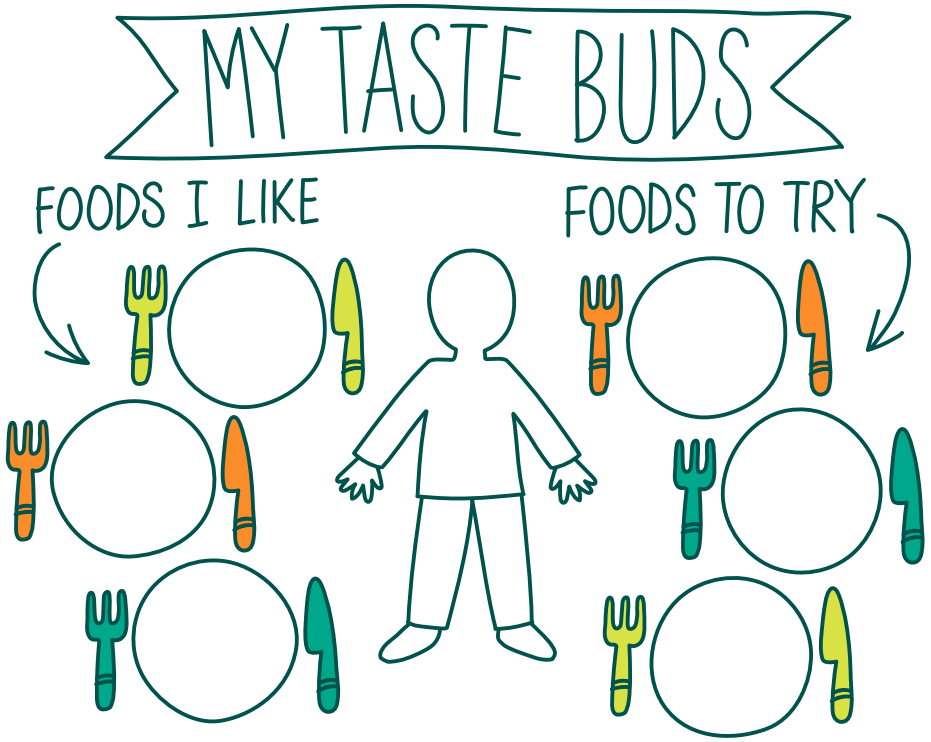
- **Nourishing Buddies Club:** Promote student mentorship by starting a "Nourishing Buddies Club" for older students to act as role models and support younger students. Train older students to offer support at the meal line, salad bar, and waste station. Nourishing Buddies wear buttons and have other "cool" incentives that make students want to join the club. Nourishing Buddies sit with students who are sitting alone and get to know the entire student body. They become health ambassadors for the school.
- **Green Team, Clean Plate Club, and Food Waste Audit:** One easy idea is to start or join a school "green team." The team could start by standing by the trash, recycling, and compost options and helping students sort as they finish their meal. Promote conversation about food waste, and ask students questions about where they think the waste ends up. If they put away empty plates, start a "clean plate club." If you would like to take this theme further, consider leading a "Food Waste Audit." This activity should be led with coordination of school and cafeteria staff. See the resource below for more information! (Recommended Resource: USDA Guide To Conducting Student Food Waste Audits)
- **Taste Buds:** Taste tests are a great way to engage students to try new foods and use their feedback to encourage cafeteria staff to integrate new local foods into school meals. (Recommended Resources: VT FEED *Guide to Taste Testing Local Food In Schools*

and Action For Healthy Kids Taste Test Guide) Taste Buds is a team of students that co-lead taste tests.

- Use the taste test as an opportunity to have students serve their peers. Promote positive social norms around "trying something new."
- Consider "short and sweet" taste tests. For instance, hold a "Blind Veggie Taste Test Competition." Blindfold two students sitting across from each other. Have them taste a fruit or vegetable. The first person to correctly identify it wins!
- Remember to take pictures of the taste test, and share the activity broadly with the school to increase interest and promote excitement!

Cafeteria Look and Feel

- **Fun food posters:** Create colorful, engaging posters that promote items on the cafeteria line, and, if possible, foods that students have also learned about in the classroom. Even better is to have your students create those posters as a club or classroom activity. You can also highlight nourishing menu items on whiteboards and bulletin boards both inside the cafeteria and other places in the school.
- **Celebrate cafeteria staff:** Honor cafeteria staff by writing their bios and sharing those on posters, through creating School Food Rockstar Playing Cards, and on cafeteria flyers. Remember to celebrate Lunch Hero Day each May!
- **Food trivia:** Generate excitement about daily cafeteria menu items through schoolwide or cafeteria announcements that can be written and posted in the cafeteria—and shared in morning announcements!



Taste Test Basics

Leading a taste test with students is a great way to introduce them to new food for the first time. It allows them to experience the smell, texture, and flavor of the food, while offering them an opportunity to authentically provide input on how they feel about the food. There are many ways to do this, including by leading a FoodCorps Lesson that engages students in growing, harvesting, and cooking a food before trying it.

This section provides some tips for how to lead a classic taste test where students quickly try a new food for the first time and offer input, using a quick, pressure-free format. For comprehensive guidance and information about facilitating taste tests, please refer to the FoodCorps Taste Test Guidebook. This Guidebook outlines best practices for leading school-wide taste tests, from preparation and planning to student engagement and feedback collection. It helps ensure your taste tests are impactful, safe, and fun!

Key Questions to Consider

Deciding What to Offer for the Taste Test

- ✓ Who will you engage in making this decision? Are students, cafeteria staff, community members, teachers, or other school staff involved in deciding the item or recipe?
- ✓ How much will it cost?
- ✓ Is it connected to the cafeteria menu? (ideally, yes; see more below)
- ✓ Is the item linked to a specific season or locally relevant holiday for students in the school community?

Logistics

- ✓ Will you need to borrow supplies from the cafeteria, like serving trays?
- ✓ Timing: When are you leading the taste test? What time works best for all school community members? Connect with teachers, cafeteria and janitorial staff, and administrators
- ✓ Numbers: How many students are you planning to engage?
- ✓ Who will prepare the food, run the taste test, and clean up?
- ✓ How will you advertise the taste test to students to generate excitement?
- ✓ How are you documenting the taste test to share success later? (photos, quotes, etc.)
- ✓ What are the best strategies to engage the community? A letter home to families? Highlight in the school newsletter?
- ✓ How will you share results? On a school bulletin board? During morning announcements?

Location and Cleanup

Where you hold the taste test influences how the taste test is run. Whether the event will happen in the cafeteria or classroom, ensure that you gain permission from those who facilitate use of the specific space you are in (teachers, cafeteria staff, etc.). It is especially important to give janitorial staff a heads-up and troubleshoot how you can ensure that the taste test doesn't negatively affect their job. Inquire about how you can thoroughly clean the space after the taste test. You may need to borrow a

broom and other cleaning supplies.

Strategies for Greatest Impact

Involve Cafeteria Staff

A taste test provides a low-cost way to explore if incorporating a new food item on the menu is marketable to students before offering it on the meal line. This information is potentially helpful to cafeteria staff who are discouraged to see food thrown away. If possible, engage cafeteria staff early on as you plan your taste test. Value their time— they are busy. Clear communication is key, especially if you are running the taste test in the cafeteria during a school meal. Remember that you share the same goals of offering nourishing, delicious food to students.

Connect to Cafeteria Menu

Coordinate the item you are offering and the recipe you use with cafeteria staff. Ideally, the item will reflect something that can be incorporated into an upcoming schoolwide meal. Ask the cafeteria staff if there is a new recipe for which they would like to do a trial run via a schoolwide taste test. Ensure that you will share the taste test results with them to inform their planning. Ask cafeteria staff if they are willing to promote the taste test with students or participate in some way. The more cafeteria staff are engaged in your efforts and are valued in the process, the more likely you will be to "connect the loop" between your taste test and school meal menu items.

Frequency

Ideally taste tests will be integrated into the school as a typical way to promote a "schoolwide culture of health." Students, teachers, cafeteria staff, and families all know and recognize taste tests as a way to show "we try new things" at the school. Instituting a regular taste test schedule is a great way to institutionalize taste tests. Considering what it takes to lead a successful taste test (people, time, and money), aim for setting up a taste test calendar: once a month is a great initial goal.

Role Modeling Opportunities

Younger students look up to older students. Explore if older students can serve younger students the items being tested. Create opportunities for younger students to see older students trying new foods—this is one of the most influential things you can do to create a positive taste testing environment throughout the school.

Engage School and Community Members

The more the school and the broader community is involved in the taste test, the more success you will see. Encourage staff and parents to participate in trying a new food during a taste test and to model to students that it's cool to try new things! Ask them to sign up to help prepare the food for the taste test or help run the taste test table. Regularly communicate with parents about upcoming taste tests, and highlight what foods students are tasting. Invite farmers to interact with students, and share what it's like to grow a product featured in the taste test.

Connect the Taste Test to the Classroom and Garden

The more students have an opportunity to learn about a new food in a hands-on way, the more likely they will be to try it. Explore opportunities to connect your taste test to classroom time. If you are taste testing a squash recipe, can you lead a squash-focused lesson with students? Can you plant squash in the school garden?

Are there opportunities for squash-focused research projects? Can students cook the squash themselves to prepare for the taste test? Some schools plant a "taste test garden" that features produce that can be incorporated into taste tests regularly.

Connect with Teachers

If the taste test is being offered in the cafeteria, is there a way to engage teachers in preparing for and running the taste test? In addition to the ideas about classroom connections mentioned above, can you engage teachers on a personal level? Ask them to participate and vote, along with the students. Encourage them to share stories about the first time they tried a new food! What did they like or not like about it?

Engage Students

Explore a variety of ways to promote student excitement about the taste test. Have students develop names for recipes that are being tested. Allow them to be as involved in the process as possible—from planting and harvesting produce that is featured in the recipe to creating taste test promotion posters to running the taste test itself.

Highlight Local Produce

Whenever possible, incorporate a product that is available locally into your taste test. Even if you can't source the item for the actual taste test, there is still value in highlighting something that reflects local agriculture and community cuisine. Explore regional specialty crops and foods and the people who grow and prepare these items. What is available seasonally? How can you highlight these throughout the school year? Are there times when there is a surplus of items (like zucchini)? Can you engage farmers to sell "seconds" or imperfect crops that might not go for market value but could easily be incorporated into a taste test? If you can source a local product, create a sign or map showing where it is grown in the state or region!

Use Taste Test Feedback

Aside from encouraging students to try new things through a taste test, it is important to share the feedback that students have offered from the process. If the majority of students didn't like a recipe, consider why. Remember that most students may need to try new things several times before they like it. You may also find that even if students report that they "liked" something during a taste test, that doesn't guarantee they will like it if it is served on the lunch menu. And recipes that were taste tested may need to be tried more than once before they are standardized and incorporated into the lunch menu. Have patience, and remember that taste testing is an important method to engage students, school staff, and the broader community in trying nourishing food items. This small step will have larger results over time.

See sample taste test voting forms on pp. 128–129.

Recommended Resources

- FoodCorps Taste Test Guidebook
- USDA Recipes for Schools: Institute of Child Nutrition
- Vermont Farm to School Network: New School Cuisine Cookbook > *Garden Gastronomy: A Bilingual Cookbook by City Blossoms*
- The Lunch Box: Recipes
- VT FEED: *Guide For Taste Testing Local Food In Schools*

FoodCorps Lessons with Cooking and Tasting Opportunities

FoodCorps Lessons provide an opportunity to engage with students in the cafeteria through cooking and tasting activities. Remember to connect with cafeteria staff for approval and logistics related to leading these lessons in the cafeteria or during meal times! Please refer to cooking-related FoodCorps Lessons in the FoodCorps Lessons Book for ideas!

Local Food and Procurement Resources

- **The USDA Community Food Systems website "Procuring Local Foods" is a one-stop resource shop.** This website includes the USDA *Guide for Procuring Local Foods for Child Nutrition Programs Finding, Buying and Serving Local Foods* an extensive procurement-focused webinar series, fact sheets, policy memos, and regulations.
- **Nutritious and Seasonal Recipes for School Cooks by School Cooks New School Cuisine Cookbook.** New School Cuisine is the first ever effort by public school cooks who wrote a hands-on cookbook for their peers. It is the only cookbook that is for school cooks; by school cooks; includes only kid-tested recipes; and features local, seasonal ingredients and farm-to-school resources. The book includes recipes for school kitchens to prepare nourishing, locally-sourced meals for their students. It's a practical resource for child nutrition programs: each recipe is in USDA format, yields school-size quantities, includes a nutritional analysis, and contains information on the specific food components that credit toward meeting the USDA meal pattern.

Cafeteria Taste Test Survey

Featured food: _____Date of taste test: _____

TRIED IT	LIKED IT	DIDN'T LIKE IT	GRADE

Themed Taste Test Survey

(Cut out and give one to each student.)

Locally Grown Greens Taste Test Grade:_____

Directions: Check off whether you tried it, liked it, and would try it again.

GREEN NAME:	KALE	SWISS CHARD	SPINACH	LETTUCE	BOK CHOY
Tried it					
Liked it					
Would try it again					

Individual Student Taste Test Voting Ballots

(Geared toward younger students)

Directions: Cut out and give one ballot to each student.

TASTE TEST Product_____ Date_____ Grade_____ (circle one) LIKE! SORT OF DON'T LIKE 	**TASTE TEST** Product_____ Date_____ Grade_____ (circle one) LIKE! SORT OF DON'T LIKE 	**TASTE TEST** Product_____ Date_____ Grade_____ (circle one) LIKE! SORT OF DON'T LIKE 
TASTE TEST Product_____ Date_____ Grade_____ (circle one) LIKE! SORT OF DON'T LIKE 	**TASTE TEST** Product_____ Date_____ Grade_____ (circle one) LIKE! SORT OF DON'T LIKE 	**TASTE TEST** Product_____ Date_____ Grade_____ (circle one) LIKE! SORT OF DON'T LIKE 

Forms adapted from VT FEED *Guide For Taste Testing Local Food In Schools*

Glossary

Teaching Terms

- **5 Es:** A model of instruction developed by Biological Sciences Curriculum Study used to plan lessons and units. The 5 Es are Engage, Explore, Explain, Elaborate, and Evaluate.
- **cooperative learning:** Placing students into small groups and having them work together toward a common goal.
- **CTE:** An initialism for *career technical education.*
- **curriculum:** A sequential, progressive course of studies that conveys content to students to help them achieve their academic goals, as designed by a school district or state.
- **curriculum standards:** A description of regulations for what students should know or be able to do (e.g., Common Core, Next Generation Science).
- **enduring understanding:** Statements summarizing important ideas and core processes that are central to a discipline and have lasting value beyond the classroom; they synthesize what students should understand—not just know or do—as a result of studying a particular content area: "The big idea."
- **essential question:** A part of the "backwards design" curriculum planning process. It is open-ended and typically will not have a single correct answer.
- **experiential learning:** The process of learning through experience. It's more specifically defined as "learning through reflection on doing."
- **formative evaluation:** Evaluation that takes place between the introduction of material and its conclusion.
- **I-Can statements:** Daily formative assessments tied to content.
- **Inquiry-based science:** Students experience something first, often working in groups, and draw conclusions of their own without teacher involvement. This happens before the teacher provides any new knowledge or facts.
- **lesson:** A period of learning and teaching.
- **pacing guide:** A plan for what is covered when throughout the academic year.
- **scope:** The breadth and depth of content in a lesson or unit.
- **sequence:** The order in which content is learned in a lesson or unit.
- **STEM:** An acronym for *science, technology, engineering, and mathematics.*
- **STEAM:** An acronym for *science, technology, engineering, the arts, and mathematics.*
- **unit:** A series of lessons with scope and sequence designed to build student knowledge toward answering an essential question.

Cafeteria Terms

- **after-school snack program:** Cash reimbursement offered through the National School Lunch Program to provide snacks to children enrolled in programs that provide them with regularly scheduled educational or enrichment activities in a supervised

environment after their school day ends.

- **audit:** Periodic verification by the state agency that the requirements of the school nutrition program are being met.
- **catering:** Preparation of food and beverages for special occasions; this may also be called "special functions."
- **child nutrition director:** A person who directs, supervises, or coordinates the school nutrition program at the school district level. School districts use varied position titles for those employed in this position. Throughout the history of child nutrition programs, other titles have also been favored, such as school lunch director and food service director. The term may be used interchangeably in this course depending on the context.
- **CNP:** An initialism for *child nutrition programs*—programs authorized by the Richard B. Russell National School Lunch Act and The Child Nutrition Act of 1966, including the National School Lunch Program, the School Breakfast Program, the Child and Adult Care Food Program, the Summer Food Service Program, and the Fresh Fruit and Vegetable Program.
- **commodity:** Food commodities donated by the United States Department of Agriculture (USDA) for use in nonprofit lunch programs.
- **competition:** Any food or beverage sold on school grounds that competes with the USDA reimbursable school meals and after-school snacks.
- **competitive food:** Any food sold at a school other than meals served through the USDA's school meal programs— school lunch, school breakfast, and after-school snack programs.
- **CSHP:** An initialism for the *Comprehensive School Health Program.* It's designed to protect and promote the health and well-being of students and staff and has eight components that promote the health of students, faculty, and the community—health education, a healthful school environment, health services, physical education, nutrition services, counseling services, community and family involvement, and health promotion for faculty.
- **dietary guidelines for Americans:** Science-based advice to promote health and to reduce risk for major chronic diseases through diet and physical activity. An advisory committee to the Department of Health and Human Services and the USDA reviews and updates the guidelines every five years. Recommendations of the dietary guidelines are targeted to the public age two years and older and are based on scientific and medical knowledge that is current at the time of the committee's report. The dietary guidelines form the basis of federal food, nutrition education, and information programs. They must be applied in menu planning in the School Lunch Program and School Breakfast Program.
- **direct costs:** Costs that can be identified as used solely by the food service operation. Examples include food, labor, and equipment.
- **FNS:** An initialism for *Food and Nutrition Services*—an agency of the USDA. It's the federal agency responsible for administering the nation's domestic nutrition assistance programs and helps address hunger in the United States.
- **FBMP:** An initialism for *food-based menu planning*. The two food-based menu planning approaches that the USDA established, Traditional and Enhanced, that require specific food components in specific amounts for specific age/grade groups.
- **food safety:** A plan to prevent unintentional contamination of the food supply.

- **food service management company:** A commercial enterprise or nonprofit organization that the school food authority may contract with to manage any aspect of the school food service.
- **free meals:** Meals served at no charge to students from households whose income and family size meets eligibility requirements for such benefits or because the household receives food stamps or Aid to Families with Dependent Children benefits and for which neither the student nor any member of the household is required to work.
- **FFVP:** An initialism for *Fresh Fruit and Vegetable Program*, a federally assisted program providing free fresh fruits and vegetables to children at eligible elementary schools during the school day. Its purpose is to increase fruit (both fresh and dried) and fresh vegetable consumption in elementary and secondary schools. It also encourages healthier school environments by promoting nutrition education.
- **income eligibility guidelines:** Family-size income levels prescribed annually by the USDA for use in establishing eligibility for free and reduced-price meals and for free milk. Schools, institutions, and facilities participating in the child nutrition programs use these guidelines, which are intended to direct benefits to those children most in need. They are revised annually to account for changes in the consumer price index and are effective from July 1 through June 30 every year.
- **meal cost:** The cost of producing a meal. It's determined by dividing total expenditures by total meal equivalents during the same period; expenditures include food, labor, and supply costs.
- **meal equivalent:** The number of breakfasts, snacks, and volume of à la carte sales prepared and served equal to one reimbursable lunch. It's used to allocate costs and determine staffing needs based on a reimbursable student lunch.
- **meal patterns:** A term formerly used to describe the components and items required in a reimbursable menu. Since School Meals Initiative, the word "patterns" has been replaced by meal planning approach to describe the requirements to be considered in meal planning.
- **National School Lunch Program:** The National School Lunch Program is a federally assisted meal program to provide nutritionally balanced low-cost or free lunches to students. It operates in over 100,000 public and nonprofit private schools and residential child care institutions.
- **school administrators:** Personnel responsible for making policy and procedures that affect all that happens in a school, including scheduling, pricing, employment, and compensation. School administrators include central office personnel, principals, and other administrative persons at the school level.
- **SBP:** An initialism for *School Breakfast Program*. A program that the Child Nutrition Act authorized. It is designed to meet specific nutrition goals for children. The SFA has the legal authority to operate the program. New terminology used in place of the SFA is the Local Education Agency (LEA).
- **SFA:** An initialism for *School Food Authority*, the governing authority responsible for the administration of one or more schools. It has the legal authority to operate the program. New terminology used in place of the SFA is the Local Education Agency (LEA).
- **SNA:** An initialism for *School Nutrition Association.* A national, nonprofit

professional organization representing more than 57,000 members who provide high-quality, low-cost meals to students across the United States.

- **Team Nutrition:** An integrated, behavior-based, and comprehensive plan for promoting the nutritional health of the nation's school children, using a team or multifaceted approach. The USDA's Team Nutrition Program provides technical assistance and training to enable school nutrition personnel to prepare and serve nourishing meals that meet SMI requirements and provides nutrition education resources that encourage children to choose nourishing meals.
- **UFBP:** An initialism for *Universal Free Breakfast Program*, which provides a free breakfast to every child in attendance at school, regardless of family income.
- **vending:** À la carte foods sold in a vending machine. By their nature, sales may be made in a variety of sites.

School Terms

- **accommodation:** A device, material, or support process that will enable a student to accomplish a task more efficiently.
- **ADA:** An initialism for *average daily attendance*. It's used for determining funding levels and is calculated as the total number of days of student attendance divided by the total number of days in the regular school year.
- **alternative school:** A school that is frequently geared toward students who are at risk of dropping out of school. It offers a flexible, nontraditional approach to teaching and learning.
- **at-risk student:** A term applied to students who are at risk of educational failure due to lack of services, negative life events, or physical or mental challenges.
- **bell time:** School time, as opposed to before- or after-school time.
- **charter school:** A school run independently of the traditional public school system but receiving public funding. It is run by groups such as teachers, parents, or foundations, and in some cases for-profit businesses. It is exempt from many state and local rules, policies, and regulations; but a public entity, often a local or state board of education, must approve its charter .
- **coordinated school health program:** A model that the Centers for Disease Control and Prevention developed to connect health and education. It consists of eight interactive components: health education, physical education, health services, nutrition services, health promotion for staff, counseling and psychological services, nourishing school environment, and parent/community involvement.
- **ELL:** An initialism for *English language learner.* A student who is unable to communicate fluently or learn effectively in English, often comes from a non-English-speaking home and background, and typically requires specialized or modified instruction in English and in academic courses.
- **emergency plan:** A dynamic document required for all schools that details contingencies and plans for a variety of possible crises or acute or ongoing threats to safety that might occur within a school.
- **FAPE:** An acronym for *free and appropriate public education*. A standard defined under the Individuals with Disabilities Education Act requiring that students with disabilities have access to the same quality public education as their nondisabled peers.

- **IEP:** An initialism for *individualized education plan.* Under the Individuals with Disabilities Education Act, every qualifying student receives this personalized plan that details all the services and educational components required to help the student meet his or her academic goals. It guides actions for families and school personnel and should be updated and changed as needed.
- **LRE:** An initialism for *least restrictive environment*. The educational placement for students with disabilities that is as close to the mainstream classroom as feasible. Required by the federal Individuals with Disabilities Education Act law, LRE means that students with disabilities should be educated with students who are nondisabled, and removal from the regular education environment should occur only if the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be satisfactorily achieved.
- **magnet schools:** Schools with strong emphasis in a particular subject area (e.g., music, science, drama, math). In some districts, students may be selected for admission to a magnet school through an application process rather than being assigned based on residence.
- **para or para-pro (paraprofessional):** An adult assigned to work with a student with special behavioral or academic needs. They also assist teachers and work alongside teachers.
- **PLC:** An initialism for *professional learning community*—teacher planning time.
- **PTA:** An initialism for parent–teacher association. An organization of parents in a school (affiliated with the National PTA) who organize projects, raise funds, and otherwise support the school.
- **PTO:** An initialism for parent–teacher organization. An organization of parents in a school (not affiliated with the National PTA) who organize projects, raise funds, or otherwise support the school. It's also called a Home and School Association.
- **resource teachers or super subs:** Extra personnel for a school (e.g., someone who comes in and takes over a class so the teacher can have time to plan).
- **continuing education (or CEU, an initialism for continuing education unit):** A unit of credit equal to ten hours of participation in an accredited program designed for professionals with certificates or licenses to practice various professions.
- **school choice:** Any policy that allows children to attend schools outside their local district boundaries (or to different schools within a district outside their neighborhood). Some choice programs are restricted to public schools (including charter, magnet, and traditional schools), while others focus on choices among public and private/parochial schools.
- **school improvement plan:** A document that a school develops and the local education agency approves to serve as a blueprint for guiding the school's continuous improvement and progress toward identified student achievement objectives and targets.
- **SIP:** An acronym for *school improvement plan*. It provides a framework for analyzing problems, identifying underlying causes, and addressing instructional issues in a school that has not made sufficient progress in student achievement.
- **specials:** Classes usually designated as nonacademic. They typically include art, physical education, library, and music. During a special, teachers might have planning time,

so this is a good time to request to meet with them. The school office will most likely have a "specials schedule" for your reference.

- **special education:** This broad term describes the range of educational and supplemental services provided to students with disabilities who need individualized plans and specialized services to help them realize their full academic, social, and developmental potential.
- **SEA:** An acronym for *state education agency.* The state agency that is responsible for the supervision of public elementary and secondary schools. The official name within a state may be the State Department of Education or the State Office of Public Instruction.
- **unions:** An organized association of teachers formed to protect and further their rights and interests.

Government Programs and Legislative Terms

- **BIE:** An acronym for *Bureau of Indian Education* schools. The BIE's mission is to provide quality education opportunities to Indigenous peoples through every stage of life that sustain history, language and heritage and support the holistic wellbeing of Indigenous communities and Alaska Native villages.
- **CEP:** An initialism for *Community Eligibility Provision*. A USDA program that allows schools that predominantly serve low-income children to offer free, nutritious school meals to all students through the National School Lunch and School Breakfast Programs.
- **ESEA:** An acronym for *Elementary and Secondary Education Act.* Originally passed in 1965, the ESEA is the law that governs many educational activities in the United States and provides the authority for the US Department of Education. It includes provisions for setting academic standards; testing students; providing information to parents; and disaggregating data to show true academic gaps between racial/ethnic groups that all states, districts, and schools receiving federal K–12 education funds under Title I of the act must adhere to.
- **IDEA:** An acronym for *Individuals with Disabilities Education Act* of 2004. The federal law that ensures that students with disabilities from birth to age twenty-one have access to the same educational quality and services as their nondisabled peers. The IDEA has provisions that provide formula funding to states to provide services to students with disabilities, including high-level medical services in some cases as well as technical assistance and support to parents and caregivers both at home and at school.
- **local wellness policy:** Overseen and monitored by the US Department of Agriculture's Food and Nutrition Service, all districts participating in the National School Lunch Program are required to have a local wellness policy that meets specific criteria related to nutrition and physical activity.
- **TANF:** An acronym for *Temporary Assistance for Needy Families.* A federal program that provides financial assistance to low-income families (welfare) through the Department of Human Services.
- **Title I:** Part of the Elementary and Secondary Education Act. A school that is designated as low-income by the US government. Title I (pronounced "Title one") provides funds to SEAs, which in turn provide funds to districts and schools with demonstrated financial need. Forty percent of children

must be considered low-income for a school to be considered for Title I. Once a school is determined to be a Title I school, it receives additional resources to help students and families (e.g., a Title I school might have a family involvement liaison on staff to help organize events for families to connect them to their child's education and provide day-to-day resources, outreach, and guidance for parents and guardians).

- **Title VII (Title 7):** Part of the Elementary and Secondary Education Act. A Bilingual Education Act that provides instruction in English and in the native language of the student to allow the student to progress effectively through the educational system. It provides assistance to schools with Indian, Native Hawaiian, and Alaska Native populations.
- **Title IX (Title 9):** Part of the federal education law that prohibits any entity receiving funds from the US Department of Education from discriminating on the basis of sex, including sexual harassment, the failure to provide equal opportunity in athletics, discrimination in a school's STEM courses and programs, and discrimination based on pregnancy.

Source: FoodCorps has adapted some of this glossary from How Schools Work and How to Work with Schools, National Association of State Boards of Education.

Appendix

Member Transition Guide

About the Member Transition Guide

The Member Transition Guide is intended to store important information about your term placements (schools or districts) that supports strategic, relationship-based FoodCorps programming. Over the course of the program year, FoodCorps members gain understanding and insight. To best transfer knowledge and insight from year to year, we ask you to complete a Member Transition Guide, This will serve as a "living" resource that you should update regularly throughout the year.

The primary user of this guide is the FoodCorps member; however, the information stored in the guide can be shared with key stakeholders. As a site partner prepares for their transition away from hosting a FoodCorps Member, it is important that members work in collaboration with their site network to record information as prompted by the Member Transition Guide. Note that there is a specific Member Transition Guide for transitioning sites. It is included in the FoodCorps Site Transition Workbook and available digitally.

Process

We encourage you to include helpful details and key resources to guide a new, incoming FoodCorps member, or to support the school in sustaining progress and programming if the school or site is discontinuing with FoodCorps partnership.

Important Dates & Deadlines

The final deadline to submit your Member Transition Guide materials to your FoodCorps Manager of Program Impact is the last day of your year with FoodCorps.

Key questions to consider

- Who are the people, and what are the resources in your school community that can help achieve the goals established in your FoodCorps Menu and Action Plan?
- What information is necessary to easily access those resources? (e.g., What is a key contact's preferred method of communication?)
- What other reflections or tips will be useful for an incoming FoodCorps member?

School information

- School name and address
- School policies, including safety procedures
- Contact sheet for key people and partners, including teachers, administrators, volunteers, and staff
- Classes taught, sequence of lessons
- Cafeteria programming
- After-school programming
- Schoolwide events and FoodCorps member involvement
- Fundraising activities, lead contacts, and approximate value of proceeds earned

Garden information

- Location and format of garden (courtyard, raised bed, window box, tower garden, etc.)
- Water access
- Storage access
- Soil quality
- Planting history
- Summer care and usage

Community information

- Contact sheet for key people and partners
- Relevant organizations and businesses
- Volunteers
- Events
- Press

KNOW YOUR STATE & DISTRICT POLICIES

The choices schools can make about their food environment are often governed by policies at many levels: federal, state, district, and school, and these policies can directly influence students' experiences of and decisions about food in school. These policies may make it easier—or harder—for your school community to make certain changes, so it is important to understand what policies are in place and how you might be able to influence them.

Below is a list of some of the policies that are helpful to know.

KNOW YOUR STATE & DISTRICT POLICIES WORKSHEET

STANDARDS AND PREFERRED CURRICULUM

1. **Do the state and/or district academic standards include specific standards for nutrition education?**
   - ☐ The state has nutrition education standards.
   - ☐ The district has nutrition education standards.
   - ☐ There are no known nutrition education standards.

2. **Does the district have a preferred nutrition curriculum? If so, how is it used?**
   - ◯ All grades use preferred curriculum and fully implement it.
   - ◯ All grades use preferred curriculum but not all fully implement it.
   - ◯ Some grades use preferred curriculum (fully or partially).
   - ◯ One grade uses preferred curriculum (fully or partially).
   - ◯ No grades use preferred curriculum.
   - ◯ It is unknown how much grades use preferred curriculum.
   - ◯ There is no known preferred curriculum.

3. **Does the district have a preferred garden education curriculum? If so, how is it used?**
   - ◯ All grades use preferred curriculum and fully implement it.
   - ◯ All grades use preferred curriculum but not all fully implement it.
   - ◯ Some grades use preferred curriculum (fully or partially).
   - ◯ One grade uses preferred curriculum (fully or partially).
   - ◯ No grades use preferred curriculum.
   - ◯ It is unknown how much grades use preferred curriculum.
   - ◯ There is no known preferred curriculum.

DISTRICT WELLNESS PLAN OR POLICY

4. **All school districts are required to have a Wellness Plan or Policy in place. What is the status of the school district's Wellness Plan/Policy?**
   - ◯ A Wellness Plan or Policy is in place, and the district has updated it in the past two years.
   - ◯ A Wellness Plan or Policy is in place, but the district has not updated it recently.
   - ◯ There is no known Wellness Plan or Policy.
5. **Wellness Committees were originally required to implement district Wellness Plans or Policies. Is the Wellness Committee in the district active?**
   - ◯ Yes, it meets regularly.
   - ◯ There is still a committee, but it does not have regular meetings.
   - ◯ There is no current committee.

6. **Does the district Wellness Plan/Policy cover a wide variety of topics related to the school food environment? What content is included?**
   - ☐ Healthy eating and nutrition
   - ☐ School gardens
   - ☐ Food policies (e.g., for celebrations, rewards, bake sales, or fundraisers)
   - ☐ Promoting local foods
   - ☐ Unknown what content is in the plan/policy
   - ☐ No known plan/policy

LOCAL FOOD PROCUREMENT

7. **Does the state and/or district have a policy about geographic preference for local food procurement?** (Geographic preference provides a competitive advantage to local, minimally processed foods.)
   - ☐ Yes, at the state level
   - ☐ Yes, at the district level
   - ☐ No known geographic preference policy

8. **Is the state and/or district policy for geographic preference regularly used?**
   - ◯ Products from local growers or distributors are regularly requested or sought out in bids or orders.
   - ◯ Products from local growers or distributors are sometimes requested or sought out in bids or orders.
   - ◯ Local products may be supplied but are not specified in bids or orders.
   - ◯ Policy exists, but is not implemented.
   - ◯ No known geographic preference policy.

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