Cornell Garden-Based Learning
Seed to Salad
Seed to Salad Table of Contents

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Seed to Salad: After school or weekend program

Background
Seed to Salad began as an after-school program at the Ithaca Children’s Garden. Each spring two youth groups grow salad gardens at the Garden over an eight-week period. Most of the time is spent designing, planting, and caring for gardens. For those who do not have a February through June time frame available for the program, this approach allows you to implement Seed to Salad over a two-month period.

Salad gardens are the focus because they fit nicely within the spring growing season. Salad greens and quickly maturing vegetables can be planted in late April or early May. One of the biggest challenges with school gardens is summer maintenance. Salad gardens solve this issue by reaching harvest before the school year ends. In addition, salad gardens change quickly and are easy to grow, keeping things interesting and relatively successful for first time gardeners.

Decision-making is important!
Although Seed to Salad is a gardening program, the underlying theme is youth decision-making. From project planning to harvesting and celebration, youth should be included in as much of the process as possible.

Planning
Because an after-school program that meets for an hour, once each week for eight weeks, allows less time than a more lengthy school program, you need to plan a little more ahead of time. Additional planning tasks may include:

- Deciding which plants to grow and buying/ordering seeds in advance.
- Identifying the location and size of garden plots.
- Depending on your location, you may have to do some bed preparation ahead of time.
- Remember to save tasks for youth participants and engage them in key elements of decision-making. Starting with a pristine, ready-to-go bed skips out on important learning experiences.

Schedule
All of the activities were guided by youth involved in the pilot. Think of them as a menu to choose from and add to.
Seed to Salad:
Sample schedule of after school activities

Week 1:
- Pre-assessment garden drawings
- Designing quilt block salad gardens

Week 2:
- Complete garden bed preparation
- Planting

Week 3:
- Finish any planting needed
- Watering techniques
- Making signs for gardens (paint on wood, laminated paper, painted rocks)

Week 4:
- Tending the garden: watering, weeding, thinning, etc.
- Weed identification and weeding

Week 5:
- Tending the garden: watering, weeding, thinning, etc.
- Mid-season taste test (depending on weather/growth)
- Nutrition super heroes game

Week 6:
- Continue tending the garden: watering, weeding, thinning, etc.
- Mid-season taste test (depending on weather/growth)
- Nutrition super heroes game

Week 7:
- Tending the garden: watering, weeding, thinning, etc.
- Plan salad party

Week 8:
- Harvest gardens
- Salad party
Seed to Salad: School-Based Program

Background
The Seed to Salad Program was developed and piloted by the Ithaca Children’s Garden in the spring of 2007 at Northeast Elementary School in Ithaca, NY. Funded by an Ithaca Public Education Initiative Grant and supported in part by Cornell Garden-Based Learning, Seed to Salad uses gardening as a multidisciplinary vehicle to engage students across grade levels.

The program began in February, and continued until the end of the school year in June. Early activities focused on choosing which vegetables and varieties to grow, planning a gardening assembly for the entire school, and designing salad gardens to be planted in late April/early May. May and June were spent outside tending the gardens and planning a Salad Party to celebrate the harvest. While this particular pilot program did not include indoor grow lights, Seed to Salad is adaptable to indoor gardening.

When to do activities
The pilot program met outside of class time: before school, during lunchtime/recess, and after school. This accommodated students in a range of grade levels. Seed to Salad can easily be done by a single classroom or across grade levels, by an after school program, or as an extracurricular club led by a parent or community volunteer.

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Schedule
All of the activities were guided by youth involved in the pilot. Think of them as a menu to choose from and add to.
Seed to Salad: Sample schedule of activities

January:
- Begin planning the program
- Start recruiting youth or talk to your classroom or group about the project
- Gather supplies
- Confirm a budget
- Give school administrators a heads up, especially if you are seeking new gardening space

February/March:
- Campaign for Salad activity
- Gardening Assembly planning
- Assembly
- Determine garden locations at the school
- Order seeds

April:
- Garden design
- Garden bed preparation (organize a family volunteer evening or Saturday)
- Begin planting

May:
- Planting
- Garden maintenance
- Mid-season taste test
- Nutrition Super Heroes game

June:
- Garden maintenance
- Plan a Salad Party
- Salad Party
- Evaluation
Seed to Salad:
Finding a place to garden

You don’t need much space for salad! Look for an area where your group can create enough small plots (approximately 3’x3’) for each person (or pair) with at least 3’ paths between.

When space is difficult to find...
Some schools have little or no green space. If this is your situation, consider large container gardens or building raised beds on top of a paved area. This will add a bit to the cost of your project but consider the containers, raised beds, and soil an investment that can be used for several years.

Reclaim neglected spaces. Some schools may have designated garden spaces that are currently in use or neglected. This offers a compromise. Your administration may view it easier to extend an existing garden area than to create a new area. Reclaiming an area that has been neglected provides your program with a space and the school grounds with a face-lift.

Create new gardens. Some community organizations, such as schools, may welcome the idea of a temporary garden space. If administrators are uneasy about making the commitment you may want to offer a trial to till a small area of lawn, plant as a garden, and then, reseed as lawn. Others may welcome the idea of creating a permanent new gardening space. Consider raised beds to help define an area and ease maintenance and weeding concerns.

Communicate. Overall the most important step in determining a gardening space for your program is to communicate with administrators, custodial, and grounds staff. Be sure to have ongoing conversations with grounds and custodial staff during the planning and design phase.

Plan. Come prepared with how much space you think you will need as well as other requirements such as light exposure and access to water. Get familiar with the grounds before meeting so that you are aware of what kinds of spaces are available. Develop a maintenance plan that includes “who, how, when.” Be ready to answer questions about funding. “Who will pay for this?” may be one of the most frequently asked questions.
A little inspiration...
During the Ithaca Children's Garden Seed to Salad pilot at Northeast Elementary School, we reclaimed three garden areas that were no longer actively managed. Many hands made light work and during the pilot program we prepared three reclaimed areas for 11 new salad garden plots during one Saturday morning work party involving student and parent volunteers.

Reclaimed garden spaces at Northeast Elementary School:
Many salad garden vegetable seeds are tiny. They can be hard to handle and plant, and they easily blow out of a cupped hand with even a slight breeze. To deal with this, reuse empty plastic spice containers. If you put the word out early to parents and volunteers, you can often accumulate a good amount.

**Step by step**
- Label each spice container with the name of the seed and the number code you assigned it during the design phase.
- For seeds that will be used a lot, such as lettuces, consider having two or three shakers available.
- If you’re working with younger children, have an extra adult or older youth volunteer on the sidelines to help fill up shakers. This way you can add just enough seed to each shaker for a single plot, avoiding spills or dumping too much seed in one place.

**Other tricks of the trade**
- If you have the space, consider having a “test plot” to demonstrate planting techniques before youth head off to plant their own plots.
- You can use a design everyone worked on together or make one up on the spot.
- Start by identifying the edges of the plot, and orienting the plan on the ground nearby.
- Along the way, give a demonstration and then have youth take turns outlining and planting different areas of the “test plot.”

**Three ways to outline your design in the soil prior to planting:**
- Use a twig, stick, or small branch to “draw” the design in the soil.
- Draw the design by sprinkling white play sand.
- Use carefully placed pebbles, gravel, or small stones to create the outlines of your shapes.
**Demonstrate**
- Show the angle to hold the shaker so that seeds come out easily.
- Demonstrate different kinds of shaking and have a conversation about what appears to be too light, too hard, and just right.
- Show how to take handfuls of spare soil and sprinkle it over newly planted seeds.
- Some seeds need to be planted rather than sprinkled on top of the soil. Show how to lay seed, such as nasturtiums, spaced on top of the soil, then push them gently into the soil.

**Watering tips**
- Watering a newly planted salad garden can be tricky. Lots of tiny seeds are sitting on or just below the soil surface. A gush of water will send them cascading far from where they were planted. You may want to do a demo on a spare patch of bare soil.
- Avoid using watering cans until seedlings begin to emerge.
- Use an adjustable water wand on the gentlest setting.
- Demonstrate holding the wand high enough and slowly moving it back and forth to avoid “mudslides” and “puddles.”

**Experiment**
- Plant a few seeds in each area of two trial areas, water one gently and the other too vigorously. How does it effect growth?
When it’s time to make salad, here are harvesting tips that are simple and fun:

- Harvest with kid-size scissors. It’s hard to pick lettuce and greens without tearing up the roots. It also makes them easier to wash, since you’re not pulling out soil. Using scissors, cut lettuces and greens just above the soil.

- Have plenty of bowls handy for harvested lettuce and greens.

- Large plastic storage tubs are ideal for washing lettuce and greens. Fill about half way with water, add a little lettuce and greens at a time, swish around and remove. Place lettuce and greens in colanders and shake to get rid of excess water. Refill with water as it becomes dirty.

- Become human salad spinners! Gather a dozen or so clean pillowcases. You may want to invest in some inexpensive ones reserved for your Seed to Salad project. Add a couple handfulls of lettuce that has been washed and drained in colanders to the pillowcase. Close, grip and start spinning.

- Keep salad bowls separate from harvest bowls. Keep a couple large bowls reserved for clean, dry lettuce and greens.
# Seed to Salad: Sample Budgets

## After School/Weekend Program (for up to 20 youth)

<table>
<thead>
<tr>
<th>Expense</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeds</td>
<td>$65.00</td>
</tr>
<tr>
<td>Garden Design Supplies:</td>
<td></td>
</tr>
<tr>
<td>Graph Paper Easel Pads (2pk)</td>
<td>$22.00</td>
</tr>
<tr>
<td>Activity Supplies: Nutrition Super Heroes Game, Taste Test, etc.</td>
<td>$30.00</td>
</tr>
<tr>
<td>Salad Party Supplies: paper products, salad dressings, etc.</td>
<td>$15.00</td>
</tr>
<tr>
<td>Printing/Paper/Copies</td>
<td>$12.00</td>
</tr>
<tr>
<td>Used ICG’s gardening tools and basic supplies (markers, scissors, paper)</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$144.00</strong></td>
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## School-Based Program (based on pilot at Northeast Elementary spring ’07)

<table>
<thead>
<tr>
<th>Expense</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campaign for Salad</td>
<td>$15.00</td>
</tr>
<tr>
<td>Paper, printing, voting &amp; activity supplies</td>
<td></td>
</tr>
<tr>
<td>All-School Assembly</td>
<td>$30.00</td>
</tr>
<tr>
<td>Activity supplies</td>
<td></td>
</tr>
<tr>
<td>Garden Design</td>
<td></td>
</tr>
<tr>
<td>Graph paper easel pads (2pk)</td>
<td>$22.00</td>
</tr>
<tr>
<td>Paper, printing, activity supplies</td>
<td>$6.00</td>
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<tr>
<td>Gardening Supplies</td>
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<tr>
<td>Seeds</td>
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<tr>
<td>Mulch</td>
<td>$50.00</td>
</tr>
<tr>
<td>Soil Amendments: Compost</td>
<td>$50.00</td>
</tr>
<tr>
<td>Salad Party</td>
<td>$15.00</td>
</tr>
<tr>
<td>Paper products, dressings, beverages</td>
<td></td>
</tr>
<tr>
<td>Used school’s gardening tools</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$363.00</strong></td>
</tr>
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</table>
Seed to Salad: Ordering Seeds

When ordering seeds, consider:

- Ordering from a larger mail order company means access to a wide array of varieties and lets you purchase seed in larger quantities (by the ounce, or pound) rather than by the packet. This can lead to significant savings.

- If others in your community are planning gardening projects, you might want to put in an order together. The side benefit is the communication and learning about each others’ efforts that can take place as you plan your order together.

- Call seed companies to ask about a donation or discount. Many seed companies are willing to donate or discount last year’s seeds. Remember to send a thank you – perhaps at the beginning of the season, and again when you have photos to share. That might go a long way toward another donation in the future, too.

- Ask for a donation from a community member or parent. Seed is a tangible, affordable item that someone may be willing to purchase for you. Be sure to acknowledge the donor at a celebration and again, always send a thank you note.
Activities
Campaign for Salad is a lively, fun, and democratic way to decide what types of greens and veggies will grow in the salad gardens. Participants determine “candidates” based on certain growing criteria and then create campaign posters, slogans, and speeches in support of their favorites. They will display and share with others who vote to select the “winners” who “represent” salad in your salad gardens. Children then tally and announce the elected representatives.

*Please note: for the 2017 NYS Project seeds have already been selected, feel free to incorporate additional seed varieties to be able to execute this activity.

**Activities & Timing**

1. Choosing the Candidates: 1 session (40-60 minutes)
2. Campaign Posters, Slogans, and Speeches: 2-4 sessions (30-60 minutes)
3. Voting: 1 session (30-60 minutes)
4. Tallying the Votes: 1 session (40-60 minutes)

**Materials**

- Seed Catalogs
- Paper
- Pencils, colored pencils, markers
- Access to computers and printers
- Masking tape
- Samples of political campaign posters and slogans

**Choosing the Candidates**

1. Before you begin, you’ll need scrap paper, pencils, and seed catalogs. Look for seed catalogs with photos to accompany descriptions.

   **A Note about Seed Catalogs:** most seed companies are willing to send you several catalogs if they know you are leading a youth or school project—give them a call. Plan ahead, since it can take 2 to 6 weeks for catalogs to arrive.

2. Brainstorm a “criteria list” that outlines the qualities you want in a candidate. Seed catalogs have a wide variety of vegetables, including many not suitable for salad gardens. To weed out tempting corn, watermelon, and tomatoes, it’s important to set some criteria before getting started.

   Criteria might include:
   
   *Needs to be able to be sown from seed outdoors.* You’ll want to avoid vegetables that require a head start indoors or in a greenhouse.

   *Define days to maturity.* Most seed catalogs list days to maturity or harvest. Depending on where you live, you’ll want to choose veggies you can harvest by mid-June. In Upstate NY we typically say 55 days or less. Lettuces and greens (spinach, chard, etc) will be harvested as baby greens so ignore figures that define harvesting a mature head. You can harvest most lettuces and greens in 55 days or less as baby greens.
3. Brainstorm other relevant criteria with children, such as ease of growing, taste, pest resistance, etc.

4. Individually or in small groups review the seed catalogs and make lists. Depending on the number of participants and catalogs, divide into equal groups and allow ample time (at least 20-30 minutes) to look through the catalogs. Ask children to mark in their catalogs or make lists of the vegetable name, variety, and page number.

5. Share with the group to compile a master list. As children/groups share their finds, create a master list of the vegetable names and varieties.

6. If needed, pare down the list to include 8 or fewer varieties of lettuce and 3 or fewer varieties of other vegetables. If you have too many varieties of a certain vegetable, children can choose which ones to cut. Are two varieties very similar and therefore redundant?

Creating campaign posters, slogans, and speeches is a great way to bring language arts skills into the gardening project. Here, we ask the youth involved to articulate why they think a certain variety should be grown in the salad gardens. They’ll need to be convincing, especially if a small group (such as a classroom) is preparing a larger group (like the entire school) for voting.

1. Before you begin, determine what you would like this activity to involve and how much time you have. Are children working in pairs, groups or individually? Are they focusing on one variety or several? Can each youth or group complete a poster, slogan, and a speech, or choose one method?

2. Talk about when voting for the Candidates for Salad will take place and who will be voting. You might share some examples of other campaign materials, perhaps from local campaigns, and discuss what various posters, slogans, and speeches are trying to convey to voters. Brainstorm “good” and “bad” qualities of posters, slogans, and speeches (i.e. simple messages vs. long drawn out speeches, catchy phrases make things easy to remember, words too small on posters, etc.).

3. Allow ample time over at least 2 sessions for youth to work on their campaign pieces. If you have access to computers, encourage children to use simple graphic design programs like Microsoft Publisher to create posters. Samples:

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**Posters, Slogans, Speeches**

**Vote for Firecracker**

the only RED LETTUCE with BOOM! POP! & FLASH!

Brilliant Red Color!
Beautiful Ruffled Leaves!

Want a Beet that can STAND UP to others?

Vote Strong! Vote for Bull’s Blood Beets!

TORRO! TORRO! TORRO!
Be creative when setting up your method of voting and ask the youth involved for their input. Think about where voting will take place, how many people will be involved, and how long the voting period lasts. Enlist the youth in your group’s help in designing materials and setting things up. Don’t know where to start? Here are some examples:

**Ballots**
Youth create ballots that reflect the choices and these are passed out to all voters who complete them and turn them in to a ballot box.

**Mural/Sticker Votes**
In a main corridor or public place, hang a mural that includes a column for each vegetable variety. Provide each voter with a certain number of dot stickers that they may distribute as they see fit.

**Table Top/Sticker Votes**
This follows the same method as the mural/sticker votes but allows smaller posters to be attached to tables rather than a wall.

**Voting Booth**
Create a voting booth much like those used for political elections. Allow ample time over the course of a day or days in which youth can enter the booth and place their votes.

**Computer Voting**
Involve the youth in your group in creating an online survey to serve as a voting ballot. Check out www.surveymonkey.com or other free sites that help you create online surveys.

*A Note about Young Voters*: if older youth are coordinating the campaign and voting that will involve younger youth, consider including a photo of each vegetable variety along with its name on ballots or other voting methods. We found the addition of photos really helped pre-K, kindergarten, and first grade students feel successful in voting.

This is a great way to bring math into the project. Tallying methods will depend on the method of voting you chose. Divide your group into two teams who will compile the exact same data. This helps to avoid mistakes.

There are many ways to expand this activity. If you want to go beyond counting and addition, consider engaging youth in creating charts and graphs to reflect the results. Or, compute the percentage of the vote that each candidate received.

Share the results. Make announcements on the school’s PA system, write a press release for the local or school paper, create posters, etc.
Seed to Salad: Gear Up for Gardening Assembly

If your Salad Garden Program takes place in a school setting or any place with a smaller group within a larger group (an after school program or camp), consider including a Gear Up For Gardening Assembly as part of your program.

Preparation
Even if only a few classrooms or an after school club is working on the Seed to Salad Project, it will be visible to the whole school, program, or camp. An assembly is a great way to get everyone excited about what’s ahead and share some fun and educational aspects of gardening!

- Plan your assembly for before the growing season. In Upstate NY we aim for around the first day of spring in mid-March.
- The date of the assembly is something you’ll want to discuss with the principal if you’re working in a school setting.
- You want to make sure that the date doesn’t conflict with testing or field trips and that the gym or cafeteria is available.
- The sooner a date is chosen, the sooner it can be communicated with teachers. They’ll be giving up instruction time for their class to attend so it’s best to keep them informed.
- Once the date is on the calendar, turn the planning over to the youth, and serve as their “coach.”

Questions to Explore
1. Most youth will have never planned an assembly for their school or group before so ask them to share experiences from other assemblies they’ve attended. What were the best parts? What wasn’t fun about them?

2. When it comes to gardening and Seed to Salad what do they think their peers will be most interested in learning about? What kinds of activities related to those topics would be fun?

3. Who can you get involved to help? Is there a teacher, parent, or someone they know that could lead a particular activity? Is there a community group that does interesting outreach on a topic that might be able to come?

4. What role do the planners want to have at the assembly? Do they want to attend like their peers or would they like a more active role, like leading activities?

5. How are you going to prepare for the assembly? Who will prep materials, make contact with volunteers, and make sure the principal has communicated the assembly with teachers?
**Planning your own Assembly**
Here is a week by week guide, based on our experience.

**Week 1:**
- Get to know each other & provide overview of the *Seed to Salad* program.
- Present the idea of an assembly to administrators.
- Brainstorm successful qualities of past school assemblies, as well as what could be improved.

**Week 2:**
- Revisit those positive and “to be improved” qualities and define what you want to include in the assembly.
- Brainstorm gardening topics you think other students might be interested in.
- Share ideas with the principal who will help determine a date for the assembly.

**Week 3:**
- Based on Week 2’s work, start brainstorming activities that you might include in the assembly.
- How will you continue your work? For example, a group may decide to meet during recess twice a week to work on this idea.
- The group holds its first meeting and designates roles of writer, director, prop master, and actors and begins recruiting additional people to help fill the roles.

**Week 4:**
- Narrow down your list of activities and define what each activity will entail.
- Generate a list of parents and community groups to ask for assistance.
- Start contacting community groups.
- Encourage youth to ask parents for assistance.
- If you plan a similar event, such as the play that we performed, complete a rough draft, and then final draft, at this time.
- Students begin rehearsing their parts.

**Week 5:**
- Confirm activities for the assembly.
- Report back on parent and community group involvement; define next steps.
- Create a supply list for each activity.
- Gather necessary supplies.
- Play cast can continue rehearsing; determine what props and costumes are needed.

**Week 6:**
- Students help prepare supplies for the assembly.
- Students make posters to hang in school corridors advertising the assembly.
- Play cast makes props and costumes.
- The cast holds their dress rehearsal.
A Case Study for Inspiration: The Gear Up for Gardening Assembly at Northeast Elementary School, Ithaca, NY

In early February at Northeast Elementary School, youth began meeting once a week for 30 minutes before school to plan a gardening assembly for the entire school. The assembly was held about six weeks later in mid-March.

Highlights
- The group planned the assembly.
- A team of 5th graders decided to perform a short play as part of the assembly.
- This group began meeting twice weekly during recess to write, rehearse, and make costumes for the play to be included in the assembly.

The Assembly
- Took place in the school gym over two and a half hours.
- Grade levels were grouped (Pre-k, K, & 1st, 2nd & 3rd, and 4th & 5th) and rotated to the gym for 40 minutes, so the same assembly was repeated three times.
- Began with the 15-minute play planned by the 5th graders followed by free choice of the activities.
- Parent volunteers staffed activity stations. The Tompkins County Cooperative Extension Master Composter program sent volunteers to set up a soil and compost station.

Assembly Activities
A Veggie Tale
An original play written and directed by, and starring 5th grade students.

Seed Starting
Kohlrabi, one vegetable planned for the salad gardens, needed a head start indoors. At this station, students planted kohlrabi seeds that would be cared for by classrooms until planting.

Seed Sort
In this game, students tried to match salad garden seeds like carrots, lettuce, and radish with their vegetable. When they were successful, youth created a bookmark that included each kind of seed they identified.

Garden Mural
To gain input from the entire school, a blank piece of brown craft paper was hung along one of the gym's walls and labeled "What I want in the garden". Students were free to draw and write their ideas.

Soil and Compost Station
Master Composter volunteers brought a worm bin to explore as well as soil samples and microscopes to explore all the microorganisms found in soil and compost.
Nutrition Super Heroes
In this game, students assumed secret identities—the nutrients found in vegetables—and completed an obstacle course shaped like the human body.

Veggie Voting
Each student voted for the vegetable varieties they wanted to grow in the salad garden. After voting, each student made a thumb print of green ink on a poster. It was a way to track how many votes had been cast, an easy way to identify students who hadn’t voted yet, and a clever way to have everyone leave the assembly with a “green thumb”.

A Veggie Tale original play

Seed Starting

Soil & Compost Station

Garden Mural

Veggie Voting
Seed to Salad: Designing Quilt Block Salad Gardens

Overview

Often we grow vegetables in rows, grouping like vegetables together. There are many good reasons to do so and it can make a large garden easy to care for. However, why not add an art element to your gardening project by creating patterns out of the vegetables you’re growing. The tapestry of lettuces—shades of green and red, lobed, oak leaf, and frilly—make a great palette for designing a garden as beautiful as it is tasty.

When working with youth in small plots (typically 3’ x 3’) it’s difficult to achieve a grand picture like a detailed herd of horses. It is easy, however, to create a simple geometric pattern like those used in quilts.

Materials

- Large easel pad with gridlines
- Pencils, colored pencils, and large erasers
- Photographs or clip art of quilt blocks, color printed
- 8.5 x 11 photos of salad garden plants available for your gardens, color printed
- Masking tape

Preparation

A few things to prepare before design day...

Samples of Quilt Blocks and Geometric Patterns

If you are working with older youth, feel free to use the included clip art page as an example of a quilt block and geometric pattern. Ask youth to analyze the quilt blocks. You’re looking for recognition that geometric shapes are put together to create patterns or simple pictures. You’re also looking for youth to recognize that the shapes used are big (large circles rather than polka dots). In the garden, the larger the shape, the easier it is to see and the clearer your pattern will look.

Younger youth might benefit from a 3-D approach to introducing this concept. Some pre-K and kindergarten classrooms have great puzzles that teach shapes. If you’re working in a school you may be able to borrow one of these. If not, consider cutting some large shapes out of scrap cardboard (squares, circles, triangles, diamonds). Before passing out the paper to design, allow youth to manipulate the large shapes or puzzle pieces to create patterns and designs.

Coding Plants Available for the Gardens

If at all possible it’s best to know what seeds will be available before you begin designing. Depending on your program you may have to make this decision before the program starts. In after school programs run at the Ithaca Children’s Garden we need to decide on and order seed before we even meet the youth that will be in the program. If this is the case with your group make sure to ask for feedback from your current group to help inform your purchases next year.
If you are working in a longer program that can begin in January or February, consider involving youth in determining what seeds to order. Check out the Campaign for Salad activity for ideas.

With either case, you'll need to prepare and code photos of the vegetables available before the design session. Since the photos will be posted on a wall for everyone to see, the bigger the better. Consider filling nearly all of an 8.5”x11” page with a photo of the vegetable and label it with the name and variety.

Once all your photos are printed sort them into three categories: use me for big spaces, use me for small spaces, and use me for borders. This will be different for each group however these guidelines might help with the sorting:

- **Use me for big spaces**: lettuces, spinach, beets
- **Use me for small spaces**: radishes, edible flowers, and any seed that's expensive and therefore you need to limit the amount used by each person
- **Use me for borders**: onions and carrots (their tall, slender habit makes them great for outlining)

The next step is to give each vegetable a number. Rather than write the name of each variety on their designs, youth will code them with numbers that reflect the vegetable to be grown in each area.

**Preparing the Large Graph Paper**
It’s also best to know what garden areas you’ll be using prior to designing. If you’re working with a square or rectangular bed, there’s not much preparation to do. Take a measurement of the beds and using the graph lined easel pad paper develop a scale such as 1 box = 1 inch. Draw an outline of the bed on the paper with a thick marker.

If your beds are irregular in shape or if not everyone’s bed is the same shape and size this may take a bit longer. The same process is involved: measure the bed, determine the scale, and draw the outline.

### Designing the Garden

#### Setting Up
- Hang all coded vegetable posters on a visible wall. Group them by category.
- Using masking tape, create an outline of a typical garden bed on the floor, actual size. This will help youth visualize scale if your paper is smaller than your plots are.
- Have your other supplies handy and ready to go.
Designing the Garden (continued)

1. If youth will be working in small groups, break off into groups first.

2. Introduce the concept of quilt blocks and geometric patterns. Allow youth to create sample patterns using blocks, cutouts, or sketching on scrap paper.

3. Introduce the wall of vegetable photos. Ask if they know why each vegetable has a number. Discuss the concept of coding and keying the designs. Go over the definitions of *use for big spaces*, *use for small spaces*, and *use for borders*.

4. Depending on your group, you may want to design a garden together before breaking off into groups. Ask youth to suggest shapes and where to put them on the page. Once all the shapes are in place, ask for suggestions of vegetables for each area. Do this as a group with your paper propped on an easel so everyone can see.

5. Hand out the large graph paper, pencils, and erasers and let the designing begin. Allow plenty of time for individuals or groups to try out different ideas.

6. Wander around. Be sure to encourage youth to use big shapes.

7. Also make sure that groups include their names on their designs. Some groups like to create a key in the margin making it easy to equate the number code with the vegetable when planting out in the garden.

8. When everyone is finished, have individuals or pairs share their designs with the larger group.
A Note about Backgrounds

Many youth will be focusing on the design they are creating and forget to designate a vegetable for the background. In order to keep weeds down, it’s best to fill the entire plot with veggies, leaving no bare soil. If youth have designed a sunburst for example, be sure they fill in the sky behind it.
Lettuce 'Blade'
Radish 'Easter Egg'
Lettuce
'Red Rosie'
Lettuce
'Waldmann's Dark Green'
Seed to Salad: Variety Taste Test

Your garden is well-established, and your group has the routines of watering and weeding down pat. Soon you’re wondering: when can we eat?! Now is a great time to introduce the horticultural concept of thinning and the fun of a taste test.

**Thinning**
Broadcasting many tiny seeds usually creates too many seedlings in a small space. Removing the excess seedlings, called thinning, allows enough room for the remaining plants to grow.

**Mid-Season Taste Test**
Rather than tossing the thinned seedlings on the compost pile, run a taste test to check out the flavors and other qualities of the lettuces and greens.

1. First assess the gardens to determine which lettuces and greens need thinning.
2. Make a chart listing the variety names, as well as the names of the youth in the group.
3. Decide on a rating system. You can rate each on a scale of 1 to 5, give a thumbs up or thumbs down, use different versions of smiley faces, or use an “icky,” “ok,” or “yum” rating. We offer an example below, and a blank chart.
4. Rate greens one variety at a time. Taste, share your ratings one by one, and record on the chart.
5. Have water on hand to drink in between tastes.
6. Save your ratings chart and repeat the taste test at harvest time. Has anyone’s opinion changed? Has the taste of some greens improved or declined with time?

**Sample Ratings Chart:**

<table>
<thead>
<tr>
<th>Name/Variety</th>
<th>Freckles</th>
<th>Red Sails</th>
<th>Spinach</th>
<th>Swiss Chard</th>
<th>Tango</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victor</td>
<td>yum</td>
<td>ok</td>
<td>yum</td>
<td>yum</td>
<td>ick</td>
</tr>
<tr>
<td>Anna</td>
<td>yum</td>
<td>ok</td>
<td>yum</td>
<td>yum</td>
<td>ok</td>
</tr>
<tr>
<td>Terry</td>
<td>ok</td>
<td>ick</td>
<td>ok</td>
<td>yum</td>
<td>ok</td>
</tr>
<tr>
<td>Audrey</td>
<td>yum</td>
<td>yum</td>
<td>ick</td>
<td>yum</td>
<td>yum</td>
</tr>
<tr>
<td>Bruce</td>
<td>ick</td>
<td>yum</td>
<td>ok</td>
<td>yum</td>
<td>ick</td>
</tr>
<tr>
<td>Gia</td>
<td>ok</td>
<td>ick</td>
<td>yum</td>
<td>yum</td>
<td>ok</td>
</tr>
<tr>
<td>Yolore</td>
<td>yum</td>
<td>ok</td>
<td>yum</td>
<td>yum</td>
<td>ok</td>
</tr>
<tr>
<td>Hannah</td>
<td>yum</td>
<td>ick</td>
<td>yum</td>
<td>yum</td>
<td>ick</td>
</tr>
<tr>
<td>Yuuki</td>
<td>yum</td>
<td>ok</td>
<td>ok</td>
<td>yum</td>
<td>ok</td>
</tr>
</tbody>
</table>
**Blank Ratings Chart:**

<table>
<thead>
<tr>
<th>Varieties to the right, and names below:</th>
<th></th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Note:**
Although you will also need to thin root vegetables like carrots and radishes, the thinnings may not be large enough to eat at mid-season.

For more activities related to taste testing of vegetable varieties, visit Vvi: Vegetable Variety Investigations:

http://vegvariety.cce.cornell.edu/
Time to celebrate! After weeks of planning and then tending to your gardens, it’s important to have a good time during the harvest with a party. Here is another opportunity to involve the youth in decision-making—in this case, planning the salad party. You may only need to gather bowls, utensils, and salad dressing for a great harvest party.

**Keep in mind**
- Similar to planning an assembly, begin with questions to find out what interests the students.
- Don’t dismiss any ideas.
- Collect all ideas in a brainstorming session and then return to them to see what is feasible and how you plan to make things happen.
- If you have extra money set aside for this part of the program, consider sharing the amount with the youth in the group so they can help inform how that money will be spent.

**Questions to consider**
- Where will we have our salad party?
- How long will the party last? How long will it take to harvest, wash, and prepare the salad? How long would we like to eat and hang out?
- Who should be invited to the salad party? Is it just for youth that grew the gardens or do we want to include others?
- If we are inviting others how should we do so?
- What supplies do we need? Who will get them?
- What is our budget? How will we spend it?
- What would we like to do besides harvest and eat at the salad party?
- What name would we like to give the party?

Salad parties come in all shapes and sizes. The three case studies below describe three different parties, two held in a school program and one held in an after school program at the Ithaca Children’s Garden.

**Salad Party Examples**

**West Village 4-H at the Ithaca Children’s Garden**

Youth in the West Village 4-H Club started their Salad Garden project in late April. They meet everyday after school at West Village, which is about 10 minute walk from the Ithaca Children’s Garden. One afternoon each week, they spent an hour at the Garden working on the salad gardens they had designed and planted.
**West Village 4-H at the Ithaca Children’s Garden (continued)**

Their program was designed to finish the second week in June. The first week in June, after watering and weeding tasks were complete, the group planned a salad party for the following week. The youth invited their families and made invitations to take home.

A vote decided what two types of salad dressings would be available. Although most of the vegetables were growing well, the carrots were still too small to eat. The group asked if they could have extra carrots from the grocery store to supplement. A vote was also taken to decide what beverages would be available.

The following week, youth arrived, some with parents and siblings joining them. Each youth harvested about half of their salad garden, washed and dried the greens and vegetables and helped prepare a communal salad. While everyone ate salad we shared our favorite part of the salad garden project. Once finished, youth were supplied with bags to harvest the remainder of their plots to take home and share with their families.

**Northeast Elementary All-School Salad Party**

Although only twenty students were active in the “garden club” that met several times each week for the Seed to Salad program, the whole school was aware of the project. The garden plots were located along the path from the school to the playground and students had a chance to observe the gardens changing over the course of the spring.

Both the school and the students were interested in a Salad Party that would involve the entire school. We realized that what was growing in the small plots would not feed over 400 people. With the help of a teacher, donation requests were sent to a local hydroponic lettuce producer and two local grocery stores. The response was tremendous: 10 cases of lettuce and enough gift certificates to provide the entire school with salad.

Youth active in the garden club brainstormed a list of supplies and teachers purchased them.

Since it was difficult to find a time when all grade levels would be at school at the same time, the principal suggested we take the Salad Party on the road and stage the party at the all-school field trip to a local pool.

Set up under a series of awnings from 11am-1pm, students active in the garden club took shifts serving salad to nearly every student, parent, and teacher at the pool. Several students came back for second and third helpings.

**Northeast Elementary Garden Club**

Fueled from the success of the all-school salad party, youth active in the garden club were eager to celebrate the harvest as a group. The day after the all-school party, the garden club met during an extended lunch and recess period to harvest, wash, and prepare salad from their plots at the school. Then, they celebrated!
Seed to Salad: Nutrition Super Heroes

Overview
Nutrition Super Heroes is a game that gets young people on their feet and moving to learn about nutrition in the garden. Each participant assumes a Nutrient Super Hero “secret identity” such as calcium or vitamin C and must complete the obstacle course if a vegetable their nutrient (secret identity) is found in is called.

Materials
- 12-15 wooden stakes (outside) or a roll of masking tape (inside)
- hula hoops, 5 gallon buckets, dish pans, garden gloves, jump ropes, etc: anything you can find to create reasonable obstacles
- vegetable cards & nutrient tags
- hat or basket for vegetable cards
- super hero capes (optional)

Preparation
Create Nutrient Tags and Veggie Cards
Use the templates provided or develop your own. You’ll need a nutrient tag for each participant (if you have a big group, feel free to have 2 of each nutrient). Choose vegetable cards that reflect the vegetables you grow in your garden or vegetables that participants have mentioned as their favorites.

Set Up the Obstacle Course
If you’re working outside, use wooden stakes to create an outline of the human body in a level open area. Lay a garden glove at the end of each arm. Alternatively, you can use athletic field pant. Chalk the outline if the only open space is paved. If you’re working inside, use masking tape on the floor of a hallway or gym.

Add any obstacles you can think of such as buckets, hula hoops, create squiggly lines with jump ropes. Use obstacles to create major parts of the body: muscles in arms and legs can be buckets. The heart and stomach can be hula hoops. Use jump ropes to create arteries or intestines. Smaller dishpans can be other major organs.

Rules of the game
The group leader will choose a vegetable out of a hat, read the name of the veggie and the nutrients (i.e. secret identities/super powers) that vegetable has. If your secret nutrient identity is among those listed for that vegetable you enter the obstacle course through the head, making sure to hit all the obstacles (i.e. all the parts of the body) before exiting through a foot.

Super heroes must keep their identities secret. Ask youth to keep track of how many times they run through the body. Also encourage them to pay attention to when the body is most full of super heroes. In a discussion at the end of the game you can ask questions that reveal what nutrients are the most readily available in foods and which are harder to get. By noticing when the body is very full versus very empty you can judge how nutrient rich a vegetable is.
1. Hand out secret identity nutrient tags, and capes if desired, to each participant.

2. Explain the rules of the game and demonstrate running through the course to reach each obstacle.

3. Pull veggie cards out of a hat or basket one at a time.

4. Read the name of the veggie and the list of nutrients.

5. Wait until all super heroes are back at the head before reading the next vegetable card.

6. After all the veggie cards are read, have the group gather. It’s time to reveal secret identities. Have each participant read the description of their nutrient “fights infections; heals bones/wounds,” and see if other participants can guess what nutrient they were.

7. Ask who ran through the course a lot, who only once or twice. What does that mean about your nutrient? Are you easy to find in foods?

8. What about how full the body was? What veggies had the most super heroes in the body? Which the least? What does that mean about how nutritious certain veggies are compared to others?

9. You can follow the activity with sampling veggies from the garden or from those used in the game.

Adapting the game

When working with younger youth (pre-K, K, 1st and even 2nd grade) consider making the super hero identities the vegetables rather than the nutrients. Each youth assumes the role of “Captain Carrot” or “Powerful Peas.” When the leader draws out of the hat, they call the nutrient (Calcium), defines it (helps build strong bones) and then lists all the veggies (super heroes) that contain these nutrients.
Protein
Builds and repairs tissue

Carbohydrate
Fuels body functions

Vitamin A
Fights infection and helps eyesight

Vitamin C
Fights infections Heals bones/wounds
Vitamin E
Heals and maintains skin

B Vitamins
Helps body use food energy

Iron
Carries oxygen

Potassium
Helps nerves and muscles
Phosphorus
Builds strong bones

Calcium
Builds strong bones

Vitamin A
Fights infection and helps eyesight

Vitamin C
Fights infections Heals bones/wounds
Powerful Peas

Clever Corn

Radical Radish

Brave Beans
Awesome Onion

Lucky Lettuce

Pow Wowzie Peppers

Totally Cool Tomatoes
<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Nutrients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans</td>
<td>Protein, Carbohydrate, B Vitamins, Vitamin C, Iron</td>
</tr>
<tr>
<td>Corn</td>
<td>Carbohydrates, Vitamin A, B Vitamins, Vitamin C</td>
</tr>
<tr>
<td>Beets</td>
<td>B Vitamins, Vitamin A, Vitamin C, Iron, Calcium, Carbohydrates, Potassium</td>
</tr>
<tr>
<td>Lettuce</td>
<td>Vitamin A, Calcium, Iron, Potassium</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>Vitamin A, Vitamin C, Potassium</td>
</tr>
<tr>
<td>Zucchini</td>
<td>Vitamin A, Vitamin C</td>
</tr>
<tr>
<td>Carrots</td>
<td>Carbohydrates, Vitamin A, B Vitamins</td>
</tr>
<tr>
<td>Onion</td>
<td>Potassium, Vitamin C</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>Vitamin A, Vitamin C, Potassium</td>
</tr>
<tr>
<td>Eggplant</td>
<td>Potassium, B Vitamins</td>
</tr>
<tr>
<td>Radishes</td>
<td>Vitamin C</td>
</tr>
<tr>
<td><strong>Protein</strong></td>
<td><strong>B Vitamins</strong></td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Powerful Peas</td>
<td>Powerful Peas</td>
</tr>
<tr>
<td>Brave Beans</td>
<td>Clever Corn</td>
</tr>
<tr>
<td></td>
<td>Brainy Beets</td>
</tr>
<tr>
<td></td>
<td>Brave Beans</td>
</tr>
<tr>
<td></td>
<td>Captain Carrot</td>
</tr>
<tr>
<td></td>
<td>Pow Wowzie Peppers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Iron</strong></th>
<th><strong>Carbohydrates</strong></th>
<th><strong>Vitamin A</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Powerful Peas</td>
<td>Powerful Peas</td>
<td>Clever Corn</td>
</tr>
<tr>
<td>Brainy Beets</td>
<td>Clever Corn</td>
<td>Brainy Beets</td>
</tr>
<tr>
<td>Brave Beans</td>
<td>Brainy Beets</td>
<td>Brave Beans</td>
</tr>
<tr>
<td>Lucky Lettuce</td>
<td>Brave Beans</td>
<td>Captain Carrot</td>
</tr>
<tr>
<td></td>
<td>Captain Carrot</td>
<td>Courageous Cucumbers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pow Wowzie Peppers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Potassium</strong></th>
<th><strong>Calcium</strong></th>
<th><strong>Phosphorus</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clever Corn</td>
<td>Brainy Beets</td>
<td>Brave Beans</td>
</tr>
<tr>
<td>Brainy Beets</td>
<td>Lucky Lettuce</td>
<td>Lucky Lettuce</td>
</tr>
<tr>
<td>Lucky Lettuce</td>
<td>Pow Wowzie Peppers</td>
<td>Pow Wowzie Peppers</td>
</tr>
<tr>
<td>Totally Cool Tomatoes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awesome Onion</td>
<td></td>
<td></td>
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<tr>
<td>Courageous Cucumber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pow Wowzie Peppers</td>
<td></td>
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</tbody>
</table>
Evaluation Tools
Garden Drawing Evaluation

Objective:
Use drawings as an effective way to gather information with young children. This activity is an example of how you can use drawings to uncover what children have learned about gardening through your program.

Time:
- 30 minutes during the program pre-session
- 30 minutes during the program post-session

Materials:
- Blank pieces of paper
- Crayons, colored pencils, and markers

Instructions:
This pre- and post-test activity will help to highlight the children’s changes in perspective. Do this activity on the first day of program, before any other activities, and one week after the program has finished.

Pre-Session:
- Provide children with blank pieces of paper, markers, crayons, and colored pencils.
- Ask them to write their first names and ages on the back of each paper they draw on.
- Ask children to draw a garden, any garden.
- Say something like: “It can be a garden you’ve seen before or a garden that you imagine. It’s your garden, so can include whatever you’d like.”
- Note: You must be very careful not to influence participants when introducing the activity or during the activity. Be careful not to use leading examples or questions (e.g. “you can draw a vegetable garden or a flower garden”, “are there any animals in your garden?” “who visits your garden?”).
- Give children between 15 and 30 minutes to draw before the drawings are collected.

Coding:
Set aside some time when you are not working with the children. Code drawings based on the presence or absence of ecological and social aspects of gardens:
<table>
<thead>
<tr>
<th><strong>Ecological</strong></th>
<th><strong>Social</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowers</td>
<td>People present</td>
</tr>
<tr>
<td>Different types of flowers (e.g. daisies, tulips, sunflowers)</td>
<td>People gardening</td>
</tr>
<tr>
<td>Vegetables</td>
<td>People interacting (e.g. gardening together, playing together)</td>
</tr>
<tr>
<td>Vegetables growing appropriately (e.g. carrots and potatoes underground)</td>
<td>People of different generations (e.g. adults, children)</td>
</tr>
<tr>
<td>Fruit</td>
<td>Structures (e.g. shed, picnic table, house, school)</td>
</tr>
<tr>
<td>Fruit growing appropriately (e.g. apples on trees, blueberries on bushes)</td>
<td>Signs</td>
</tr>
<tr>
<td>Soil</td>
<td>Activities other than gardening (e.g. playing, eating, bike riding)</td>
</tr>
<tr>
<td>Sun</td>
<td>The time it takes to garden</td>
</tr>
<tr>
<td>Water (e.g. water source, hose, watering cans, rain)</td>
<td>Commitment, caring, ways of expressing feelings about the garden</td>
</tr>
<tr>
<td>Different Colors</td>
<td></td>
</tr>
<tr>
<td>Insects or animals present</td>
<td></td>
</tr>
<tr>
<td>Trees, shrubs, or other plants near garden</td>
<td></td>
</tr>
</tbody>
</table>

**Post-Session:**
One week after the program ends, ask the children to draw a garden. It can be any garden they would like. Code the drawings again based on the presence or absence of the ecological and social aspects.

**Compare:**
Compare and contrast the children’s pre- and post-drawings to determine if any change in understanding of gardens is expressed.

**Modify:**
If you are working with younger children (5-6 year olds) or with special needs audiences whose drawings aren’t easily interpreted, you may have facilitators visit with children toward the end of the drawing exercise. Ask facilitators to carry a post-it note pad and denote the participants’ name. They can simply ask the participant to “tell me about your drawing.” Once again, caution your facilitators to be careful not to ask leading questions (e.g. is that an apple tree?).
Ask facilitators to record the participant’s response to the question. After you collect the drawings, attach the post-it note to the drawing for reference when coding.
Know and Show Sombreros

Purpose
Children create wearable pieces of art by decorating newspaper hats, as a way to their knowledge of a question of interest.

Objective:
The objective of this activity is to make wearable works of art that show children's understanding of a question of interest, such as the benefits of plants to people. This activity is both a creative arts project as well as an effective evaluation tool. If you make the hats as a pre- and post-test, you can note the difference between what the children included before, and after, the program.

Time:
- 1 hour during the program pre-session
- 1 hour during the program post-session

Materials
- 2-inch clear tape
- Newspaper
- Miscellaneous art supplies (markers, yarn, glitter, pipe cleaner, tissue – whatever you can think of!)

Instructions:
This activity needs to be done twice – once during the program pre-session and once during the program post-session. The rationale behind this is that through comparing these activities, you will be able to identify a change in a group of children’s knowledge or understanding of your program's subject of interest.

Make the Hat
- Place the middle of two large, square sheets of newspaper on the top of a student’s head.
- Lay the rest of the paper flat against the student's head.
- Tape around the newspaper starting right over the ear, and continue wrapping until the tape goes all the way around the student’s head.
- Curl up the edges of the newspaper to form the brim of the hat.

Decorate the Hat
During the pre-session, simply ask, without prompting, a question of interest related to your project goals, such as: what are the benefits that plants provide us? Or, what do plants need to grow? Encourage them to be creative, but do not offer suggestions or prompting.

Encourage children to decorate their hats, with different art supplies, to show what they know.

Describe the Hat
- When everyone’s finished their hats, encourage them to show their creation and talk about what each decoration or item means.
- As they do this, jot down the numbers and range of responses.
- For example, when asked what plants need, children may show water drops, and a sun. Note those as examples of two different needs. Note, too, any misinformation you see presented.

Post-Session:
- Repeat this activity again at the end of your program’s session. Again, jot down the numbers and range of responses.
- Is there a difference? At the end of the session, are children able to identify more, or present a broader/deeper understanding of the plant world?
- For example, they may now note that plants need sun, water, nutrition, time to grow, a good location, and care.

You’ve just completed another evaluation method and most likely had some fun while doing it!

This activity was used with permission from the Junior Master Gardener Program. For more information, visit http://www.jmgkids.us
**The Quick Whip**

Sometimes, despite our best planning, we haven’t prepared a survey, we’ve neglected to plan for a quality circle, or we just didn’t get it together to have someone observe our program. Don’t despair!

The “quick whip” is a great way to still grab some information at the end of the program. It’s basically a quick go-around. Ask simple and direct questions that the participants can answer on the spot with not too much thought.

For example, ask the group:

- Was there one thing you learned today? If so, what was it?
- Go around the room and ask participants to describe it. Record what they share.

Or, ask for a show of hands:

- How many of you learned something new today?
- Count the number of hands and record as a percentage.

Modify these questions for whatever you’re interested in learning about...
Survey Sample #1 (Post-test for children and youth program participants)

Hello! We want to know about the garden project you’re doing and how you feel about it. We have some questions for you to answer so that we can try to make our projects better in the future!

Which of these things have you done in your gardening program?

- I planted seeds
- I watered the plants and flowers
- I took weeds out from the garden
- I picked vegetables when they were ripe
- I helped with composting
- I talked with the adult leaders about my ideas
- I helped plan things to do
- I helped make decisions
- I helped find answers to problems
- I got to be in charge of some of the things we did
- I helped raise money for the garden
- I helped decide what to do with money for the garden
- I was a member of a committee
- I talked to other people about the garden
- I helped write an article about the garden
- I showed other kids how to do things, like planting
- I looked after the younger kids

Which of these things did you learn from working with the garden?

- How to plant a garden
- How to look after a garden
- How to decide what plants are best to grow
- More about vegetables, herbs, and flowers
- How to tell the difference between the plants and weeds
- How to get rid of insects and pests
- How to use different tools in the garden
- How to work together with other people to reach a goal
- More about nature and the environment
- More about my school
- More about my town
- How to make decisions
- How to find answers to problems
- How to talk about important things with adults
**Survey Sample #2** (Pre- and post-test for children)

For each question, color in the face that matches how you feel about the statement.

<table>
<thead>
<tr>
<th>In this program I feel that….</th>
<th>No, I strongly disagree</th>
<th>I disagree</th>
<th>No opinion</th>
<th>I agree</th>
<th>Yes, I strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I can make a difference in the world.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>2 I have responsibility for how others feel.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>3 What I have learned is useful and helpful to me.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>4 What I have learned is useful and helpful to others.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>5 I belong to a caring community.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>6 My family could be involved in this program.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>7 I am valued and I matter.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>8 I am given chances to make decisions affecting me.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>9 I am asked to give input into decisions.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>10 I am free to discover.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>11 I am given chances to succeed.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>12 I believe I can do what I set out to do.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
<tr>
<td>13 I understand that failure and frustration are learning experiences.</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
<td>☺</td>
</tr>
</tbody>
</table>
Going Further with Seed to Salad

Readings:

• *Seedfolks* by Paul Fleischman. 13 narrators tell the story of the founding and first year of a community garden in an immigrant neighborhood of Cleveland, Ohio. Best for adolescent and adult readers. We encourage a community read – a book group gathering – or other way of engaging conversation around this little but weighty book.

• *The Vegetables We Eat* by Gail Gibbons. Learn about vegetables in this fun and colorful book. The book explains what parts of vegetables we eat and how they are grown. Best for Grades K-2. This would be a nice way of going further by integrating literature.

• *Salad People* by Mollie Katzen. A cookbook for preschoolers and up, this book includes several easy vegetarian recipes that are fun and tasty for youth. Adding in an accessible and easy cooking component could be enjoyable – and pave the way to a lifelong joy of cooking.

Activities

• Enter vegetable data into the Vegetable Varieties for Gardeners database, a citizen science program designed to assist gardeners select the best varieties for their environments and taste preferences. [http://vegvariety.cce.cornell.edu/main/login.php](http://vegvariety.cce.cornell.edu/main/login.php)

• Donate extra produce to a local Food Pantry. Engage the youth in the selection and delivery.

• Explore the garden-related music by Banana Slug String Band. Learn to sing ‘Dirt Made My Lunch’ or ‘Roots, Stems, Leaves’ with your group of youth. [https://bananaslugs.bandcamp.com/album/dirt-made-my-lunch](https://bananaslugs.bandcamp.com/album/dirt-made-my-lunch)

• Do an additional activity, The Plant Part Factory, from UC Davis Children's Garden. [https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxozWFsdGh5c2Nob29sZ2V5aXJvbmi1bnR8Z3g6NmM5NWEzYWU2ODI1YzjjZnA](https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxozWFsdGh5c2Nob29sZ2V5aXJvbmi1bnR8Z3g6NmM5NWEzYWU2ODI1YzjjZnA)

Can you think of other creative ways to go further with Seed to Salad? Email us at [fcd9@cornell.edu](mailto:fcd9@cornell.edu)!
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Johnny's Selected Seeds: seed donations

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Ithaca Public Education Initiative: grant funding for school-based pilot program

Kelly Craft, Pre-K Teacher, Northeast Elementary School: support of school-based Seed to Salad program

Students at Northeast Elementary School: development of school-based Seed to Salad program

Mary Alyce Kobler and Mya Thompson, Ithaca Children’s Garden Volunteers: development of original Seed to Salad after school program

Leigh MacDonald-Rizzo, Education Director, Ithaca Children’s Garden: program development and pilot testing, overall coordination of Seed to Salad Program, toolkit author