SEATTLE P-PATCH

2014
YOUTH GARDENING RESOURCE BINDER

...Bringing the Next Generation of Organic Gardeners into your local P-Patch...

Seattle Department of NeighborhoodS

P-PATCH COMMUNITY GARDENING PROGRAM

700 5th Avenue, Suite 1700 PO Box 94649 Seattle, WA 98124-4649

Ph. (206) 684-0264, Fax 233-5142
http://www.seattle.gov/neighborhoods/ppatch/youth.htm

P-Patch Youth: Program Area Vision

P-Patch Community Gardens actively offer opportunities for youth to discover food, nature, gardening, and community building. It is our hope that Dept. of Neighborhoods P Patch Community Gardens are used as a tool to promote safe gardening practices, and healthy lifestyle choices to future generations.

We encourage youth to be involved in the community garden through assisting in the garden giving plot, renting a plot with a school group or after school program, utilizing the space for service projects, or simply taking a visit to one of the gardens.

Partnering with local gardening experts, P-Patch acts as an agent in distributing community gardening knowledge to youth of diverse economic, racial, and ethnic backgrounds.

Our youth gardening opportunities strive to incorporate youth into the fabric of the community and foster the growth of active and involved citizens.

PPatch gives interest list priority to people gardening with youth groups!
Sign up here for a plot: http://www.seattle.gov/neighborhoods/ppatch/signupPpatch.htm
Phone Number: 206.684.0264 Fax Number: 206.233.5142 Email: p-patch.don@seattle.gov

Seattle Department of NeighborhoodS

P-PATCH COMMUNITY GARDENING PROGRAM

2014 P-Patch Youth Plots

There are several ways youth are already involved in the P-Patch sites.
Some youth groups have their own plot which they are dedicated to year round;
others work in the common areas of the garden, or assist in the giving garden.
These programs prosper thanks to the excellent leadership of Teachers, After School Programs,
Community Members, AmeriCorps Members, and Garden Educators!

LastName	FirstName	EMail	SiteNumber	SiteName
Reed	Paige	PaigeSReed@gmail.com	73	Bitter Lake
Teen Program	Bitter Lake	rob.bellm@seattle.gov	73	Bitter Lake
Kelty	Jennifer	jennifer@tccbgg.org	6	Burke Gilman
Hasme	Nathaniel	1nathaniel.hasme@gmail.com	33	Cascade-P
Youthcare	Orion Center	jack.koran@youthcare.org	33	Cascade-P
Youthcare-Orion	Jack Koran	Jack.Koran@youthcare.org	33	Cascade-P
Minor Ave Children H	Joyce Jarvis	jhunter@haggardchildcare.com	33	Cascade-P
Hynes	Eileen	eileen@lakeandparkschool.org	13	Colman Park
Martinez	Alejandra	Alejandra.martinez@soundchildcare.org	16	Delridge
Wartman	Lily Natasha	carol.wartman@gmail.com	12	Eastlake
TOPS-Seward	School	pam@newtonstreet.org	12	Eastlake
Montessori	Magic Lantern	amy.wood@soundchildcare.org	29	Hillman City
Elementary School	Orca	suewilkes@comcast.net	29	Hillman City
Cummings	Marilyn	cummingsmj@yahoo.com	39	Immaculate
Porter	Vicki	madronaplacetwo@hotmail.com	19	Judkins
Remlinger	Renee	teelinger@comcast.net	81	Kirke Park
Kelly	Anne Frances	annefranceskelly@gmail.com	89	Licton Springs
Kenney's Korner	Bernadette Ande	kenneyskorner@comcast.net	50	Lincoln Park
SWAG Project	Jennifer OBrien	osodiva@yahoo.com	47	Longfellow Creek
Bishton	Emily	greenlightgardening@gmail.com	7	Magnuson
Child Care Center	Mary Jo Dostal	Maryjo.dostal@seattlechildrens.org	7	Magnuson
Outdoors for All	Molly Harrigan	MollyHarrigan@outdoorsforall.org	7	Magnuson
Simons	Amara	littleksbird@gmail.com	5	Picardo Farm
Olson	John & Susan	johnandsueolson@msn.com	5	Picardo Farm

Howell-Clark	Janet	klhc@msn.com	5	Picardo Farm
Ford	Barbara	timbbford@comcast.net	28	Queen Anne
Ford	Barbara	timbbford@comcast.net	28	Queen Anne
REWA			59	RV Dakota
Att: P-Patch Lead	U-Coop School	julie.hampden@gmail.com	77	Shiga's Garden
UDistrict Childrens	Sandra	butterflies@udccenter.org	17	University Hgts.
CO-OP childrens CTR	C, Rodriguez	pinchef@gmail.com	17	University Hgts.
Highland Park School	Brian Gaynor	brgaynor@seattleschools.org	87	Westcrest Park

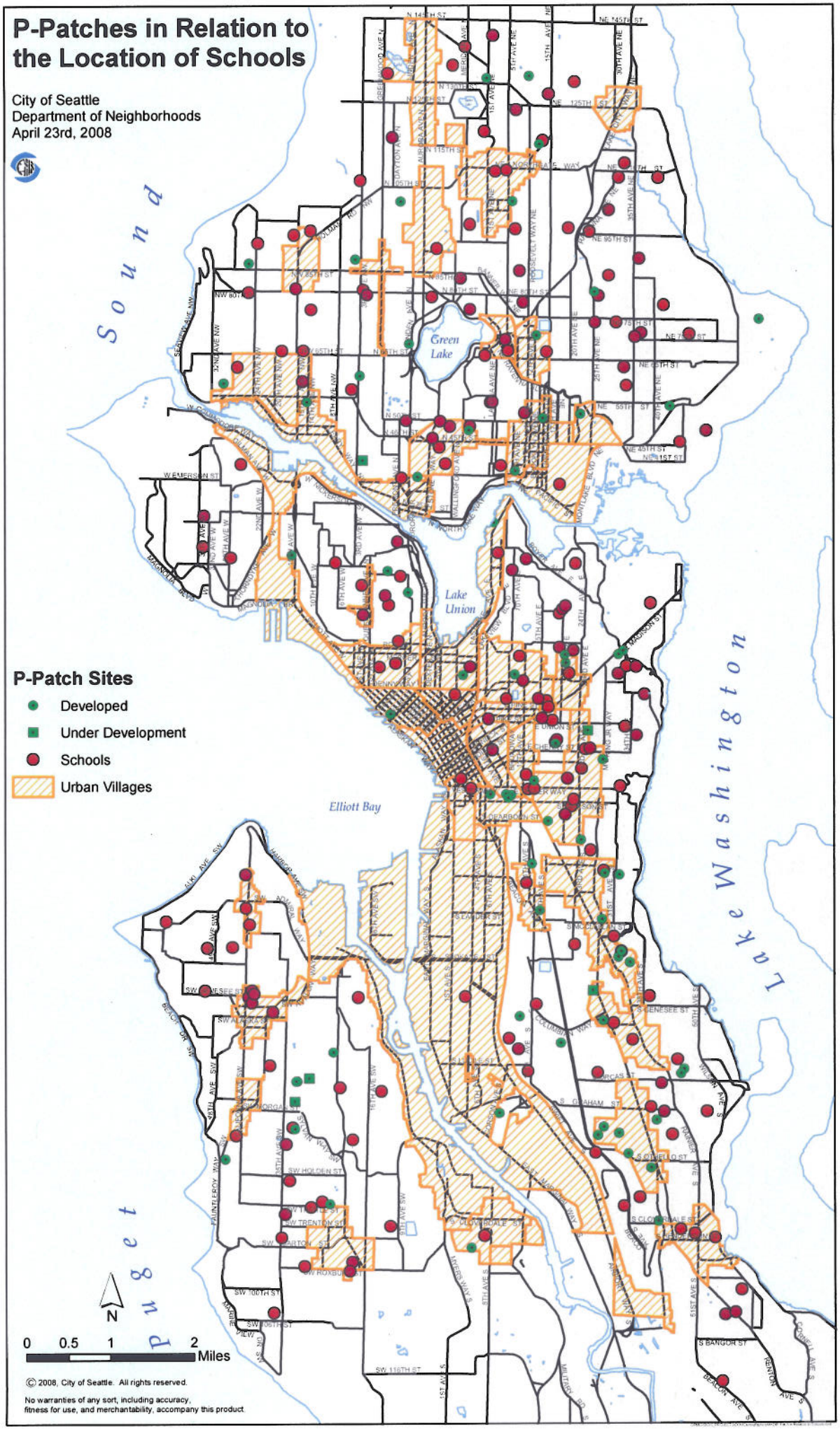
PPatch gives interest list priority to people gardening with youth groups!
Sign up here for a plot:
http://www.seattle.gov/neighborhoods/ppatch/signupPpatch.htm
Phone Number: 206.684.0264 Fax Number: 206.233.5142
Email: p-patch.don@seattle.gov

P-PATCH COMMUNITY GARDENING PROGRAM

www.seattle.gov/neighborhoods • 206 684 0464

P-Patches in Relation to the Location of Schools

City of Seattle
Department of Neighborhoods
April 23rd, 2008



© 2008, City of Seattle. All rights reserved.

No warranties of any sort, including accuracy, fitness for use, and merchantability, accompany this product.

Local Seattle Youth Gardening Programs/Resources

Seattle Tilth

Seattle Tilth is a nationally recognized non-profit organization dedicated to cultivating a sustainable community, one garden at a time. They have several demonstration gardens, as well as in P-Patches and other community gardens across the region, where they teach people how to improve their environment by using organic gardening techniques. http://www.seattletilth.org

4649 Sunnyside Avenue N, Room 120 Seattle, WA 98103

Phone Number: 206-633-0451 Fax Number: 206-633-0450

Lettuce Link

Coordinate with Seattle-area gardeners to donate fresh organic produce to their local food banks. Each year, hundreds of backyard gardeners and P-Patch volunteers from more than 30 community gardens collect and donate about nine tons of fresh, organic produce for people in need! Produce is distributed to two dozen food banks, meals programs and shelters across Seattle.

http://www.solid-ground.org

1501 North 45th Street Seattle, WA 98103

Phone Number: 206.694.6754 Fax Number: 206.694.6777

Email: lettucelink@solid-ground.org

Seattle Youth Garden Works

Seattle Youth Garden Works empowers homeless and under-served youth through garden-based education and employment. We are a market gardening program for youth ages 14-22 in the University District and South Park neighborhoods. http://www.sygw.org/

5700 Sixth Ave S, Ste 207 Seattle, WA 98108

Phone Number: 206.632.0352 Fax Number: 206.632.0355

Magnuson Nature Programs

Magnuson Nature Programs are a unique partnership between Magnuson Community Center and Magnuson Children's Garden. Together, they bring organic gardening and nature education to children and their parents through a wide variety of special events, classes, camps, and field trips, and manage 3 different garden sites: the Children's Garden and its double P-Patch plot, the Bird-friendly Landscape, and the Resource Conservation Landscape. All 3 gardens are used as teaching sites for dozens of special events, classes, camps, and field trips, and other public education each year.

www.magnusonnatureprograms.com

Master Gardeners

WSU King County Extension provides many resources for home gardeners. In addition to the services of over 600 Master Gardener volunteers, Community Horticulture faculty and professional staff are available to provide expert advice. WSU Extension also provides extensive online gardening resources.

http://mastergardener.wsu.edu/

Phone Number: 206.205.3122

Clean Greens Farm and Market

Based on 22 acres of leased land in Duvall, WA, this innovative project was begun by the Black Dollar Days Task Force, an organization dedicated to creating economic opportunity and equity in Seattle's low income communities. http://www.cleangreensfarm.com/

Marra Farms

Marra Farm is a model urban community farm engaging people in sustainable agriculture and education while enhancing local food security. Tucked into the South Park neighborhood of Seattle, it has 4 acres of historic preserved farmland. http://www.solid-ground.org/Programs/Nutrition/Marra/Pages/default.aspx

1501 North 45th Street Seattle, WA 98103-6708

Phone Number: 206.694.6746 Fax Number: 206.694.6777

Email:

Green Plate Special

Green Plate Special (GPS) is an independent garden-to-table pilot program, designed for at-risk and underserved youth, grades 6-8. The initial pilot program is located in the Madrona-Central district, on the corner of East Union Street and Martin Luther King Junior Way. Our mission is to be part of a movement that provides access to and tools for our low income Seattle youth to become the healthiest next generation, breaking the cycle that surrounds inadequate diet, poor eating habits, and the lack of access to and knowledge of healthy whole foods. This new generation of young people will be good citizens, who understand the rewards of taking on new responsibilities and have the resources and personal power to make a happy and productive life for themselves and their own future families. http://greenplatespecial.org/

Ground Up Organics

Teen-Based Waste - Water - Soil Management Training Program operating at Seattle Housing Authority's Yesler Terrace Garden Community working with Seattle Parks and Recreation, Seattle Public Utilities, Seattle Neighborhood Group, Seattle Tilth and other grassroots organizations to create green employment and educational opportunities for low-income youth of color in urban center.

Yesler Community Center | 917 E Yesler Way, 98122

http://groundupproject.blogspot.com/

Rainier Valley Eats!

Growing, Sharing and Eating in Southeast Seattle

Coalition welcomes opportunities to learn about, grow, cook and eat food together around Southeast Seattle. We promote equally the importance of healthy nutrition and of the pleasure that comes from choosing and eating food that we love. In the food that we serve and promote, we are constantly looking for the terrain where "nutritious" and "delicious" intersect. Working "from field to table," we focus on the entire system that puts food on our tables: from the growing, processing and distribution of food to purchasing, cooking and consumption. http://www.rainiervalleyeats.org/

Department of Neighborhoods- Seattle P Patch Program

PPatch gives interest list priority to people gardening with youth groups!

Sign up here for a plot: http://www.seattle.gov/neighborhoods/ppatch/signupPpatch.htm

Phone Number: 206.684.0264 Fax Number: 206.233.5142 Email: p-patch.don@seattle.gov

Seattle Department of NeighborhoDS

P-PATCH COMMUNITY GARDENING PROGRAM

P-Patch Gardens for Children: Creating Success & Sustainability from the Start

© 2013 by Emily Bishton

Why to Start: Almost every lifelong gardener, park ranger, and nature lover have this in common: there was a caring adult present in their lives who helped spark and nurture their curiosity about the natural world. Spending quality time in a p-patch and/or home garden with children is one way that you can help to do that too!

How to Start: It's important to remember that *the way of all living things to start small and grow larger*. Even a small plot can hold a lot of plants! And rather than try to fit all your activities into just your own plot, try to utilize all the features that are already present in and around your garden. *Take a walk around to take stock of all the resources there*:

- Deciduous trees and shrubs show the seasonal cycles of plant growth, and give children the opportunity to observe them from dormancy to bud, to leaf and flower, to fruit and seed. Fruit trees and berry bushes are especially interesting to children.
- Trees and shrubs also provide bird habitat, and provide a wonderful place to install nest boxes so children can witness the magic of parent and baby bird interactions. "Wild areas" on the margins of your p-patch are especially attractive to songbirds.
- Perennial borders and herb gardens attract a variety of beneficial insects within easy viewing height for children. This is a great way to help children to lose their fear of insects, and gain respect and understanding of their importance in the world.
- The 'Giving Gardens' and/or common areas in your p-patch site provide a great opportunity for children to help care for something that will benefit others, strengthen bonds with their fellow p-patchers, and gain a sense of empowerment. . You can also create your own small Giving Garden by planting one or two rows dedicated to your local food bank.

How to Grow: Think of your children's program as a tree. A sustained and steady amount of nourishment from multiple sources is what a tree needs over the long term in order to stay healthy and strong. The end of growth is the beginning of a tree's decline. This may sound strange, but *make sure that from the start, your plans include never being "finished" with creating and re-creating the garden and your activities there.*

Designing for Success and Sustainability:

1. *Make sure you welcome input from children on each step of the process:* in designing the garden, changes to it over time, and on which plants you grow each year.

When children participate in the ideas, planning, & decision-making, they bond more with the garden and learn more from their experiences in it. The more "ownership" they develop, the more sustainable your p-patch plot will be.

Your main design role is to listen, and to guide only when necessary. Sometimes ingenious ideas come out "of the blue" to kids, and may seem outlandish at first to you. But take time to consider them seriously- they are probably tremendous ideas that just need a little "steering" to be do-able.

2. *Basic design features that belong in or near all children's garden plots:*

- Plenty of room on the garden paths for children to pass each other comfortably without stepping on each other, or on the plants. *No paths should have a dead end.*
- Soft path surfaces, such as wood chips, pine needles, or straw.
- A major visual and physical difference between the path surfaces and the garden soil, that acts as a reminder for where to walk. IE: River rock or used brick border, etc.
- Beds arranged so that children can do activities while observing adult leader(s).
- A creative and fun way to mark all plot entries, such as a scarecrow, steppingstones, and/or arbor (can be homemade with branches, or 2 bamboo poles with garden flags strung on wire between them).
- A restroom within a short walk if possible, especially if you garden with young kids.

3. *Features that open up even more possibilities if they are in or near the plot:*

- Activity locations in both sun and shade, so you can alternate as needed.
- A common area where a whole group can sit. If possible, with a covered area and picnic table for "plants parts parties", journaling, or nature crafts.
- A worm bin and/or compost bin.
- "Found objects" to use as imaginative garden decorations.
- PVC pipes and Remay for extended-season cloche gardening.
- A bulletin board or kiosk for displaying garden art, "what's blooming" notices, etc.

<u>Tools can be simple:</u>

- A 5-gallon 'bucket buddy' full of hand trowels, cultivators, gloves, and an old towel.
- Plenty of small watering cans, plastic magnifying lenses, and a cloth measuring tape.

<u>Planting Tips:</u>

- It's easier for children to plant large seeds than tiny ones, but doing a pantomime of the "pinch and sprinkle" technique with them helps greatly when planting tiny ones.
- If adults also hold all seed packets and dispense the seeds into children's palms, there will be much less seed spillage and mass clusters of seedlings all in the path.
- Let the children be generous when sprinkling seeds of salad greens, carrots, and radishes, because thinning and tasting the seedlings is part of the fun and learning!
- Whenever planting starts or thinning seedlings, allow for plenty of time and encourage children to observe, explore, and compare the roots of the various plants.

<u>Maintenance:</u>

- Don't expect or strive for the garden to be a showpiece or a record-setter. It's a sign of success for the garden to look 'lived in', and the whole gardening experience is one of your main goals, which will include imperfect harvests and occasional failures.
- Try to keep a handle on weeds to keep them from taking over, but utilize weeding as part of the learning experience whenever possible. Hint; make it a game of skill, such as "who can dig the longest dandelion root", then share everyone's successes as a group. And be prepared to explain the *concept* of weeds, as kids are sometimes confused about why a plant they think is very pretty is being called a weed.
- Done in 10-15 min. chunks of time, most children will find it fun to do garden chores such as mulching beds, spreading wood chips in paths, digging spent plants, etc.

Last but not least:

There is a garden proverb that says, "More grows in the garden than is sown there". When a child feels at home in a garden, something wonderful is sprouting!

Tips for the "Big 3": Recruiting, Retaining, and Recognizing Volunteers:

© 2013 by Emily Bishton

When you're inspired and excited to teach children about growing a garden, it's easy to give the time and the effort to lead a garden program. When others participate alongside you, it makes it more fun for you and for the children, and makes it much less work to keep the "fire" of inspiration burning brightly for all! When others participate by *also* adding their ideas to its growth and improvement, the leadership becomes a shared role and much more sustainable. *Recruiting, retaining, and recognizing volunteers are equally important and closely linked!*

Getting Started in Volunteer Recruiting

- **Take time to identify and write down the things that personally motivate you to volunteer.** That will help in all your communications to volunteers, verbally and in writing, both in the recruitment phase *and throughout your volunteer relationship.*

- **Identify and write down your program goals, and how you visualize volunteer recruitment helping to fulfill them.**

- **If your main goal is to attract more volunteers, identify the specific purposes for it,** such as creating a better adult-to-child ratio while teaching in the garden, increasing the scope of activities done, keeping the garden maintained better, etc. *Also identify your highest priority, so you can concentrate more of your effort on attracting volunteers for that purpose, and focus on the other purposes later.*

- **Identify the specific "pieces" that you would like volunteers to take** before you try to recruit them. The more specific you can be, the more you can refine your goals and focus your recruitment efforts. Most people feel more comfortable responding to being asked to take on something specific than to a general "I need help" request. If possible, give an estimate of how many hours you think it will take. Taking on small chunks of teaching or garden tasks allows volunteers to "dip their toe in the water"... and if the water is fine they are more inclined to "dive in" to participate more! For instance:
    - Being a "special guest" for one or two classes. Kids love special guests, and sometimes the special guest has such a blast that they want to return time and again!
    - Watering or weeding the garden once a week or once a month, spreading compost or mulch once or twice a year, taking photos or writing an article about the garden for the P-Patch (or school) newsletter, building a worm bin or tool bin, etc.

- **The goal of your volunteer appeal is to attract volunteers to want to participate.** Re-visit the things that motivate you (see above) and convey that feeling to others.

- **You only get one chance to make a first impression,** which can make a huge difference in retaining volunteers. Make it a welcoming, friendly, sincere, "can do" impression, whether it's a flier, poster, or spoken appeal!

- **Be 100% honest about how much time you are asking for,** because building trust is a vital component to your volunteer retention, and a very precious resource too.

Tips & Resources for special guests or "one-time" volunteers:

(remember, sometimes these "one time" volunteers can become ongoing volunteer support)

- Include at least one photo (with parent permission) of your garden activities on any recruitment flier or poster that you create. *Pictures do say a thousand words!*
- Create a simple blog (free and easy at Google and some other servers) to post photos from the garden program, descriptive text, etc. to increase your appeal to potentialvolunteers. Most volunteer organizations below will list a website or blog when you post with them.
- Master Composter Program guest- http://seattletilth.org/learn/mcsb/outreachrequest
- King Co Master Gardener Program- contact a member of their speaker's list for a presentation www.county.wsu.edu/king/gardening, or contact Program Coordinator Elaine Anderson for a volunteer listing in their "news you can use" email newsletter.
- Connect with your local Campfire Group (http://www.campfire-usa.org), and/or local Boy Scout (http://www.seattlebsa.org) or Girl Scout Council (www.girlscoutsww.org) for connecting with a troop for a stewardship event, and/or connecting with an Eagle Scout candidate. Eagle Scout projects can have a major impact on your garden infrastructure!
- Create a listing at www.volunteermatch.org
- List your stewardship opportunities as a "hot project" with www.seattleworks.org or apply for one of their TeamWorks or Seattle Works Day events
- Sign up with United Way at http://volunteer.truist.com/uwkc/agency/signup.aspx to be able to list volunteer events on their website, which is automatically linked to www.serve.gov, www.createthegood.org, www.allforgood.org and more.

Retaining Volunteers

- **All meetings must include refreshments!** It doesn't have to be fancy, but meetings always go much better with a pitcher of iced or hot tea, a few cookies or crackers.

- **Ensure that your garden and garden program is never "all done" or "finished" being created.** Many volunteers love to be involved in creating or building something new, so plan for there always to be room for volunteers to bring in new ideas, new lessons, new garden projects or features, etc. Take every opportunity to involve your volunteers!

- **Make sure that what you ask volunteers to do is meaningful and uses their time wisely, even if it's a simple and quick task.** What they are exchanging for their volunteer experience with you and your program is more valuable for that person than any amount of money, and it is non-renewable – it is their TIME!

- **Try to match the volunteer with a task that they are comfortable with** because it's in their scope of knowledge or because it will be an enjoyable learning experience for them.

- **Provide an orientation at the garden before volunteers become actively involved,** with plenty of time for them to have a thorough "look see", understand your current plans, and get their questions answered.

- **When a volunteer has a positive experience, they become a big fan of your program and tell others, which greatly increases volunteer retention and makes future recruiting easier.** The time and energy you give towards making sure that volunteers have a positive experience will come back ten-fold in their enthusiasm and effort. Also, make sure to set a goal for the total number of volunteers you want, as it is easier for all when the volunteer group starts small and grows bigger in time.

- **One of the main ways you can ensure a positive experience is to be a good listener,** and welcome your volunteers' ideas for activities or ways of doing things, even when they are very different than your own. Think of your volunteer recruitment as inviting people for a potluck, with each of them bringing something unique and delightful to the program!

- **Ask for frequent feedback, and follow-up on it.** Volunteer feedback is also a precious resource, and will keep you learning and inspired, and help your program function better. Seeking feedback also establishes (or cements) a personal connection that will help sustain volunteer enthusiasm even when things don't always go well on a particular day.

- **Make sure to have adequate one-on-one contact with ongoing volunteers.** Much of your "news and notes" and other communication can be done via group emails, but try to also make time for an occasional post-volunteering personal chat or phone call, etc.

- **When a volunteer that you trust reaches out to take some leadership, let go!** Part of being a strong leader is facilitating and encouraging others' desire for taking leadership roles, *not assigning leadership roles to others.*

- **Don't expect or strive for your garden to be completely weed free, or to produce record-setting crops.** That puts too much pressure on you, and on your volunteers. Besides, perfection is totally over-rated! Instead, set some reasonable goals with your volunteers, so that you're all on the same page and so that weeds don't take over and create a huge job to manage.

- **Have some laughs!** Even when things go wrong, keep spirits light if you can. And when things go right, laugh with joy! Share funny or poignant moments you've had that day.

When Volunteers say No

- **Remember that people do not always volunteer the first time they see or hear about the opportunities,** so try not to be discouraged if no one responds to your first or second volunteer appeal. Research has shown that it can take 3-10 times for an appeal to "bear fruit". When someone does say no to your appeal, (whether directly to you, or by just not responding) it can often mean "not right now". If it's directly to you, ask if you can contact them about future volunteering. If they agree, then stay in touch *without pressuring them,* so that yours is the first program to come to mind when they are ready to say "yes" to volunteering.

- **If/when a volunteer leaves, make sure to talk with them about it even if it's uncomfortable for you.** Find out why they are leaving, what they feel they gained by their volunteer experience, how to improve the volunteering experience for others.

Recognizing Volunteers

- **The power of a sincere "Thank You" cannot be over-estimated.** Seize all opportunities, give them freely, they don't cost you anything, and are worth more than gold! They also create a bond between volunteers who are working together, and can help keep volunteers enthused when doing something rather routine or working on a lengthy project.

- **If volunteers are "making your day", show your joy!** They will get a kick out of it and out of you.

- **Pay attention to what volunteers are doing while working together.** This can be hard when you're in the midst of a busy gardening session, but it enables you to be specific with your look-in-the-eye thank you at the end of the session, by adding something special or interesting that you noticed.

- **Asking volunteers for input and feedback is part of recognition.** Input on a new idea you have, and feedback on an event or experience, is another way (besides saying thank you) for you show them how much you value them and trust their opinion. I have learned a lot by doing this for all "one-time" or special project volunteers too.

- **Special volunteer efforts deserve a special thank you.** When someone goes above and beyond with their volunteer effort, a written thank-you note is a permanent reminder of appreciation and can be shown to significant others. Because volunteers are aware of how much time are devoting for the garden program too, they also understand the value behind a written note that you have taken the time for. It doesn't need to be fancy- a personal email or a mailed postcard can convey as much as a store-bought card. As in your verbal thank yous, acknowledging specific aspects of the volunteering that you truly appreciate makes the note more meaningful too.

- **Include photos of volunteers on visual materials you create about the garden program,** whether they are fliers, brochures, posters, PowerPoints, memory books, or other displays.

- **Have a party!** Seize every opportunity to make your volunteer recognition a public event. Make sure to publicize your event, as it can also inspire potential volunteers to begin participating. People don't typically volunteer just to be recognized publicly, but knowing that you take time to recognize your current volunteers sends a message to potential volunteers that they will be appreciated too. It gives volunteers a chance to show their appreciation to one another too!

A Few People Who Have Inspired My "Big 3":

- Lucy K. Bradley, former Maricopa Co, AZ Extension Agent, current NC State Univ. professor
- Jack Hale, Past-President of ACGA and co-founder of GrowLab Program
- Dr. Judy Esmond http://morevolunteers.com
- My own years of volunteering in community gardens, schools, food banks, etc.
- All the volunteers I've worked alongside over the years!

Outdoor Classrooms: Tips for Teaching and Troubleshooting

© 2013 by Emily Bishton

Tips for Teaching:

- **Getting kids in a circle** for lessons and activity instructions is helpful, no matter what age group you are working with. It makes it easy for them all to see you, and for you to make eye contact with all.
    - For younger children, sitting or kneeling in a circle, or holding hands while standing in a circle, also helps with the "ants in their pants".
    - For older children, standing in a circle is sufficient.

- **Make good eye contact** with all children while giving the lesson and instructions. This can take some practice, but it's worth it.
    - It helps you see which kids understand the lesson and/or instructions you're giving, and which may not be getting it.
    - It helps all kids feel the attention from you, even the quiet ones who may not verbally respond, and therefore creates some equalization in the group.
    - It helps prevent "squirrelyness", and certainly lets you know right away if it starts.

- **Start each hands-on activity with a question or two.** This will accomplish two things:
    - It helps you find out what the children already know about the topic/activity, and give kudos to children who are sharing what they know with their peers and you.
    - It helps to engage all the children.

- **Always give instructions before handing out any tools. Kids have a hard time focusing on what anyone else is saying once a tool is in their hands (true with adults sometimes too!).**

- **Keep lessons and instructions at around 10 minutes or less**, as most kids learn better- especially when they're outside- by doing the activity itself.
    - Plan to give out additional info, facts, etc on the topic during the activity, as you give each child a little one-on-one attention (and assistance if needed).
    - Planning to have a "Part 2" to the activity also enables you to gather the children together for another quick circle, and get cooperation back if it feels like it's fading.
    - If there is a "Part 2" to the activity, announce it to the group at the start, but wait until part one is done before giving the part two instructions to pre-K to 1st grade children.
    - Older children can get both parts of the instructions at the start, but some will likely need a reminder about part 2 also.

- **Ask children to help pass out supplies or tools for activities.**
    - This also helps keep kids engaged, as they are always interested in what their peers do.
    - It can also serve as a reward to the ones who are paying attention to directions, and provide incentive to the ones who are not. Many times, a child who has been goofing off in the back of the group will say to me, "Hey, why is he/she getting to pass out tools? I want to help!", to which the reply of "Well, I asked he/she to help because they were paying such good attention, or sharing with their neighbor, etc etc" works well.
    - This helps reduce the things you have to do too!

- **Team up for success.**
  - Planning activities that pair kids up is a great way to do activities that have multiple parts. For biological inventories (which can be as simple as counting worms or roly polys), one child can be the "finder" and another can be the "scribe".
  - It encourages kids to share, and to learn from each other.
  - If you are working with multiple ages, pair up an older child with a younger one and give the older children the mentor role. It's good for both parts of the pair!
  - Teams can also be in 3s or 4s, as long as there is something for each teammate to do. Empty hands and standing around to watch will usually result in acting out.

- **Be prepared to adjust the activities or timing if something unexpected happens that deserves everyone's attention.** (IE: an ant parade, a nearby bird or frog, etc)
  - Sometimes the most amazing learning and teachable moments come out of unplanned events. It's part of the magic of outdoor learning! As long as learning is going on, go with the flow even if it means that you don't finish what you had originally planned to do.
  - Try to tie in the unexpected event with the lesson or the garden if you can, to help kids understand that all things are connected in the natural world. IE: If you see an ant parade, ask the kids if they want to guess where the ants are going (probably a tree or a sugary snack left behind by a human) and why they are going there (to find food to bring home to their young), etc.
  - Having a "Plan B" in your back pocket, such as a game, song, or other activity is also very helpful if the weather changes for the worse, or to do some troubleshooting (see below).

Troubleshooting Tips:

- **Acting out** is usually just attention-seeking behavior. Giving attention can be the remedy, as long as it is not as a reward that stimulates other children to act out.
  - Using verbal and non-verbal recognition (see eye contact info above) is a way to give attention to children who are showing good behavior from the start, and can be a great preventative against acting out.
  - When acting out happens, address it as soon as you can so that it doesn't spread. Giving them attention doesn't mean you are giving in to their behavior.
  - Be honest with a child who is acting out, to get an honest reaction from them too. Off to the side, ask them why they are not paying attention and/or participating. Sometimes that's all the attention they need to get back into the activity! If they do give you a reason, consider it before reacting, as it might be legitimate.

- **If things just aren't going right overall,** it's OK to take a group time out.
  - Sometimes despite your great ideas and planning, you make mistakes and things aren't working. Or there are just too many kids with ants in their pants.
  - The first thing I do is to acknowledge to the children my mistake, the problems we're having, and/or my understanding that things just aren't going well now for us all. That is usually a surprise to them, and can help with "hitting the reset button".
  - A few minutes of free play, a game, a song, dance, etc., even a silly activity, can shift the whole event quickly and make it possible to get "Back on track" again.

- **Pair up to teach, rather than trying to go solo.**
  - Being solo leaves you in a tough spot if there is a bathroom emergency, if one or more children in your group are acting out, or any other problem.
  - See volunteer recruitment page for tips on recruiting and retaining assistance.

Outdoor Classrooms: Tips on Getting Started off Well

© 2013 by Emily Bishton

- **Kids associate going outside with recess**, so it's important to make sure they understand that garden time is not exactly the same thing as free play. *However, sometimes a few minutes of free play before gardening can help get the "ants out of their pants", if you have a place for this too.*

- **Establish some simple "garden rules"**, and go over them as the first part of garden activities. Letting kids announce the rules can help keep attention focused during this. *If you give them catchy titles, and then ask the kids to tell what they mean, it helps make it more fun to say the rules and follow them.* Here are some rule examples, and how to make them fun:
  1. **Where are your feet?** (walk only on the paths, try not to step on plants, etc.)
     a. Ask: "Everyone point to where their feet are right now- it's easy to know where our feet are when we are standing/sitting still, isn't it?" Kids will reply: YEEESS!
     b. Ask: "But it's much harder when we are walking and looking around us, isn't it?" Everyone: YEEESS!
     c. Ask: "What could we accidentally hurt by stepping on it if we forget where our feet are?" Kids will reply with answers such as: plants, flowers, a worm, insect, someone's toes, etc.
     d. Tell them that if they hear you or another adult ask "where are your feet", that means for <u>all</u> kids around to check where their feet are, because someone or is about to accidently step on something. *And that if they see someone else's feet in the wrong spot, they can say "where are your feet" to help that person remember too.*
  2. **Leaf Me Be** (do not pick leaves unless you are invited to by a leader)
     a. Ask: "Do you think plants need their leaves?" Kids will reply: YEEESS!
     b. Ask:" Do you think we can pick some if we are careful?" Kids will reply: YEEESS!
     c. Ask: "How will we know if it's OK for us to pick a leaf or not to pick?" Answer: Only if one of the leaders invites you to, and shows you how to do it in a way that won't hurt the plant. (hold the stem with one hand, pick the leaf with the other)
     d. Tell them that if they hear you or another leader, teacher, or parent say, "leaf me be", that means that you have seen someone who might have forgotten to listen first before picking. *And they can say "leaf me be" to help another child remember too.*
  3. **The Belly Button Rule** (keep the head of all tools below your belly button)
     a. It's best to give this rule right before using tools. This includes wheelbarrows full of wood chips, plants, stones, etc. as well as the typical hand tools.
     b. Hold up the tool you will be using, and explain which end is the head, and that the head always goes on the bottom (unlike ours!) to work best, and to keep us all safe. So the head of the tool will need to always stay below your belly button.
     c. Ask: "Please point to where your belly button is" (they don't have to show it). Who can tell me what can happen if your tool goes up above your belly button?" Kids will reply: I could hit myself, hit my neighbor, get dirt on somebody, dirt in my eye, my neighbor's eye, etc. Show empathy when each "owie" is identified.
     d. Tell them that if they hear you or another adult say "Belly Button", that means all kids should stop and check where their tool is. Have them practice reminding while you demonstrate the rule once or twice. *And they can say "belly button" to help another child remember too.*

- **Make sure to include educating kids about bees and other flying insects that they will see in the garden, and how to "Bee Safe".** Kids being afraid and/or aggressive towards insects can create chaos that is hard to contain. Here are some of my "Bee Safe" rules:
    - **Don't get between a bee and its lunch.** Ask them how they would feel if they were really hungry and someone wouldn't let them eat their own lunch. This is a great opportunity to make sure kids understand what bees are doing when they are on a flower, and to know that it's fine with bees if you watch them eat their lunch!
    - **Don't wave your hands in the air like a great big bear.** Explain that this scares bees, and might make them feel in danger of being hurt, and then sting. Kids learn at a young age about bears liking to eat honey, so can identify with this rule easily, even though it applies to all bees not just honeybees. This is also a great opportunity to help kids understand that not all bees make honey!
    - **Take 2 steps back.** Ask kids to point to the colors they are wearing that might be on a flower (most kids wear very colorful clothes). Then explain that if a bee lands on you, it might be because you look like a flower to them! This really helps them identify with the bee, which is the first step to empathy and caring. Ask: "Do you think a bee will figure out pretty quick that you are not a flower, and go find a real one to have lunch? Ask: can a flower take 2 steps back? That's how you can help a bee figure it out quicker!

- **Always give instructions before handing out any tools. Kids have a hard time focusing on what anyone else is saying once a tool is in their hands (this is true with adults sometimes too!).**

- **Other rules to consider, especially if you want to observe birds, or have garden neighbors who are disturbed easily:**
    1. Fox Walk. (walk softly and do not run, unless your leader invites you too)
        a. Ask, "Do you think birds and small animals might be scared of us? Why?" Hints: We're big and they are little, we can run really fast, we are in a big group. We might even remind them of an animal that wants to have them for lunch....
        b. Ask, "Does anyone know how a fox walks when it is hunting for its lunch? Hint: Quiet and slow and sneaky.
        c. Ask: "Are we trying to catch birds/frogs/grasshoppers for our lunch?" Everyone: NOOOO! Say, "That's absolutely right, but we are trying to get as close to them as we can without scaring them away from their home sweet home. Doing the fox walk works for that too!"
        d. Tell them that if they hear you or another leader, teacher, or parent say, "fox walk", that means that you have seen someone who might have forgotten to walk quiet and slow like a fox. *And that they can say "fox walk" to help others remember too.*
    2. Bird Voice. (talk softly, using, your indoor voice, and listen while others are talking)
        a. Ask, "Does anyone have an idea about what a bird voice is?" Hint: Most birds call or sing loud enough to be heard by other birds, but soft enough that they can hear other birds call or sing too, or hear something trying to sneak up on them.
        b. Ask, "Do you think we will hear the birds call and sing better if we talk softly like a bird, and take turns talking and listening?" Everyone: YEEESSS!
        c. Say, " That's absolutely right, and if we all do that we can each have a chance to talk, and each have a chance to listen, just like a flock of birds."
        d. Tell them that if they hear you or another leader, teacher, or parent say, "bird voice", that means that you have seen someone who might have forgotten to talk quiet like a bird. *And that they can say "bird voice" to help others remember too.*

Digging into Decomposition from Magnuson Nature Programs "Life in the Garden" field trip

© 2012 by Emily Bishton

Tools needed:

- Garden fork and wheelbarrow
- A "bug box" for each child
- Worm anatomy chart, photos of compost critters

Set-up of exploration areas:

Use the fork to shovel out some compost from the worm bin, or some soil from a garden bed, into a wheelbarrow.

- Position the wheelbarrow so that children can explore from all sides of it.
- Set out the unopened bin of bug boxes.

Intro to Exploration Activity- 3-minutes

- They are about to have the chance to see some amazing creatures who usually live on or in the ground beneath our feet, and learn about what they do to help the earth.
- Use the decomposers chart and photos to explain the important "jobs" of 1-2 creatures, and to prepare the children for what they may find. Then set the photos and charts out for the children to use during the activity.
- Each will get a bug box to put soil creatures they gather. Demonstrate taking off and putting the lid back on, picking up and holding a creature gently in your hand.
- How and why to be gentle with the creatures they find (OK to scoop or pick them up), that it's not a race to get the most creatures, and no one will be forced to hold them in their hand.

Explain "Belly Button rule" and demonstrate it.

Exploration Activity: 10-12 minutes

1. Ask one of the kids, or another adult, to pass around the bug box bin for children to each get a box.
2. Time to explore! Circulate among them to see what they've found and give them more info. Fill a bug box of your own too (with something unusual if possible).
3. Get everyone together in a circle to do a 2-minute "slideshow", with your or another adult doing the "clicking". As you look at each box that comes your way, this is another chance to impart some more decomposition information to the group.
4. At the end of the slideshow, have all children empty their bug boxes back into the wheelbarrow, then put their boxes into the bug box bin. Ask for help to empty the wheelbarrow into the worm bin or into the garden soil.

If you are working with elementary age kids, do "The Little Pillbug" poem or "I'm a Little Red Worm" song.

OUR GARDEN

Biological Inventory of Soil Organisms

Date:

Name	How Many?	Drawings

"Soil Squeeze" and "Soil Shake"

by Emily Bishton
www.greenlightgardening.com

Take a trip around your garden to take soil samples, learn what kind of soil you have, and see if it is ready for digging and planting!

Soil Squeeze:

Have each child gently dig in the garden soil and get a small amount that will fit in the palm of their hand. Give the soil a firm squeeze, then open your hand. One of three things will happen:

1. It will fall apart as soon as you open your hand, because it is sandy and dry enough to plant!
2. It will hold its shape when squeezed, but when given a light poke, it will crumble. Lucky you—this means you have luxurious loam soil that is dry enough to be planted!
3. It will hold its shape when squeezed, but sticks together in a hard ball even when poked. This means you have clay soil, or loam soil that is still too wet to plant. Wait a few more days to try again, and you might also need to add some more compost!

Soil Shake:

Materials needed- 2 or 3 clean, quart-size glass or clear plastic jars with tight-fitting lids.

1. Chose several different locations in the garden, as far apart as possible. Have the children dig down to the native soil in each area, and use it to fill each jar halfway to the top.
2. Have the children fill up the rest of the jar with plain tap water, screw the cap on tight, and take turns shaking it thoroughly. Have the last child quickly place the jar right side up on a flat surface to settle.
3. The sand will settle immediately before their eyes, because it's the heaviest and largest soil particle.
4. The silt layer will settle on top of the sand, and they'll be able to see the difference by observing the color and particle size of each layer.
5. The clay layer may take several hours or several days to completely settle on the very top. It is usually either a bluish or yellowish color. Any organic matter that is in the soil will float on or in the water.

"Root Research" and "Root Ropes"

by Emily Bishton
www.greenlightgardening.com

Whenever you have weeding to do in your garden that is not too difficult for children to help with, make it a fun exploration activity and game!

Digging weeds is one of the few chances that children have to thoroughly pick apart and examine roots without harming the plant. Since one of your main weeding goals is to dig up the entire root so that the weed won't re-sprout, this "root research" also gives an incentive to children to take the time to do a nice deep digging. Here are some tips:

- Space the children as wide apart as possible, as it's hard to keep dirt from flying around when children knock the dirt off of the weed roots.
- If you have big clumps of grass, loosen them up in advance with a turning fork, which will make them easy for children to finish lifting with a hand trowel.
- If you have a Morning Glory invasion, give children the incentive to get as long a root section as they can with the "lift-and-follow" method, then create some activities with them:
    - Lay the long roots end to end to see how long of a "root rope" you can make.
    - Lay the long roots side by side down a nearby path, then twist them together and tie in a circle for a decorative "root rope" belt for a scarecrow, or other display.

THE "HONEYBEE DANCE" by Emily Bishton www.greenlightgardening.com		A great activity for understanding one of the "secret" languages that other living things use to communicate with each other.

HAVE FUN LEARNING AND PRACTICING!

 Round Dance	 **Waggle Dance**
When a food source is very close to the hive, a forager bee performs the round dance. She does so by flying around in narrow circles, suddenly reversing direction to her original course. She may repeat the dance several times at the same location or move to another location to repeat it. After the round dance has ended, she often distributes food to the bees following her. The round dance communicates distance but not direction.	When a food source is farther away from the hive, a forager bee performs the waggle dance. She flies straight ahead towards the food source, returns in a semicircle to the starting point, flies again through the straight course, then makes a semicircle in the opposite direction to complete a figure-eight. While flying the straight-line course of the dance, the bee wags its body vigorously from side to side and emits a buzzing sound that is produced by its wing-beats. The waggle dance communicates both distance and direction.

References:
Karl von Frisch, The Dance Language and Orientation of Bees
David R. Tarpy, NC State Univ., The Honeybee Dance Language

Bee Dancing ideas for groups of 2 or more children:

1. Explain and demonstrate each type of bee dance. Don't be afraid to be silly!
2. Have one child at a time choose to either the round dance or waggle dance to demonstrate, while the other children try to guess which dance it is. Then take turns until everyone has had a dance chance.
3. An advanced version is to have children try to guess which flower the "bee" is pointing to!

RESOURCES FOR FREE PLANTS AND GARDEN SUPPLIES

- Spring plant sales by local non-profits abound, and there are usually many leftover plants that need a home at the end of the sale. Check the Miller Library online listing at http://depts.washington.edu/hortlib/calendar/sales.php, then contact the non-profit in advance to find out their policy.
- Master Gardener Plant Sale leftovers are available to all non-profit gardening groups who submit a written request *in advance* to the Master Gardener Foundation. www.mgfkc.org
- Do you know a Plant Amnesty member? They have a free online Adopt-a-Plant (u-dig) and Green Share List that all members can access. www.plantamnesty.org
- Compost bins or worm bins are sometimes listed on www.craigslist.com by people who decided not to use them after all, or who are moving. Sometimes they are in brand new condition!

Jr. Nature Explorers Camp Songs

Unless noted, lyrics by Emily Bishton © 2006

♥ I've Been Workin' on a Flower
(sung to the tune of I've Been Workin' on the Railroad)

I've been workin' on a flower, all the live-long day.
I'm collectin' lots of pollen, just to take it on my way.
Can't you hear my wings a buzzin', I rise up so early in the morn.
Makin' all your favorite food ever since you were born.

Makin' all your food, makin' all your food, ever since you were born (repeat)

♥ "Plant Parts Song"

Roots, Stems, Leaves, Flowers, Fruits, and Seeds
Roots, Stems, Leaves, Flowers, Fruits, and Seeds
(repeat 2 more times)

Well there's 6 parts, 6 parts,
6 plant parts that plants and people need!

©Banana Slug String Band

♥ "The Food Song"
(sung to the tune of Jingle Bells)
Carrot roots, carrot roots,
Waiting in my lunch
You are my favorite food,
How I love to munch!

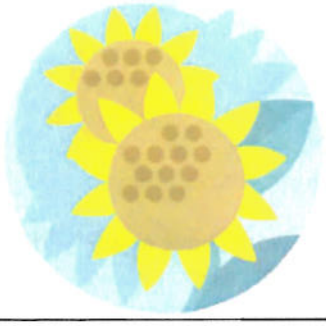
(variations: Celery Stems. Lettuce Leaves, Broccoli Flowers, Apple fruit, Pumpkin Seeds- keep adding all the plants you love)

♥ "I'm a Little Red Worm"
(sung to the tune of I'm a Little Teapot)

I'm a little red worm, tickly and wet,
I have 10 hearts but only 1 head,
I love to eat banana peels and apple cores,
I sleep in a pile of leaves but I don't snore!

Jr. Nature Explorers Camp Games

Unless noted, created by Emily Bishton © 2006



The Little Pillbug

I'm a little pillbug (start by tucking yourself into a ball)
rolled up in a ball,
wait for just a minute,
and then I'll start to crawl! (crawl around)

(variation: substitute millipede for the word pillbug)

Sniffer Cups

Tell the children that they're going to have a chance to make "sniffer cups"—cups that contain pleasing scents from nature. Give each child a small paper or plastic cup, then head outside. Have the kids explore the garden for a few minutes to choose something from nature to put in their cup. (IE: pine needles, bark, dirt, herb leaves or flowers) Then gather everyone in a circle and shut their eyes. Have each child pass their cup to the person on their left to sniff, and try to guess what is in the cup.

Adapted from an activity created by the Audubon Society

Nature Scavenger Hunt

Make a list of things present somewhere in the common areas or your individual p-patch. Then create teams of 2-4 children to explore the garden for a set amount of time (5-15 minutes) to try to find as many as they can, and check them off the list. Older children can add notes on the list describing what they found. Some ideas:

a flying insect	a crawling insect
a leaf that is not green	a seed
a bird	a blue flower
a hole that an insect made	a red flower
a plant with fuzzy leaves or flowers	a bee
a plant with thorny stems or leaves	a shade tree
a leaf bud or flower bud	moss
a fruit	a tall, thin plant
animal tracks	a low, wide plant
a spider web	something that is decaying
a puddle	something that smells good

Lesson Plan for "How Does a Worm See, Hear, and Feel?"

by Emily Bishton © 2012

Materials needed:

- An empty cardboard canister from cocoa, coffee creamer, etc.
- A smooth, palm-size rock
- A large, fresh or decomposing leaf

Part 1: How does a worm see?

Get in a big circle, so all kids can see you.
Start by Q & A, based on the kids' prior knowledge of worms: IE: "does a worm have eyes?", "does a worm need some way to see even though it lives most of its life in the dark?", etc.
Then move on to the activity:

- Have they ever woken up in the morning and laid in bed with their eyes closed, but could still tell if the sun was up yet;
- How could they know; (the thin skin of eyelids lets the light through)
- Ask all to close their eyes and then put their hands over their eyes to make it dark like the night, then take their hands away from their eyes but keep eyes closed to "see" the light shine through their eyelids.
- Then explain that a worm's entire body is like their eyelids, and lets the light shine through so it can "see" if it is night or day.

Now go back to Q & A that completes Part 1:
"Does it matter to a worm if it's day or night?", "Why?" (IE: day is when the sun could dry them out and make it hard to move around or even kill them, day is when a Robin or other bird can see them easily, night is cooler and there is dew to keep their skin moist, night is when most creatures who would eat them are sleeping or roosting, etc)

Part 2: How does a worm hear?

Staying in the circle, start again with Q & A, based on the kids' prior knowledge of worms: IE: "does a worm have ears?", or use humor IE: "does a worm need to hear so it knows when its Mom is calling?"

Then move on to the activity:

- Have they ever been in a house where someone was walking around upstairs and making the ceiling vibrate? Explain that this is the same way we make vibrations when walking on the soil above a worm.
- Could they tell who was making the vibration even though they couldn't see or hear the person?;
- How?;
- Show the canister and explain that it is like the soil over a worm's head, and you are going to pretend to be a Robin walking on that soil (demonstrate "walking" with your fingers on the lid)
- Ask all to close their eyes and put their fingers in their ears, and wait for you to walk around the circle and put the canister on each head one at a time.
- When they "hear" your fingers walking on their head, they should say the word "Robin".
- Then explain that a worm's entire body is like their muffled eardrums, and very sensitive to vibrations.

Now go back to Q & A that completes Part 2:
"How do you think it helps a worm survive to be able to "hear" this way?"

Part 3: How does a worm feel?

Staying in the circle, start again with Q & A. IE: "Now that we know the way a worm sees and hears, do you think either of those senses help it find its favorite food to eat?", "does a worm eat with a spoon?"

Then move on to the activity:

- Have everyone hold up both their index fingers, and very gently touch them together a few times. Explain that our fingertips have some of the most sensitive skin on our bodies, and can feel even the slightest touch. Ask everyone to touch one finger gently to the side of their neck to find another sensitive spot of skin.
- Show the rock and the leaf, and explain that a worm's entire body is as sensitive as their fingertip or neck, and that sensitivity lets them know whether they are crawling over food or not.
- Ask all to close their eyes, hold out one finger, and say either the word "rock" or "leaf" after you walk around the circle and touch their fingertip with one or the other. We will all find out if we can feel as good as a worm can.

Wrap Up:

Have everyone put on their thinking caps and ask: Now that they know just what it's like to see, hear, and feel like a worm, how does this change they way they think about worms? Go around the circle to give everyone a turn to share.

More Jr. Nature Explorers Camp Songs

Unless noted, lyrics by Emily Bishton © 2006

♥ The Swallow Song (sung to the tune of She'll be Comin' Round the Mountain)

She'll be flyin' 'round the meadow
when she comes.
She'll be flyin' 'round the meadow
when she comes.
She'll be flyin' 'round the meadow,
She'll be flyin' 'round the meadow,
She'll be flyin' 'round the meadow,
when she comes.

2nd verse: She'll be eatin' flying insects

♥ Butterfly Butterfly
(sung to the tune of Pussycat, Pussycat)

Butterfly, Butterfly I love you, yes I do!

(variations: substitute Bumblebee, Hummingbird, Red Wiggler, etc.)

♥ "Dirt Made My Lunch"

Dirt made my lunch,
dirt made my lunch,
thank you dirt, thanks a bunch,
for my salad, my sandwich, my milk, and my munch,
cause dirt, you made my lunch!

©Banana Slug String Band
(variations: substitute plants, worms, sun, or bees, for the word dirt)

♥ Little Bat
(sung to the tune of Twinkle Twinkle Little Star)

Twinkle twinkle little bat,
How I wonder where you're at!
You eat mosquitoes all night long,
You're sleepin' while I sing this song!
Twinkle twinkle little bat,
How I wonder where you're at!

What can you do with Youth in the Garden?
Quick Lesson Plans Utilizing the Garden

Terrariums
During colder months students can build mini greenhouse for indoors. Using two clear plastic cups, sand, and charcoal and potting soil. Talk with students about what they think a plant would need to grow in the winter. Students will only have to water these plants once because the water will cycle through the water cycle-explain. Sand and charcoal help with water filtration. Have students share where they will be keeping there plant safe-preferably where they can get as much light as possible. *GR K-6*

Dirt Challenge
To have students get over there sometimes fear of dirt, play in the mud! Make mud either in a bucket or contained area. Have students place there feet or hands in the mud. It can get a little messy but students get a kick out of dirt! Be sure to have a hose or cleaning bucket and towels for students to clean up. You can have students write a journal or poem around what it felt like. They can have their names, or pictures, placed on a "Dirt Challenge" poster board. *GR K-3*

Garden Journals
Have students make their own garden journals for the season. They can document their gardening experience through pictures poem and writing. Using cardstock or cardboard for outside covers, colored construction paper, hole punch and heavy duty string. The journal can be used to document a seed planted, adopted plant, or entire garden layout. Students can keep track of growth height, watering schedule, and harvest date. *ALL AGES*

Garden Scavenger Hunt
Compile a list of items students need to find in the garden, you can associate points to each item or simply have them check off if they find the item. Equip students with rulers, bags, magnifying glasses, bug catchers etc. Examples could be: Stem 8" long, weed root, smooth stone 3" wide, flower with six petals, etc. Have students circle up at the end of allotted time and share what they found, could not find, and why they think they could not find certain items. *GR 1-5*

Lady Bug Stones, Lady Bug Search
Discuss why lady bugs are good for the garden and how they help. Go on a lady bug search around the outlying areas of the garden, carefully catching any ladybugs and bringing them back to the garden. Older students can do a survey of the amount of ladybugs they find in a garden compared with outside the garden. Discuss outcomes. Smaller students can search for smooth stones at least four inches around and can paint these stones like a ladybug. They can be used to decorate the garden or paperweights. *GR K-4*

Labeling Signs
During colder months one can do some garden planning. Ask students what they would like to plant in their garden this spring. Suggest themes, salad garden, taco garden, pizza garden, or fairy garden. Make a list of veggies students would like to plant in the garden. Distribute cardstock and have students volunteer to make labeling sign to be placed in the garden. Students can use paint, colored pencils, crayon, and markers. Encourage students to make signs colorful and legible. They can be collected and laminated for future use! *ALL AGES*

Building a Trellis
Peas after Presidents Day, and beans when it gets a little warmer! Both can be trellised for maximum use of garden space and production. Older students can design a trellis, looking at different styles (metal, wood, bamboo, plastic, tepee or ladder). Discuss pro's and con's to each option and decide on best options. Offer pictures as examples *GR 6-HS*

Weed Tally
Ask students what they think a weed is. Discuss with students that a weed is a plant that is simply in the wrong place. Why don't we want weeds in the garden? Give each student a section of the garden and tell them to collect as many "weeds" and keep count. They then can log the number of weeds on a poster board with their name, date, and number of weeds they collected. *GR K-3*

Plant/Weed competition
After discussing what plants need to survive (sunlight, water, and soil). Have several 4" cards with each plant need. Divide the class into two groups "weeds" and "plants". Round one: plants are in even rows, where they can not move. Place plant needs on the ground, students have five seconds to pick up as many cards as possible, staying in one place. Record how many each student collects. Round two: plants are still in even rows but weeds are added (weeds do not have to be in rows they can go where ever they want) students are again given 5 seconds. Record the data and compare results. Similar game can be played (older students) with plant nutrients: Nitrogen, Potassium, and Phosphorus. *GR 1-5*

Bird Survey
Why are birds important for the garden? Why are they a nuisance to freshly planted gardens? Students will be conducting a bird survey of the garden and surrounding area. Partner up students with a clip board, pencils and paper. Students make a tally mark for every bird they see and a circle for every bird nest. Explain that birds may get frightened of noises so students should be quite, set boundaries for the survey, suggest students take different locations to make sure they don't count the same birds twice. *GR 1-5*

Bird Treats
Winter is a hard time for birds. Although most migrate to warmer places some stick around. Have students collect pinecones so make bird treats for those that stayed around. Students tie a long, durable string around the pinecone, using lard (or peanut butter if no student is allergic) cover the pinecone with a thin layer of this sticky substance, roll cones in birdseed and hang from tree. To transport sticky treats home, wrap in tin foil or recycled newspaper. *GR K-3*

Bugged Out
Discuss/Ask why we need bugs in our garden! Several educational books, ranging in age appropriateness, "The Icky Bug Alphabet Book" "Hide and Seek Science, Where's that Spider" Students can pick there favorite insect and draw a chalk picture of the insect and explain why they are important. Students can go on a bug search! Explain that bugs are living creatures and we must respect and return them to nature.
GR K-3

Compost Worms
What is compost and why is it important to the garden. Borrow a working compost worm bin from Seattle Tilth and have students get up close with red wiggler rooms. Explain difference between red wigglers and night crawler worms. Have students measure and name worms, draw a picture and label the different parts of a worm (head, anus, segments, and clitellum) Guess how much a worm eats each day, and how much we would have to eat if we were worms? Students can have an apple snack and add the core to the worm bin! *ALL AGES*

What a Seed Needs to Grow Experiment
Using what a seed needs to grow as a variables- water, sunlight, air and soil, have three cups, with one of each of these variable taken away: one container that will not be watered, one that will be kept in the dark, one in a zip lock bag, and one where the seed is planted in a sponge. Wheat Grass seeds work well because of the fast germination times, within a week. Discuss the

outcomes and why some seeds may have grown even if they didn't have all variables (desert plants, hydroponics, and shade loving plants). *GR 3-6*

Map the distance food travels
Have three bags, with three pieces of produce in them. Each bag will contain a scenario on how that piece of produce arrived in the class room; one bag will contain a vegetable from the local garden. Have students use string and push pins on a world map to trace how far the food traveled. Discuss the problems with food traveling so far, why it is hard to eat local year round, and solutions. Older students can calculate carbon footprints of food. Example of Scenario: Banana from Ecuador-collected on a farm, trucked to Quito, shipped to L.A. by boat, trucked to WA, driven home from grocery store. *GR 3-HS*

Where's that Veggie from?
Have students pick out their favorite vegetable or fruit. Then ask them where they originated from, what type of weather is ideal to grow them in, would they grow in WA? Discuss where students could find this information (Library, Internet, Gardeners). Have samples of produce (or pictures) from the garden and have students match where this produce originates from. *GR 4-HS*

Green Smoothies
Here is an awesome recipe to get kids to eat the last of that fresh spinach from your garden! They might be a little leery of the green color, but after they taste it, they will be screaming "add more spinach!"
1 banana
2 cups orange juice
2 cups freshly picked spinach
1 ½ cups frozen fruit (Strawberries, Mangos, or Pineapples)
Spinach is a great source of dietary fiber. It is known to be an excellent source of iron, calcium, and vitamins A and C. *ALL AGES.*

Garden Chores
Students should help with the maintenance of the garden through the year. This will create a sense of ownership in the garden. From watering with canisters, mulching, weeding, turning compost bins, planting seeds, transplanting starts, gathering sticks, to drawing the garden map, constructing stepping stones, and posting garden rules. Explain how to do each task, along with the importance. Ask to students to imagine what would happen if no one ever did a particular task. *ALL AGES*

Plant Part Cooking Stir-Fry/Pot stickers/Garden Salad
Have students choose what they would like to prepare using the six different plant parts (leaf, stems, flowers, fruit, roots, and seed). Discuss the function of each plant part. Students can divide into groups and make their own recipes.
INGREDIENTS
1/2 head Napa Cabbage, cleaned and cored
1/2 cup carrots, peeled and diced
3 Tbs shallot, onion, or green onion, minced
1 Tbs garlic, minced
1 Tbs ginger, minced
1/2 small can water chestnuts, drained
10-20 wonton wrappers
2 Tbs water, reserved
1 Tbs vegetable oil

PREPARATION
1. Cut cabbage into 1`` pieces.
2. Add remaining prepped vegetables.
3. Smear water on the edges of the wrapper. Fold and seal.
4. Drizzle oil into hot pan. Fill pan with pot stickers, ensuring enough cooking room.
5. Sauté pot sticker on each side.
6. Add water and cover pan to steam ingredients. Allow to steam 3 minutes.

Crispy Kale Recipe: Healthy Snacks That Don't Seem Healthy at All
http://kidscooking.about.com/od/sidedishes/r/crispykale.htm

Kale recipes aren't normally on the top of most parents lists when they're looking for vegetables the kids will like. But I urge you to try this crispy kale. It is really extraordinary.
Although the kale is roasted, not fried, it becomes crispy and salty, almost like french fries.
This kale recipe is incredibly healthy, too. It boasts a whopping 309% of the recommended daily allowance of vitamin A, 201% vitamin C, 14% calcium, 10% iron, 3 grams of protein, 2 grams of fiber, and it only has 112 calories and 1 gram of saturated fat per serving!

- Prep Time: 5 minutes
- Cook Time: 20 minutes
- Total Time: 25 minutes
- Yield: 4-8 servings

Ingredients:
6-8 cups chopped fresh kale, hard stems removed
2 Tbsp. olive oil
1 tsp. apple cider vinegar
1/2 tsp. kosher salt or sea salt

Preparation:
1. Place a rack on the lowest shelf of your oven. Preheat oven to 350 degrees F.
2. Spread kale out on a sturdy baking sheet. Drizzle with olive oil and apple cider vinegar. Toss to coat completely.
3. Place on the lowest rack of the oven and bake for 10 minutes.
4. Remove from oven and stir so that kale can get crispy all over.
5. Bake another 8 to 12 minutes or until kale is crispy. It should be just lightly browned and crispy to the touch. If kale still bends, rather than crackles, when you touch it, it isn't done yet. Return it to the oven. Turn down the heat if it is getting too brown. Continue cooking until crispy.
6. Remove from oven, and sprinkle with sea salt and serve immediately.

PPatch gives interest list priority to people gardening with youth groups!
Sign up here for a plot: http://www.seattle.gov/neighborhoods/ppatch/signupPpatch.htm
Phone Number: 206.684.0264 Fax Number: 206.233.5142
Email: p-patch.don@seattle.gov

Seattle Department of NeighborhoodS

P-PATCH COMMUNITY GARDENING PROGRAM

Youth Gardening- What's On Our (P Patch Office) Book Shelf?

Find a copy at your local library or if a Seattle "P Patcher" - please call our office to borrow!

Material	Title	Author	Age	Quanitity
Book	Side by Side	Gayle Leitch Kelly, M.S		2
Book	Schoolyard Habitats	National Wildlife Federation	K-12	1
Book	Health & Nutrition from the Garden	Junior Master Gardener		1
VHS	Make Your School Grounds Come Alive	Schoolyard Habitats		1
Map	The World Physical	Bartholomew		1
DVD	Stepping up to the Plate	Candice Cosler		1
DVD	Broken Limbs	James Howel & Guy Evans		1
DVD	Be Alert in the Dirt	Seattle/King Co. Public Health		1
VHS	Get Ready, Get Set, Grow!	Brooklyn Botanic Garden		1
Book	The Art of Food	Oster	Adult	1
Book	Farm to Cafeteria Connections	Kelli Sanger & Leslie Zenz		1
Book	Beyond the Bean Seed	Nancy Allen Jurenka / Rosanne J. Blass	K 6	1
Book	The Everything Kids Environment Book	Sheri Amsel		1
Book	Fed Up! (Picture Book)	Rex Barton	PreSchool	1
Book	How to Teach Nutrition to Kids	Connie Liakos Evers		3
Book	From Seed to Plant	Gail Gibbons	Elementary	1
Book	Guide to Kids' Gardening	Nat'l Gardening Asso/Lynn Ocone		1
Book	French Fries & the Food System	Sara Coblyn		1
Book	Flowers and Trees	Time-Life Books	Elementary	1
Book	Composting Yard & Food Waster at Home	Seattle Public Utilities	Adult	1
Book	Kids' Cookbook	American Heart Association	Elementary	1
Book	The Tortilla Factory	Gary Paulsen	PreSchool	1
Book	The Frog Alphabet Book	Jerry Pallotta		1
Book	The Pea Patch Jig	Tatcher Hurd	PreSchool	1
Book	La Canasta Del Mercado	WIC of WA		1
Book	Planting a Daisy	Laura Burton Rice		1
Book	Milk Matters Coloring Book	USDA	PreSchool	1
Book	Lincoln Opark P-Patch	Group Effort		1
Book	Flies	Sara Swan Miller	Elementary	1
Book	Eating the Alphabet	Lois Ehlert	PreSchool	1
Book	Spring is Here	Taro Gomi	PreSchool	1
Book	Lets' Eat	Ana Samorano	PreSchool	1
Book	Dirt	Steve Tomecek	PreSchool	1
Book	Little Chick's Breakfast	Mary De Bali Kwitz	PreSchool	1
Book	The Tale of Peter Rabbit	Beatrix Potter	PreSchool	1

Book	30 Simple Energy Thing You Can Do to Save the Earth	Seattle City Light		1
Book	Everybody Cooks Rice	Norah Dooley	PreSchool	1
Book	The Sun	Seymour Simon		1
Book	Where's that Spider	Bernice Carciet/Barabara Brenner	Elementary	1
Book	The Icky Bug Alphabet Book	Jerry Pallotta	PreSchool	1
Book	Puget Sound Book	King County		1
Book	Edible Pyramid	Lauren Leedy	PreSchool	1
Magazine	Ranger Rick - Jan 09	National Wildlife Feceration	Elementary	1
Magazine	World Ark - Winter 2010	Heifer International	Adult	1
Book	The Incredible Heap	Chris Catton and James Gray	Adult	1
Book	Insects Did it First	Akre, Paulson & Catts	Elementary	1
Book	Nature Crafts	Imogene Forte	Elementary	1
Book	Gifts from the Herb Garden	Emelie Tolley & Chris Mead	Adult	1
Magazine	Your Big Backyard Feb 2009	National Wildlife Federation	PreSchool	1
Book	Growing Fruits & Vegetables	Laurie Manahan	Elementary	1
Notebook	Comprehensive Organic Gardener	Seattle Tilth	Adult	1
Book	The Maritime Northwest Garden Guide	Seattle Tilth	Adult	2
Book	Gifts from Your Garden	Suzanne Frutig Bales	Adult	1
Catalog	Kitchen Garden Seeds	John Scheepers	Adult	1
Book	What Butterfuly is It?	Anna Pistorius	Elementary	1
Binder	P-Patch Program Handbook			1
Binder	Vietnames Friendship Association Garden Journal			1
Binder	Got Veg Demo P-Patch Garden Journal			1
Game	Drop Swap & Roll - The Game of Reuse & Recycling	EPA	Elementary	4
Notebook	Growing the Futures from the Ground Up	Seattle Youth Garden Works	Adult	1
Calendar	2004 Orca Children's Garden Calendar	Orca School		1
Booklet	Discover a Peaunt	Tin Man Press	Elementary	1
Booklet	Discover Crackers	Tin Man Press	Elementary	1
DVD	Abi's Garden	Island Wood		1
Book	Beetles	Alice Mead	Elementary	1
Notebook	Kids Up Front 202	Tyson	Elementary	1
Binder	Cultivating Youth Garden Journal			1
Notebook	P-Patch Youth Gardening Resources	Kenya Fredie		1
Mailer	Celebrate Urban Birds	Cornell Lab of Ornithology		10

Kits are available at two locations, one at Seattle and one at Renton.

For further information, contact the Extension Coordinator:

elaine.anderson@wsu.edu
206-685-5104

The Master Gardener program is a part of Washington State University Extension presenting science-based research on a variety of environmental subjects including, plants, pest management and gardening.

www.mgfkc.org **www.kingcountymg.org**

MGF OF KING COUNTY
Master Gardener Foundation of King County

WASHINGTON STATE UNIVERSITY Master Gardeners EXTENSION

WSU Extension Master Gardener Teaching Kits

Environmental education in a box!

A FREE curricular resource for schools, community groups, Master Gardener clinics AND MORE...

Master Gardener Teaching Kits are designed to bring environmental education to schools, community groups, parks and recreation departments, senior centers, nursing homes, youth programs, and Master Gardener clinics.

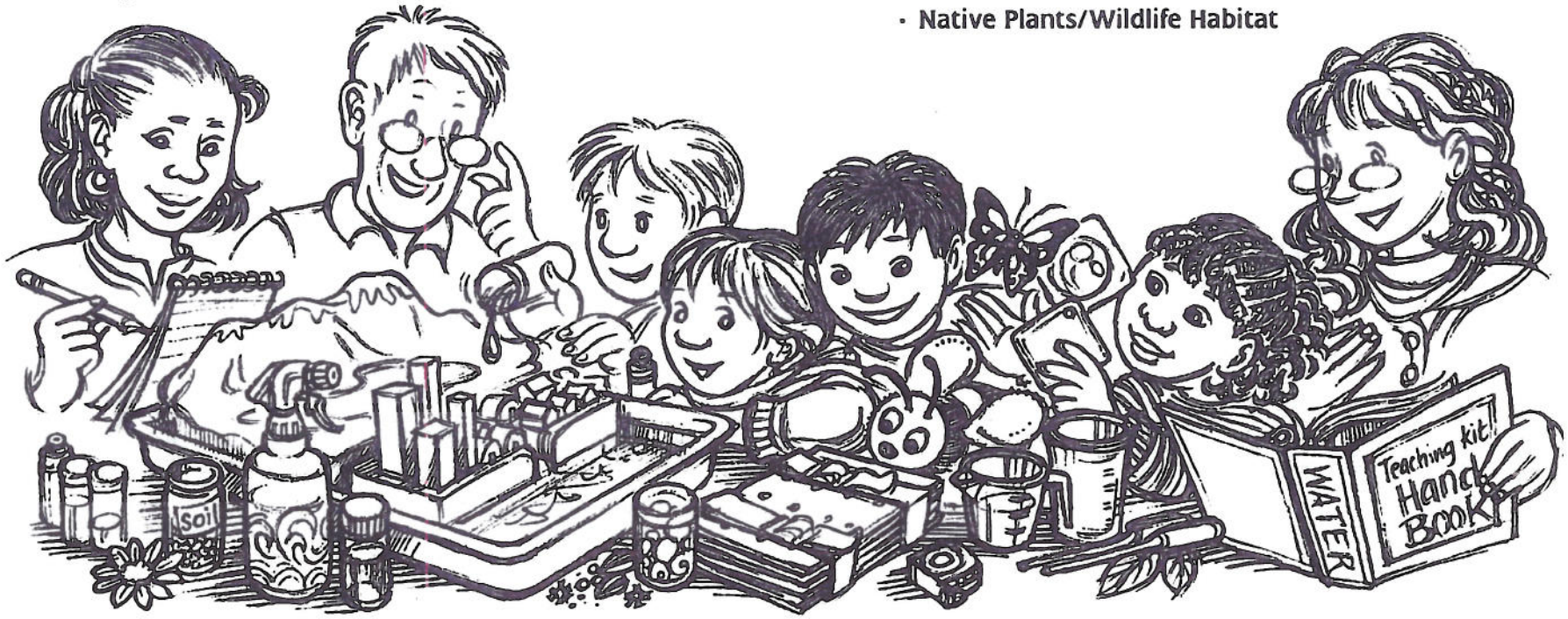
Each kit is a classroom in a box focusing on one scientific concept with curricula that can be easily adjusted to any age group, from kindergartners to teenagers to seniors.

Contents of the kits include: Videos, hand lenses, Petri dishes, posters, storybooks, puppets, brochures and flyers. In addition, there is a handbook with background information, diagrams, worksheets, teaching tips and lesson plans. A folding luggage cart is provided for easy transport.

Every kit is tailored to its subject. For instance, the water kit includes a watershed model that can be used to illustrate the cause and effects of pollution by demonstrating water runoff from our homes to the lakes, rivers, and ocean nearby.

There are currently 12 kits available; each kit may be checked out for three weeks:

- Roots and Shoots
- Seeds and Flowers
- Insects
- Pollinators
- Trees
- Water
- Observation Chamber
- Native Plants/Wildlife Habitat
- Soil and Compost
- Worms
- Mini Worm Bin
- Recycling
- Food Gardening (coming soon)



Plants for Kids (http://www.seattletilth.org/)

Perennials

Perennials

Agastache

Artichoke

Berries

Cardoon

Chamomile

Chives

Clove Currant

Comfrey

Culinary Sage

Dianthus

Fennel

Fruit Trees

Honeysuckle

Hyssop

Jerusalem Sage

Kiwi

Lamb's ear

Lavender

Lemon Balm

Lemon Verbena

Mint

Monarda

Oregano

Pineapple Sage

Roses

Rosemary

Silver Shield Sorrel

Sweet Cicely

Thyme

Tulips

Annual Veggies and Flowers

Leaf

Basil

Broccoli

Cauliflower

Chard

Cilantro / Coriander

Collards

Garlic

Leeks

Lettuce

Onion

Spinach

Stevia

Root

Carrots

Beets

Potatoes

Radishes

Flower

Arugula

Bachelor's Buttons

Bean blossoms

Black-eyed Susan

Borage

Brassica flowers

Calendula

Clover

Cutting flowers for bouquets

Daisies

Nasturtiums

Red Dead Nettle

Viola, Pansies, Johnny Jump Ups

Zinnia

Fruit

Beans -- snap

Beans -- runner

Cucumbers -- lemon

Peas

Peppers

Pumpkins

Squash

Tomatillos

Tomatoes

Others we like

Buckwheat

Burdock

Cleavers

Mullen

Phacelia

Rye, oats, barley, wheat

A Few Poisonous Plants

Aconite

Anemone

Azalea

Buttercup

Calla Lily

Clematis

Daffodil

Delphinium

Four o'clock

Foxglove

Hyacinth

Hydrangea

Iris

Ivy

Mistletoe

Morning Glory

Nightshade

Periwinkle

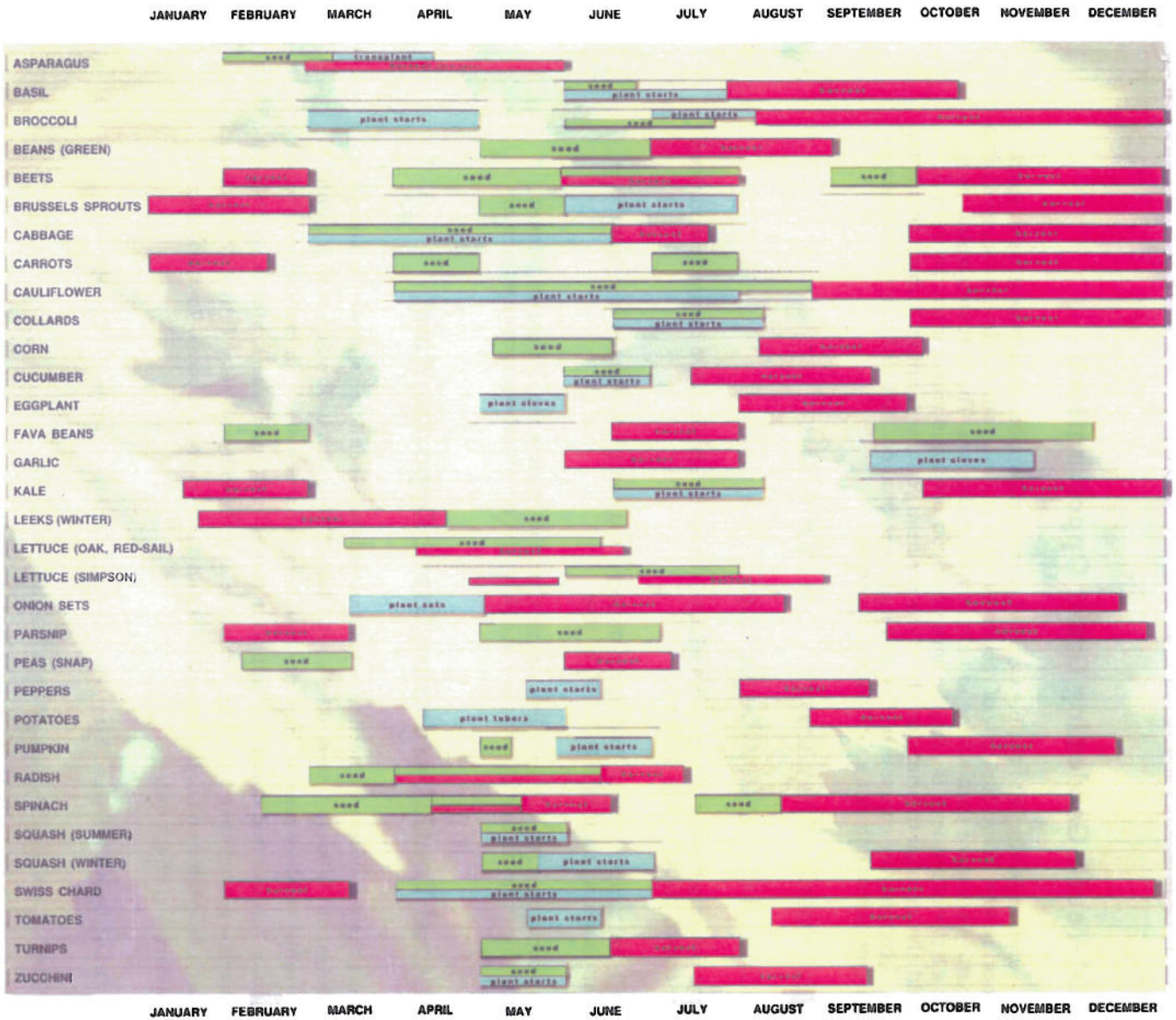
Poison hemlock

Rhododendron

Spurge

Sweet pea

Wisteria


JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER
ASPARAGUS
BASIL
BROCCOLI
BEANS (GREEN)
BEETS
BRUSSELS SPROUTS
CABBAGE
CARROTS
CAULIFLOWER
COLLARDS
CORN
CUCUMBER
EGGPLANT
FAVA BEANS
GARLIC
KALE
LEEKS (WINTER)
LETTUCE (OAK, RED-SAIL)
LETTUCE (SIMPSON)
ONION SETS
PARSNIP
PEAS (SNAP)
PEPPERS
POTATOES
PUMPKIN
RADISH
SPINACH
SQUASH (SUMMER)
SQUASH (WINTER)
SWISS CHARD
TOMATOES
TURNIPS
ZUCCHINI
seed
transplant
plant starts
plant cloves
plant sets
plant tubers
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

calendar

Local Youth Gardening Grant Opportunities

Before delving into the big world of grants and applications take a look around the local sector. There is plenty of resources right around your neighborhood, and often companies are more then willing to help in your endeavors. The first step would be to draft a letter of request. Be specific with what you need and where it will be used. It should also contain information about the program you are running. Submit this letter to local community companies. Try and make personal contact with the individuals so these companies can put a face with the request.

Seattle Neighborhood Matching Fund- Three Opportunities:

http://www.seattle.gov/neighborhoods/nmf/

-Large projects Fund: is for projects which take up to 12months to complete and need more than $15,000 up to $100,000

-Small and simple Project fund: is for projects that can be completed in 6 months or less and seeking awards of $15,000 or less.

-Neighborhood outreach and Development fund (including Small Sparks): Makes awards for projects that involve new people in the neighborhood organizations or activities.

National Youth Gardening Grant Opportunities*

Finding the resources you need to begin and maintain a children's garden is always a challenge, but it doesn't need to be a roadblock. Think of your funding search as an opportunity to allow other community members to participate in an extraordinary youth program. You can find donations, apply for grants, host fundraisers, start a youth garden business -- get together with your committee and the kids and get creative! Think of it as a search for people and organizations that can share in your success. To start your brainstorming, check out:

NGA Grant Opportunities : http://www.kidsgardening.org/grants-and-awards

A Wealth of Wisdom: Funding School Garden Projects:
http://www.kidsgardening.org/node/3954

Strategies for a Growing Business: http://www.kidsgardening.org/node/3941

Seeds for Education Grant Program Invites Applications
Wild Ones is a not-for-profit organization dedicated to the use of natural landscaping with native plant species as an ecologically better alternative to traditional landscaping practices. Schools, nature centers, and other nonprofit and not-for-profit places of learning (including houses of worship) with a site available for this stewardship project may apply for an SFE grant. Cash awards range from $100 to $500 each. Complete grant program information as well as resources on natural landscaping are available at the Wild Ones Web site. http://www.for-wild.org/seedmony.html

America the Beautiful Fund

Grants of 100 to 1,000 seed packets are offered on the basis of availability and relative need. America the Beautiful Fund also offers *The Green Earth Guide* containing illustrated gardening instructions and ideas on involving the whole community in your project. For nutritional information, harvesting, storage and eating tips they offer *Gardening for Optimal Nutrition*. With an annual membership contribution you will also have access to technical assistance via their toll free member hotline, newsletter and announcements of special events and grants.

http://america-the-beautiful.org/free_seeds/index.php

Bonnie Plants 3rd Grade Kids Cabbage Program
http://www.bonnieplants.com/CabbageProgram/tabid/81/Default.aspx

3rd grade classes can request "oversized" cabbage plants as part of the cabbage program. Participating students have the chance to win a $1,000 scholarship.

Master Gardener's List of Grants
http://www.mastergardenerssandiego.org/schools/grants.php

American Community Gardening Association's List of Grants:
http://www.communitygarden.org/rebeltomato/roots/fundraising.php