

School Learning Gardens (Outdoor Classrooms)

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Prepared by

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Whether you are developing a new learning garden, or renovating or expanding an existing garden, these Guidelines are intended to provide general direction for planning, developing, operating and maintaining school learning gardens on Seattle Public Schools' school sites. The information contained here is not intended to be all-encompassing, and should be supplemented with the wide range of superb information and resources regarding school gardens available in our community, in books and other publications, and on the web. Please do not hesitate to call with your questions, or to schedule a meeting in person at your school.



School learning gardens are a recognized hands-on teaching tool to support a variety of disciplines such as Science, Environmental Education, Reading, Art, Language, Math, Health and Nutrition, Stewardship and more. The opportunities to implement lessons outdoors are endless.

There is a number of factors to consider when planning a successful learning garden. We have observed many glorious and bountiful school gardens, but conversely just as many gardens that have failed or gone fallow. We recognize that, similar to gardens that change throughout the seasons, so do school gardens flourish and wane over time as interest and support varies from year-to-year. Thoughtful planning, long-term commitment, and networking among other school gardeners are among key factors for success.

Prior to starting up a garden, or making significant improvements to your garden, review and approval is required through the School District's Self Help Projects Office. Check out the [Self Help Application for Project Approval](#) for information on the review and approval process.

Many of our schools are constrained by small site size and competition between all the site components that must be accommodated to operate a school. Keep in mind, your learning garden is not limited to only what you create on your school site. Map all the wonderful environmental resources in your community within walking distance from your school. For example, streams, forests, urban farms, commercial nurseries, grocery stores, restaurants, etc.

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1. Getting started: Approvals

- The first step *always* is to get buy-in from your school principal.
- School District review and approval are necessary prior to installing or modifying a school garden. You will need to complete and submit a Seattle School District [Self Help Application for Project Approval](#). Contact the Self Help Projects Office, and staff will arrange to meet with you on-site to discuss what you have in mind, and provide useful tips to get started in the right direction. The District's Grounds personnel will also be involved.
- Developing a learning garden is a long-term proposition, and likely will occur over the course of many growing seasons. Initial approval for your garden will be for your first improvements, with the understanding additions are likely in the future as your program flourishes.
- If your PTA is sponsoring the project, be sure the officers are on board with the project and are clear about their role for the project – e.g., funding, on-going maintenance, etc.
- Be sure your school's head custodian is aware of your project.
- Don't be discouraged if it takes up to a year to get your school garden planned, funded, built and operational. It's worth the time and effort to plan thoughtfully with broad stakeholder participation to ensure long term success!

Your notes:

2. Learning garden terms

- Types of learning gardens, examples:
 - food and nutrition
 - herbs, medicinal
 - native plants
 - permaculture
 - rain garden / storm water management
 - wildlife habitat
 - landscape renovation, grounds beautification
 - decorative planters
- Community garden (P-Patch): The City of Seattle manages P-Patches throughout the city, where community members may sign-up for a plot to personally garden. Community gardens and P-Patches are not permitted on Seattle School District school sites. However, a school garden committee is welcome to recruit community members to help in their school garden, provided they follow their school's protocol for engaging volunteers.
- Outdoor classroom: Synonymous with learning garden, the term "outdoor classroom" encompasses the variety of components or features typically found in a learning garden setting.
- School garden Contact, Educator, Coordinator:

These are typical roles recognized as part of learning gardens. Sometimes these roles are assigned all-in-one person, but a successful garden program will usually divide the tasks among several people.

Garden contact: typically the person who is the main point of contact when people have questions about the learning garden.

Garden Educator: typically the person who coordinates learning activities in the garden and works directly with teachers and students to carry out lessons. The Educator may teach in the garden, as well as guide classroom teachers in methods to use the garden as a teaching tool for their own lessons.

Garden coordinator(s): this person may have several responsibilities. Some examples are: scheduling teachers and classes in the garden; planning, scheduling, advertising, recruiting and leading volunteers for events or cleanups in the garden.

Your notes:

3. Planning for your new, renovated or expanded learning garden

- Form a garden core committee, usually three to six people, representing school staff and families, and possibly neighbors. This planning, or steering, committee will work with other teachers, students, and staff members to determine what the school garden will look like, how it will be utilized, as well as what resources and materials to collect and who will accomplish which tasks.

- Involve your principal and make sure you have her/his support.
- Think about and identify the purpose of the garden (e.g., demonstration of native plants, carrying out Science experiments, growing vegetables, etc.)
- Work with several teachers and establish how the garden might be associated with specific curriculum, especially Science Units, and how the teachers could use the garden for their classroom lessons.
- Identify the sponsor(s) of the project. What other organizations or individuals will be part of this project?
- These are a few ideas schools have utilized or suggested:
 - designate a primary garden contact, a garden educator, and a garden coordinator;
 - budget an annual monetary allocation toward the garden (sources: PTSA, school, grants);
 - maintain a garden notebook and/or log book to pass on year to year;
 - establish a master calendar for the year for events and seasonal cleanups.
- Participate in the Seattle Schools - School Garden Network meetings, held quarterly.
- Attend garden educator workshops. Seattle Tilth and other garden organizations offer frequent learning opportunities.
- Peruse learning garden books, publications and web sites to learn, be inspired, and gather ideas.

Your notes:

4. Visit other learning gardens to spark ideas

(to be added: list of awesome SPS and other learning gardens to check-out)

5. Physical features of your learning garden

- **Location | features | design considerations**

District staff from the Self Help Projects office and from Grounds department will meet with you on-site to help you select an appropriate location at your school grounds to avoid conflicts with maintaining and operating the school and grounds.

- Consider an existing landscape area or transforming an abandoned garden spot. Can your efforts beautify a currently neglected area?
- We recommend that outdoor classroom features are consolidated into a single area on your school grounds. If you have multiple (non-landscape-type) gardens scattered around the school site and/or some have been abandoned, think about how to combine them into a cohesive area.
- Sun: Direction and hours of sun or shade is of utmost importance for the type of garden you choose. For many garden types, you will want a sunny location, but preferably not too hot in order to avoid heavy water consumption (or sweltering gardeners).

- Visibility: Think about placing the garden in a highly visible place for all to enjoy (and to nudge you into good maintenance practices.) However, we try to avoid placing school gardens at the front of the school, because school gardens sometimes tend to be untidy, which detracts from the community's first impression of the school. If there is no other option, locating a learning garden in the front yard of the school will be considered, with an increased expectation of a high level of maintenance of your garden.
- Water: A nearby source of water is imperative; otherwise you'll need to include the cost of extending a water line or another creative watering method in your budgeting. A small water meter may be required for your hose bib to monitor the quantity of water you are using for the garden. This can be a great learning tool for water lessons.
- Safety and security: gardens should not create attractive-nuisance places to hide or congregate. Consider plant materials' and garden elements' sizes and shapes and locations.
- Rodents: Critters such as raccoons, rats, mice, and squirrels are ubiquitous in Seattle's neighborhoods. It is important for your garden, as well as the future for all schools' gardens, that your garden does not earn notoriety for harboring rodents. We will stress best practices to avoid rodent habitat.
- Stinging insects: Gardens can provide a sanctuary for beneficial insects including important pollinators. However, plan carefully where certain plants that may attract stinging insects are located, since many students and adults are seriously allergic to bee stings.
- Pest control: We require that no plant material (at maturity) or garden features are placed within two feet of the building walls to avoid habitats that foster rodent activity. Mulching along the building wall will keep weeds down and provide access around the garden. Fruit trees are not permitted, except at the few learning gardens that have a long history of a paid Garden Educator who can monitor and manage timely harvesting in order to avoid attracting rodents and stinging insects.
- Exposure: You'll want to be sure your school garden is not too exposed to wind.
- Outdoor classroom size: *[in progress to develop maximum size of outdoor classroom for elementary, middle, high school. Considerations – other elements that need to fit on the site such as play areas; resource conservation (water use); capacity of volunteers for on-going attention and care.]*
- Fences, gates: Where feasible, a fence enclosure is desirable to provide a sense of ownership, containment of students working in the garden, security of the garden, and protection from playground activities. Fence material must be consistent with District's standards for chain link (may be black vinyl coated). Artistic elements on fence and gate may be considered through Self Help Application for Project Approval.
- Conflicts: Observe playground patterns and avoid locating your school garden where trampling and bouncing balls could damage your garden.
- Garden beds: Weigh the pros and cons (including costs, soil viability, flexibility, and resources) for raised garden beds versus in-ground beds. Be sure some beds are accessible to students and adults using wheelchairs or with mobility constraints. If you decide to use raised beds, the beds must be constructed of durable materials that will hold up for many years, and are non-toxic to plants and people.
- How many beds do you want as start up? How much room do you have? How many can you afford?
- The width of garden beds usually should not exceed 48" so children can easily reach into the beds while standing on adjacent paths.
- *[to be added: photos of garden bed designs, plan details.]*

- Soil, compost: With advice from District Grounds and or Self Help Projects staff, select appropriate types of soil and compost to add to your garden based on what you are going to grow.
- Mulch: Use of mulch is important to help retain water in the soil and to help control weeds. Many materials can be used as mulch, such as leaves, arborist mulch (chipped tree branches) and compost. Arborist mulch or ADA-appropriate playground chips are often used for path material to avoid mud as well as keep weeds at bay (more info below under “Paths”).
- Irrigation:
 - It is mandatory that the use of water in learning gardens follows resource conservation methods, and is consistent with School Board Policy and Superintendent Procedures regarding water conservation.
 - Hand watering with a hose or water-can: The use of watering cans to water your garden crops teaches valuable lessons. For example, students can measure quantity of water, weight of water, and monitor weather to determine water needs, etc. Also, water can be directed specifically where needed, based on size of planting-bed, type of soil, weather conditions, and type of crop.
 - Some types of simple irrigation set-up may be allowed, subject to prior Self Help review and approval:
 - Examples include: soaker hoses, drip emitters, and/or low-profile spray stems, as suitable for the specific types of crops being grown. The system should not be elaborate, and set up to easily attach a hose during watering. Details on hardware and layout plan will need to be provided for District review and sign-off.
 - Operation must be manual, in order to prevent under- or over-watering; to monitor routinely for leaks; to respond appropriately with weather conditions; to monitor crops’ needs; and particularly so there isn’t the risk of running water for days on end, which is a waste of a precious resource as well as very costly to the District.
 - An “Egg-timer” type control may be used, provided it is manually set for a specific number of minutes, and checked immediately at the end of its run-time to confirm shut off.
 - A backflow device is required to prevent contamination with the domestic water system.
 - A small meter device at the hose bib may be required for a new garden to measure water used. In this case, the school garden contact will be expected to report monthly the amount of water used.
 - For landscape renovation gardens, perennial plants may be watered regularly through establishment (the first two to three years), and then afterwards only occasionally as weather dictates.
 - The District practices water conservation. In some summers, the city may declare a drought. If so, it may be necessary for the District to impose a ban on summer watering.
- Garden paths: In some cases, there will already be existing asphalt next to your garden beds. Otherwise, plan for suitable material to avoid muddy paths, as well as accessibility to those using wheelchairs. Woodchips are often a good option; Engineered Wood Fiber (a specific type of wood chips) should be applied to some paths in order to be navigable by wheelchair users.
- Seating: It is a good idea to include some form of seating to allow up to one classroom of students to be seated while an instructor engages students in a lesson. Seating may also be used while writing, drawing, and socializing. Use of clipboards as a writing/drawing base is a great tool. Usually seating is fixed in place; otherwise, it must be stable, as well as unlikely to

- steal or vandalize. You might take advantage of nearby seat-height retaining walls or extend an edge on your garden beds. *[Add some ideas and photos on seating from various schools.]*
- Signage:
 - A sign should be displayed at your garden, saying something to the effect, “Please respect our school’s Learning Garden, created and being maintained by _____”.
 - Other friendly signs can provide a good way of communicating what’s happening in your garden, or specific school garden rules. *[Add photos of some ideas on fun signs at various schools.]*
 - Bulletin boards can be a good way of sharing upcoming garden events or special seasonal features in your garden.
 - Compost bin: It is desirable to include a two-bin compost system to manage a small amount of yard-waste generated from your garden to demonstrate composting and soil lessons to students. However, you might wait until your garden is underway and you have more time to devote to setting up compost systems. Be sure to designate a space for it when you start your school garden. Utilize assistance from Seattle Tilth’s Master Composter/Master Soil Builder program to advise as you get started.

The compost system likely will not be large enough to fully accommodate your garden’s yard-waste in all seasons. As of September 2015, it is mandatory for all schools to collect cafeteria food-waste for composting through Cedar Grove. Therefore, all schools now have a food-waste bin on site, which can be used for small amounts of your school garden’s yard-waste. For large garden cleanups, we can assist you in ordering a temporary large yard-waste container.

Design and operate your compost system to avoid rodents. Absolutely NO FOOD WASTE is allowed in open compost systems.
 - Worm bin: Consider including a worm bin (closed container) in your school garden to demonstrate and teach recycling of food waste scraps. You will need prior review by the Self Help Team and specific approval and training to install an appropriately designed worm bin.
 - Other elements you might place in your garden: weather station, rain gauge.
 - Tools storage: We have established a design standard and maximum size for garden sheds. *Info provided upon request. Will add to this document in the near future.* Storage units require Self Help Project Application for Approval.
 - Materials used in your garden: Prior review and approval must be secured for any salvaged materials proposed for use so we can screen for hazardous materials, appropriateness, installation methods, etc.
- **Plant material selection**
 - Again, reaffirm the purpose of the garden to determine what types of plants you hope to grow. Will all children have opportunities to plant something new each year? Or, will planting be perennials?
 - **What’s NOT ALLOWED:** Fruit trees are not permitted, except at the few learning gardens that have a long history of a paid Garden Educator who can monitor and manage timely harvesting in order to avoid attracting rodents and stinging insects. Invasive plants (such as bamboo) are not permitted.
 - Associated with your school garden, consider incorporating drought-tolerant native plants for learning, and to demonstrate the District’s commitment to water conservation, as well as save precious district dollars spent on water bills.
 - Be careful selecting plants that may attract a large number of bees, since many children and adults are allergic to bees. Place any bee-attracting plants away from highly traveled paths.
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- Keep a weekly log to track what worked and what didn't work to share with next season's gardeners.
- In your garden binder of information, keep track of all areas on the site for which your group is responsible – e.g., school garden, decorative potted plants at school's entrances, native plantings, etc.
- **Art**
 - Gardens are a perfect place to incorporate outdoor student art, such as mosaic tiles on benches and/or garden beds; whimsical bird houses; scarecrows, and whirligigs.
 - When planning art projects, address safety issues (e.g., no sharp edges, no protrusions, no climbable structures, sturdy installation, etc.)
 - Pavers must be affixed firmly in the ground to prevent tripping and to discourage use for breaking windows.
 - If an art project is done at a later date separate from the garden development, be sure your proposal is reviewed through the Self Help Projects process.

Your notes:

6. Operating /maintaining / sustaining your learning garden

- **Operating**
 - **Tips for meaningfully and fully engaging students ...**

(info to be added)

- Establish garden rules
- Stress tool safety
- Determine best time of day to work in garden
- Consider maximum attention span

Your notes:

- **Maintaining**
 - As part of your garden project, you'll be required to prepare a long-term maintenance plan addressing responsibilities for watering, weeding, pruning, disposal, mulching and composting. Define how often will these tasks be needed and who is committed to doing them. Establish a budget and source for funding needed materials.
 - Many schools keep a bulletin board inside the door/lid of their storage unit to share messages with other teachers and colleagues.
 - Often schools keep a daily log of what activities have occurred in the garden, and use this for seasonal and annual planning.

- An example outline for maintenance to help with your planning:

School:

Garden Coordinator name/phone/email:

Date maintenance plan prepared or updated:

2015-16 Month/Week	Task / activity Budget if applicable and how funded	Responsible person / signature	Follow up notes
April Week 1 Week 2 Week 3 Week 4	Plan for Earth Day work party. 4 adult volunteers needed. Obtain arborist mulch and arrange for delivery. \$\$ Carry out work party Etc.	Insert names	
May Weekly	Water all new plantings 2 to 3 times per week, depending on weather. Weed Mulch	Insert names of one family per week ...	
June, July, Aug	Water all new plantings 2 to 3 times per week, depending on weather. Weed Mulch Harvest		
Sept	Harvest celebration		
Oct	Winterize some beds; plant winter crops, etc.		

Your notes:

- **Sustaining**
(info to be added)
 - **Great ideas from other Gardeners ...**
 - Fund Gardener-in-Residence for education
 - Share Garden Educator between schools, and share costs
 - Annually schedule work parties at the beginning of each school year so they become part of school's culture and good way to meet families and staff.

Your notes:

7. Resources

SOIL TESTING *(info to be added)*

- Links from WSU

GARDEN HOTLINES *(info to be added)*

- Seattle Tilth
- Master Gardeners

EDUCATION/ CURRICULUM RESOURCES *(info to be added)*

FUNDING IDEAS *(info to be added)*

GARDEN STRUCTURES *(info to be added regarding plan details)*

- Garden beds
- Storage shed
- Storage bin
- Compost bin
- Worm bin
- Examples of benches

LOCAL SCHOOL-RELATED ORGANIZATIONS *(info to be added)*

SELF HELP APPLICATION FOR PROJECT APPROVAL *to be added*

GROUNDS STEWARDSHIP – PROJECT REGISTRATION FORM *to be added*