

School Garden Development

Best Practices



So you want to start a school garden...

School gardens can be wonderful places for hands on learning, outdoor classroom spaces, link to science and reading curriculum, procure food, and much more! Designing a garden is one of the most exciting parts of a school garden development project, but before garden design planning it's important to form a larger framework for your school garden, so that framework can effectively inform your design.

According to a 2016 report by Growing Gardens there are common barriers to the long term success of a school garden. These include a lack of adequate and sustained funding, personnel turnover, and garden infrastructure difficulties like broken irrigation or school building access. (Growing Gardens, 2016) Consider these common barriers and make sure you include a plan to successfully navigate through them when they arise.

*Much of the information here was adapted from the **School Garden Project of Lane County**. For further detail regarding design, planning worksheets and some curriculum suggestions, we highly recommend referring to their document, **Growing Success with School Gardens**: www.schoolgardenproject.org/download/growing-success/.*

This guide will help you start planning your garden, and is organized into 4 sections:

- 1. Form Your Group**
- 2. Define Your Goals**
- 3. Design Your Garden**
- 4. Central Oregon Resources**

1. Form Your Group

It's important to create a garden steering committee to ensure long term smooth transitions of leadership within the school garden community as well as organized planning and clear transmission of information.

- When forming your committee, reach out to everyone in your school community, especially stakeholders like administration, teachers, facilities and maintenance, nutrition services, parents, and neighbors. Drawing from many people and getting a representative from many stakeholder groups can give the garden broader social capital and social power for asks, future events, donations, and volunteer needs.
- If possible, establish clear communication methods and regular meetings for the committee.
- It can be helpful to create the position of a project lead, someone who can facilitate initial meetings and steer all voices and desires for the garden toward a common garden plan.

Discuss these questions with your garden committee:

- What is the gardens primary purpose? If more than one, choose a primary, secondary, and tertiary purpose.
- Who will be using this garden? How many teachers will be using, or have communicated a desire to use the garden? What other groups will be using the garden? We recommend surveying your school community to get a sense of how many people wish to use the garden and how frequently.
- Who will be maintaining the garden?

2. Define Your Goals

Create Your Master Plan: Your master plan will:

- ★ Influence Design
- ★ Help allocate funding
- ★ Helps coordinate use of the garden
- ★ Plans for summer maintenance
- ★ Plans for changing participation
- ★ Increases the likelihood of long term success!

- Create Your Vision Statement** - An idealized description of the desired outcome that inspires, energizes, and helps you create a mental picture of your ideal future. Vision is the big picture of where you are going. If you are wildly successful, what will your world/community look like?
- Create Your Mission Statement** - A concise statement of the means you will use to make your vision come true.
- Rationale** - Use evidence and research to support your vision and the development of a school garden.
- Stakeholders** - The people who will use the garden, provide support, and/or be affected by the garden. Include these people in your planning.

Create Your Action Plan

Break your mission down into separate measurable goals each with at least one measurable objective per goal. Include logistical goals such as uses of the garden, maintenance of the garden, curriculum integrated into the garden, safety, culture of the garden, etc. Make sure to include a time element.

- Goal:
 - Measurable Objective:
 - ✓ Action Item:

3. Designing Your Garden

Now that you have the framework and a proposed action plan, start considering physical development and design. In addition to considerations for the design of any school garden, the unique climate of Central Oregon poses an extra challenge to the vegetable gardener. Due to high elevations ranging from 1000 to 4200 feet, winters tend to be longer and colder and night temperatures are lower during the growing season. “Other effects of higher elevations include lower night temperatures, especially during the growing season, and increased intense sunlight year round.” (Detweiler) This makes growing vegetables, especially warm season crops, especially difficult. Some tactful design and season extension technologies can create more favorable growing conditions, but seriously take this into consideration when deciding what to plant with your students.

Site Analysis and Considerations for Success:

- ❑ **Amount of Light:** 6-8hrs is preferable for garden success. To determine the amount of sun your garden receives throughout the year, you will need to observe which direction the sun is moving (east to west) and ensure that you are building on a south facing site. To determine the amount of light, stand where your garden will be placed and face south, look for any buildings or trees in between you and the horizon that will create shaded areas. Draw the angle of the sun with your arm for both summer (high in the sky) and winter (just above the horizon all day).
- ❑ **Slope:** If your garden area is being built on a slope you will need to consider drainage and erosion as water moves from higher ground to lower ground. It is unadvisable to build right next to a creek or ditch as water will collect and saturate the soil, making it hard for the roots of food crops. Cold air settles at the bottom of slopes. Since central Oregon has a very short and cool growing season, we recommend locating your garden at the top of a slope, or in a flat area with no slopes that would create cold pockets. Before choosing a site, take note of the microclimates around your campus. Are there areas that have more frequent morning frost than others? Spots where water tends to pool? Choose the warmest and best drained area to build your garden.
- ❑ **Drainage:** Good drainage will ensure better crops. Standing water often will drown out fall, winter and spring crops and change the soil layers making a less conducive environment for summer crops. Soils in central Oregon are generally coarse, sandy, and very well drained. Our soils do not retain water well. Amending your soil with organic matter will improve water holding capacity and microorganism activity. (Detweiler, 2009)

- ❑ **Water Source:** Water is imperative to your garden. Before building on a site make sure that there is a spigot within 15 feet of your garden area. If there is not, you will want to contact your facilities department to see if they are able to run a line for you.
- ❑ **Mowing Access:** If building in or near a field area at your school you will need to check with facilities. Plan to have full responsibility for the maintenance of your entire interior garden space. Keep in mind that district mowers require a minimum of 6 feet of width for turning, check with facilities to make sure that your space will accommodate their needs. In addition, be mindful of border maintenance. If you plant a border to your garden, or create a border with rocks or fencing, know that this area must be weeded and maintained frequently, and cannot be weed-whacked by facilities or otherwise.
- ❑ **Staging Area with Truck Access:** You will most likely be moving large quantities of materials in and out of your garden. When assessing a site, check to see where the closest truck access will be and if there is room within the space to create a staging area or loading and unloading zone.”
- ❑ **Visibility:** Gardens are a wonderful way to beautify school grounds and having visual access to them can keep students (and teachers) engaged year round. Gardens that are in far corners of campus take longer for students, teachers, and volunteers to walk out to and are less engaging than a garden in the center of campus. If possible try and locate your garden in a visible area with heavy foot traffic. A central or highly visible location marks the garden as part of the core school learning environment. Before making any decisions about garden placement, make sure you communicate directly with any staff members whose space will be affected by the proposed garden site.
- ❑ **Security/Loitering:** It is important to consider who may be attracted to your garden when assessing sites. Gardens that are tucked away and overgrown can become oases for loitering or even illegal camping. Placing gardens in highly visible areas or adding open fences can help to deter unwanted attendance in them.
- ❑ **Water and Utility Lines:** Before you begin digging in, check with facilities to locate any existing underground water or utility lines that would be affected by your garden site.
- ❑ **Existing Trees & Shrubs:** Pre-existing trees and shrubs do not necessarily indicate a poor site choice. However, understanding how pre-existing foliage will affect sunlight, watering and visibility should be taken into consideration.
- ❑ **Wind:** Wind can become damaging to crops even at moderate speeds. Being aware of how much wind your site experiences can help you to design your garden appropriately. The effects of wind can be minimized through creating living fences or planting native hedgerows but you must consider how these elements will affect light access.

- ❑ **Traffic & Pollution:** Areas with high automobile traffic leave a lot of pollutants on the plants and soil around them. Make sure that your edible garden site is far enough away from busy streets or heavily frequented parking lots to ensure food safety.

- ❑ **Soil Health & Quality:** Before building your garden, get the soil checked for heavy metals or other pollutants that may transfer through your plants. These tests can be minimally expensive through the OSU Extension Service. Testing for nutrient levels can also be helpful when initially constructing a garden and building or amending the soil.
 - A helpful guide on how to properly collect soil samples - <https://catalog.extension.oregonstate.edu/ec628>
 - Labs and Services: the best way to submit a soil test and to who - <https://catalog.extension.oregonstate.edu/em8677>
 - All about soil and adding organic matter - <https://catalog.extension.oregonstate.edu/ec1561>

- ❑ **After Hour Access:** It is important to consider what type of access you will have to your garden space during non-school hours and the summer months. If your space will be in a courtyard you will need to work with the custodian at your site to make sure that you will have access to the garden when necessary.

- ❑ **Existing Structures:** Existing structures will affect the temperature of your garden, light exposure and wind. Avoid building on the north side of a building and make sure that your watering systems will not adversely affect the integrity of pre-existing structures.

- ❑ **Current Use:** Determining how your proposed site is currently being used will help you to create a solid plan for getting your school and community behind you for development. Check with people within the community to make sure that no one is using the space in a way that would be negatively impacted by your plans or design.

- ❑ *We recommend you consult the worksheets from **School Garden Project of Lane County's Growing Success with School Gardens** starting on pg. 16 ending on pg. 31 for additional important design elements. www.schoolgardenproject.org/download/growing-success/.*

Additional Central Oregon Gardening Resources

- **OSU Extension Deschutes County Gardening Classes**
<http://extension.oregonstate.edu/deschutes/garden-classes>
- **The Environmental Center, A Garden For every School Project**
<https://envirocenter.org/schoolgardens/>
 - School Grant Support
 - Garden Educator Network
 - Garden Expertise
 - District Support
- **Get in touch with Deschutes County Master Gardeners**
<http://extension.oregonstate.edu/mg/gardening-questions>
- **Article: Central Oregon Climate and How it Relates to Gardening**
A. Detweiler, 2009
http://extension.oregonstate.edu/deschutes/sites/default/files/GN1_CO_Climate_R1.pdf
- **Article: Short Season Vegetable Gardening**
J. Robins and M. Colt 1996
<http://www.cals.uidaho.edu/edComm/pdf/PNW/PNW0497.pdf>
- **Article: Eastern Oregon Vegetable Garden Guide**
M. E. Baur, 1998
<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/14368/ec1491.pdf?sequence=3>
- **Guide: Growing Success with School Gardens**
The School Garden Project of Lane County, 2016
<https://www.schoolgardenproject.org/download/growing-success/>
 - Useful worksheets for developing a master plan, action plan, garden design.
 - Materials suggestions and estimated costs.
 - Seasonal Garden Curriculum, broader curriculum connections.
- **Study: Portland School Garden Assessment by Growing Gardens, 2016**
<http://www.growing-gardens.org/wp-content/uploads/2017/01/SchoolGardenSurveyReportFinal.pdf>
 - In depth survey and report on 144 schools and gardens in Portland, Oregon.