



Facilities Services
2016-2017
School Garden Informational Booklet



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School Gardens 101

School Gardens are one of the fastest growing projects being requested by Teachers, Parent Groups and Students in Thompson School District.

These exciting projects offer many great benefits to the overall education and well-being of our children and the environment. Children learn highly valuable life-skills in how to cultivate plants and food, work together for a mutual goal and respect for our environment. Parental, staff and community involvement is key to helping our students succeed in creating, fostering and maintaining school gardens .

School gardening can encourage a higher quality of learning. In 1999, the California Department of Education found that over 77 percent of students in environment-based learning education programs, scored higher across all standardized tests and most held higher grade point averages. Studies have shown that students who participated in gardening scored significantly higher on science achievement tests compared to students that did not participate in garden-based learning activities (Klemmer et al (2005). Nutrition, plant ecology, ecosystems and gardening are naturally taught through school garden programs (Pothukuchi 2004). As added benefits, school gardens have been proven to have positive impacts for students in reading, writing, math, science, arts, and health education.

School Gardens in Thompson School District have historically proven highly successful in the first 3-4 years of their existence. Once parents naturally move onto other schools with their children, Teachers and Principles move on to other positions, schools or professions, and leadership in parent groups change, it has proven challenging for the District in maintaining these gardens. As a result Thompson School District has developed the following guidelines and standards for all School Gardens existing within District Schools.



School Garden Checklist

1. Planning the Garden: Form a steering committee of students, teachers, administrators, parents and possibly community members.
2. Select a garden site with good drainage, sunlight, water accessibility and highly visible from classrooms, playground and the community.
3. Adhering to District, ADA and State of Colorado Standards and Guidelines, plan and design your garden indicating the location of the planting beds, walking paths, any outdoor classroom areas, any tool or storage areas, fencing configuration and access to water.
4. Carefully review all District Standards and Guidelines available on the TSD Intranet site. Important: ALL guidelines must be adhered to in order to obtain District Approval for your project. Please remember, the District owns the property you are altering and will be stuck forever with the changes and additions you make, no to mention liabilities involved. This is the reason full district approvals must be obtained before any work can begin.
5. Determine the prices and budget you will need to create and maintain the School Garden
6. Secure all funding for your project (please contact the District Facility Project Coordinator or the M&P department to assist you in obtaining pricing and determining your budget).
7. Complete and submit a District Project Proposal Form along with any drawings plans , garden examples you may have.
8. Meet on site with the District Grounds Manager and any other Facilities personnel necessary to review your school garden plans and discuss any concerns or suggestions they may have. Be aware that a State Permit must be obtained for any permanent structure to be added on school grounds. This includes Shade Shelters, Sheds and Pergolas.
9. Monitor the Project Proposal for any questions or information being requested by Department Managers. Work directly with the Facility Project Coordinator in getting your Proposal approved through the district.
10. Make sure all Volunteer Waivers have been signed and insurance guidelines have been met in the case of anyone operating equipment.
11. Once all final approvals have been obtained, the Facility Project Coordinator will let you know and help you move forward with your project (e.g. calling in 811 utility Locates, coordinating contractor bids, applications for permits, etc.) The Facilities Project Coordinator will monitor the progress of the project and is also available to assist you in anyway needed during the construction of your project.



Garden Planning and Design

The pre-planning and design efforts for your school garden are key factors in its overall success. Whether it will be a vegetable or perennial garden, it is best to look for areas with full sun and access to water.

Level ground makes the garden more accessible and safer for all and is a requirement for ADA compliance. A dryland area of the school property with good access to the existing irrigation mainline is most preferable as a low cost hydrant can be installed for your needed water source. Also consider the proximity of truck and equipment access to your garden area, both during construction and for long term maintenance (delivery of compost or topsoil)

Determine the garden's goals, and purpose. then begin designing the space. The design of the garden should consider the following:

- Type of garden: vegetable, flower, environmental center, etc.
- Number of students participating at any one time
- Amount of space needed to garden
- Water requirements and how to tap into the existing water source.
- Redwood,, Cedar, Deck Composite or stone to be used to construct raised beds along with the size and number of beds needed.
- Topsoil and composting requirements
- Pathways
- Fencing (4'-6' "commercial grade" chain link fence** is required by the district with a mow strip extending the entire length of the fence is also required).
**see district fence requirements.
- Seating areas/gathering spaces
- Access to water
- Budget considerations
- Planting plans
- Storage (PLEASE NOTE: Only Metal storage sheds are allowed by the District (Wood and plastic are not allowed). All sheds regardless of size, must be anchored into a concrete pad, no wood or dirt floors will be accepted. Most sheds are required to be permitted through the State of Colorado and the fees for this permitting needs to be included in your budget. **Please see the "Thompson School District Shed Guidelines"page on this website for more details.**



Garden Planning and Design

- Ensure Equipment and Vehicle Access will be maintained, both for installation and maintenance.
- Be sure to have a short term , (School Break) maintenance , as well as long term maintenance plans in place. The District is now requiring that Parent Groups include the routine maintenance and upkeep of all School Gardens in the PTA/PTO Bylaws as their responsibility , along with it being added as part of the Principle's Facility duties and oversight. The District does not have the capacity to manage and maintain school gardens, either in short term or long term , and therefore this plan is required for district approval of all school garden projects.

Please note: Please review the TSD Landscape Project Guidelines included in this packet. Contact the Grounds Supervisor or Facilities Project Coordinator with any questions you may have.



School Garden Funding Resources

Funding your School Garden is the first and most vital step in getting your project off the ground. Securing the upfront funds to build the garden is only one part of the needed resources. Parent groups, Fundraisers, Kiwanis, Rotary Clubs, Lions Clubs and other community organizations can be a tremendous resource in finding support (and manual labor) for the implementation of your new school garden.

The long term funding for the maintenance and upkeep of the garden is typically the most challenging aspect of school gardens. TSD asks that all project proposals for school gardens have a well thought out, long term plan in place for maintaining these gardens. This plan should include all school breaks (e.g. Spring and Summer Break). Long term maintenance and funding, once parent groups, teachers and administrators have moved from that school is a vital and critical part of planning your school garden. Thompson School District now requires that **parent groups and administrators retain the responsibility of making sure their gardens are funded, maintained and or removed (should that be the desire at some point in the future)**. This responsibility needs to be written into all PTO/PTA bylaws in schools where gardens are present. The District can provide information and contact information on community groups such as Faith in Motion, tax payers working off tax liabilities, and gardening groups that might be able to assist in the maintenance of your school garden, even during summer breaks.

Grants Available for School Gardens

The Whole Kids Foundation: <https://www.wholekidsfoundation.org/index.../schools/school-garden-grant-program>

Education Outside: <https://www.educationoutside.org/school-garden-grants>

Annies Homegrown: www.annies.com

The Collective School Garden Network: www.csgn.org/funding-school-garden

America In Bloom: www.americainbloom.org/resources/grant-opportunities.asp

Food Corps: <https://foodcorps.org/get-involved/school-garden-grants>

Lowes: www.toolboxforeducation.com

USDA: www.fns.usda.gov/farmtoschool/farm-school-grant-program

Home Depot: <https://corporate.homedepot.com/.../home-depot-foundation-grants>

- **NOTE:** Many Grants must be applied for prior to September 1 each year so they can be reviewed during winter months and awarded in spring of the following year.



Thompson School District Landscape Project Guidelines

TSD Landscape Project Guidelines were established to ensure that:

- Shrubs and trees are planted where they can be maintained easily by Grounds Services personnel.
- Flowers or other plants are planted in appropriate areas and will receive water from the existing irrigation system
- All shrubs, trees, flowers, and other plants are approved by Grounds Services and are appropriate for the climate and soil conditions at each site.
- Each site's irrigation system is kept functional and that nothing is planted on top of it or in an area that will block the sprinklers from irrigating necessary areas.
- Ensure that any planted material will not be in an area where the plant or the roots could cut through or grow into the irrigation lines.
- All landscaping is compatible with the existing landscape design.
- All landscaping is compatible with the District's pesticide and herbicide control plans.
- Energy management has been considered (e.g. irrigation operation expense)
- "Xeriscaping" or low maintenance/low water plantings are encouraged.
- Pertinent safety issues have been addressed (e.g., placement of guide wires for tall trees, placement of fences, maintaining emergency access to playing fields, etc.
- Technical support and design review are facilitated by Grounds Services personnel during the planning and design phases of the project.

TSD Grounds Services may provide the following planning and design services:

- Technical support through all phases of the project, from inception to completion.
- Assist with estimating project costs.
- Coordinating with outside consulting or technical support.
- Coordinating donated or inexpensive plantings(e.g. trees, shrubs, wild flower seed, flowering plants, etc.)
- Providing existing site irrigation, drainage, or snow removal plans.
- Planning and design support related to safety issues (e.g., edging, temporary staking, construction fences, etc.)
- Reviewing designs for compliance with city, county, and state regulatory agency codes and guidelines.
- Analyzing design impact on existing sidewalks, pavement, adjacent facilities, and irrigation or drainage systems.
- Providing approval of all plantings to ensure plants meet district criteria (e.g., caliper, species, zone, etc.)
- Developing project timelines and proposing seasonal recommendations.



TSD Sites shall follow these steps to initiate a landscape project:

- The site administrator shall schedule a meeting to discuss the project proposal and landscape plan with the Grounds Services Supervisor. The site's final landscape proposal shall include the scope of work, landscape drawings, time-line and proposed budget.
- Develop a plan on how the project will be sustained. Long term planning must include:
 1. Long Term budget source and maintenance plan (including a plan for the Garden's Maintenance through subsequent school Administrators and parent groups.
 2. Plan for who will be responsible to maintain the project during school breaks (e.g., Summer break, Spring Break, Winter Break, etc.)
- **Work may not begin on any proposed work until the District C.O.O. and the appropriate "Director" of Learning Services have officially approved the proposal.**

TSD Site Based Gardens shall follow these guidelines:

- Plot must be a minimum size of 8"x8' and a maximum size of 50'x50'.
- Location must be fenced in full compliance with Thompson School District Chain Link fence standards and mow strip. The fence design and materials must be approved by the Ground Services Supervisor or designee.
- If importing or amending existing soil use only Screened Topsoil, Garden Soil, or Amended Topsoil. Use only a high quality Dairy or Vegetable Compost to amend the soil. Poultry or human based composts are prohibited.
- Raised Beds must be constructed of Cedar, Redwood or composite lumber only. No pressure treated lumber or railroad ties are to be used, under any circumstances.
- The location must have pedestrian and truck access with durable, defined pathways.



ADA COMPLIANCE

- ADA (Americans with Disabilities Act) for Raised Planter Boxes Work surface height of raised planter boxes Raised beds with a built-in work surface (i.e. a wide top edge for writing or sitting) should comply with ADA standards. ▢ Elementary school – 26 to 30-inches high at the top of the box. (ADA 902.4) ▢ Middle school/high school – 28 to 34-inches high at the top of the box. (ADA 902.3) Width of planter boxes In consideration of reach into garden beds, maximum bed widths should be 48-inches. (ADA 308.3) Space between planter boxes In accordance with ADA standards, spaces between planter boxes are considered pathways and must meet pathway clearance standards. (Section 2.5)
- Pathways Universal access should be considered in planning all pathways.
 - ◇ Pathway clearance ▢ The minimum clear path of travel must be 36-inches wide around all planter boxes. (ADA 403.5) ▢ The minimum clear path of travel for dead-end turnabout areas is 60-inch diameter. (ADA 304.3) ▢ No obstructions should be within the path of travel. (e.g. support posts, sprinklers, etc.)
- Acceptable pathway materials All listed pathway materials are acceptable; any other pathway materials must be specified in the garden application to be approved by Facilities Management.
- Smoothest & Most Stable:
 - ◇ Asphalt , Pavers, Redwood or Composite Deck, *Breeze, *Engineered wood fiber, Concrete

*Breeze must be compacted and 3-4 inches thick to be compliant. Breeze and engineered wood fiber are common pathway materials between garden beds.



PRICING GUIDELINES FOR COMMON SCHOOL GARDEN ELEMENTS

FENCING

- 4' Commercial grade chain link fence with concrete set posts
- 6' Commercial grade chain link Fence with concrete set posts

Avg. Price Range 2016

****10.57 to 11.18 L.F**

****16.83 I.F.**

REDWOOD LUMBER

****1.50 Board Foot**

CEDAR LUMBER

****1.53 Board Foot**

PLAYGROUND MULCH

****39.00 Cubic Yard**

GRAVEL

****33.00 Cubic Yard**

AMENDED TOPSOIL

****32.00 Cubic Yard**

COMPOST

****39.00 Cubic Yard**

LANDSCAPE FABRIC

****50.00 per 100 Ft**

STANDARD SOLID FLAGSTONE BENCHES

****8.00 Sq. Ft.**

HYDRANT

****50.00 plus**

BOBCAT/SKID STEER RENTAL

****439.00 per day ##**

****This pricing is provided to you as a "Guide Tool" only. You are welcome to obtain pricing and TSD encourages you to do so. These are standard prices and are subject to change. TSD Materials and Purchasing Department as well as the Facility Project Coordinator are happy to assist you in obtaining quotes and pricing anytime.**

IMPORTANT NOTE: ## Any operator of equipment is required to provide the district with proof of 1 million dollars of General Liability insurance coverage. There can be no exception to this requirement. (Licenced contractors typically carry this amount of coverage).

VOLUNTEER and SAFETY GUIDELINES

1. All volunteers working on school grounds must complete and sign the “Volunteer Waiver Form” provided in this packet.
2. Be thoughtful in the abilities of the volunteers to perform the task they are assigned.
3. Placing Volunteers in potentially perilous situations should never be allowed (e.g. working on roofs or up in trees, near power lines or uncovered holes.
4. All holes dug shall never be left uncovered. Place a sturdy sheet of plywood over the hole or stake and rope off such holes at all times until they can be filled in.
5. Be mindful of sharp or worn out tools. Insist all volunteers wear gloves and protective eyewear when working in the garden. Hats are important on sunny and even slightly overcast days. Masks must also be worn when working with any type of fertilizers or herbicides. Keep plenty of water and sunscreen on site for use at all times while working in the garden.
6. If an area becomes saturated and muddy, wait until it dries out to continue working.
7. If Utilities have been marked as running through your garden dig areas, please contact the Facilities Coordinator prior to digging or planting.
8. Written Parental permission and a completed Volunteer Waiver form are required for any child or student working to install or maintain the school garden.
9. Heavy Equipment such as skid steers, backhoes and dump trucks must only be operated by licensed operators who can provide the district with the required minimum of 1 Million Dollars of General Liability Insurance Coverage.
10. Only District approved Fertilizers, Herbicides and Insecticides are to be used in School Gardens. Such chemicals are never to be stored on site and must be used up completely or stored off site.

School Garden with Classroom at Centennial

Excellent Example of Garden Created Specifically to all District Standards



School Garden at Cottonwood Plains

Good example of well designed and well maintained School Garden



School Garden at Van Buren Elementary

Good Example of a Fenced in Garden



Natural Setting for Big Thompson Elementary School Garden

Good Example for utilizing natural surroundings when possible



Additional School
Garden Ideas



School Garden—Undesirable Result

This was a wonderful garden that the staff, parents and students put a great deal of work and effort into creating at one point in time, complete with planter boxes, picnic tables and worm farm boxes.

Now an example of a poorly maintained, severely neglected, non functional garden. The worm farms have been abandoned, weeds have overtaken the area and the planting boxes, worm farm boxes and picnic tables are in disrepair.

