

WISCONSIN SCHOOL GARDEN INITIATIVE BRIEF

WATER CONSERVATION AND EDUCATION IN SCHOOL GARDENS



**Wisconsin
Partnership Program**
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Water is an essential component of any garden. Attention to its use in a school garden offers opportunities for stewardship, education and fun. This brief provides an overview of how water conservation and education can be integrated into school gardens. It includes types of irrigation systems for your garden, strategies for water conservation, water education activities for the classroom and the garden, ideas for making water FUN, and links to relevant resources.

General watering tips

- After plants are established, watering deeply once per week is adequate for most garden plants (about 1 inch per week)
- Watering early in the morning or later in the evening can be a challenge for school gardens, but is the most efficient way to water your garden
- Care should be taken to water plants as near to where their stem meets the soil as possible. Water on plant leaves is a good way to spread plant disease, especially among tomatoes.



Types of irrigation systems for school gardens

There are many ways to get water into your garden, from very simple techniques to more complex irrigation systems. The best system for you will depend on the size of your garden and resources available.

Watering cans can deliver a surprising amount of water to plants, exactly where they need it – at their roots. Children often enjoy interacting with water and this can be a popular ongoing activity for students of all ages.

If you have a long hose, you may choose to have a student and helper drag a hose with a nozzle around the garden, delivering water in a controlled way to each plant. Depending on how strong your water pressure is, have students count 15-30 seconds for each plant.

If you have a larger garden or less helping hands, you can purchase an inexpensive overhead sprinkler at a local garden center. While this is perhaps the most simple and time-efficient technique, it also wastes the most water and can spread plant disease.

If summer help is a difficulty, you may wish to purchase a drip irrigation system. Drip irrigation consists of soaker hoses that are customized to fit your garden. It will likely take a few hours to set up and require some maintenance during the season, but it can be the most efficient way to consistently deliver the correct amount of water to your plants. Depending your garden's size, it may cost a couple of hundred dollars, but it can often be reused each season. (See Dripworks www.dripworks.com/)

Ways to conserve water in your school garden



- Choose the right irrigation system for your garden and involve students in the process of choosing and installing your irrigation system.
- Install rain barrels off any structure near your garden that has a roof and gutter system. Rain barrels are simple to install and depending on gravity, any irrigation system you choose can be hooked up to a rain barrel.
- If you have an outdoor kitchen area in your garden with prep sinks, you may wish to install a rain garden. This can be an active way to teach students about the water cycle (see <http://dnr.wi.gov/topic/Stormwater/documents/RgManual.pdf> from DNR).

Make it FUN!

Water can be a popular entry point for students to engage in your school garden. Here are some ideas for incorporating fun into your water education curriculum:

- Have students design and install a water wall. A water wall can be constructed with piece of vertical pegboard with a variety of adjustable irrigation equipment like hoses, pipes, and containers of rocks, sand, and woodchips. Children love to pour water from the top of the wall, and watch it travel in streams, drips and flowers where it collects in containers below.
- Water relay races
- Design your own watershed in a garden bed or sandbox using bridges, rivers, dams, castles, and moats
- The always popular game of water limbo!

Resources

Wisconsin-based Water Resources

Environmental Education for Kids! - WI DNR: <http://dnr.wi.gov/org/caer/ce/eek/index.htm>

Project Wet Wisconsin - UW Extension, WI DNR, Wisconsin Association of Lakes: <http://erc.cals.wisc.edu/gwah/>

Water Action Volunteers - University of Wisconsin Extension, WI DNR: <http://watermonitoring.uwex.edu/wav/>

Water-related Curricula Databases

Education Resources Information Center ([ERIC](http://eric.ed.gov/)) - Clearinghouse for Science, Mathematics and Environmental Education

Educating Young People about Water (over 150 curricula in this database) <http://www.uwex.edu/erc/ey paw/choose.html>

Involving Students: Lessons and Projects

The number of lessons that can use water as the teaching medium are almost endless. Consider:

- Science experiments and research projects.
- Social science surveys about water use in the city or surrounding neighborhoods.
- Math projects calculating the amount of water saved by your rain barrel, or how much water your plants will need in a growing season.
- Point of source water pollution experiments. A lesson on microorganisms present in water.



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WSGI
Wisconsin School Garden Initiative

Visit us at WISchoolGardens.org
or contact us at wsgi@communitygroundworks.org

Community GroundWorks
3601 Memorial Drive, Suite 4
Madison, WI 53704
Phone: 608-240-0409