

Planting Trees for Equity and Health

Trees offer more than shade—they can be considered a part of the school district infrastructure.

By Richard Weeks



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Infrastructure is a topic that has taken center stage recently—particularly with regard to the decades-long neglect in socioeconomically disadvantaged neighborhoods. But infrastructure is more than buildings and bridges. Trees are actually an important part of infrastructure. In fact, a recent U.S. Forest Service study found that trees in urban areas reduce the energy spent on heating and cooling in buildings by 7%, or \$7.8 billion annually (United States Department of Agriculture 2017).

“It’s hard for us to think of trees as actual infrastructure rather than an amenity, and because of that, we

don’t allocate sufficient funds,” according to Brian Stone, Jr., of the Georgia Institute of Technology. “If we think about [trees] as actual infrastructure on par with investing in roads and sewers and everything else, those costs will become more acceptable to us” (Einhorn 2021).

How do we know if there are enough trees in a neighborhood to ensure everyone can reap their benefits?

That question was partially answered by the conservation group American Forests, which, after years of research and analysis, created the Tree Equity Score (treeequityscore.org). It calculates a score for all 150,000 neighborhoods and 486 municipalities in urban America,

cities, and nearby small towns with at least 50,000 people. The scores are based on how much tree canopy and surface temperature align with income, employment, race, age, and health factors (Americanforests.org). More than 70% of the U.S. population lives in these urban places.

Speaking of equity, Richard Louv, environmentalist and recipient of the Audubon Medal, says, “Every child has a right to a positive connection to the natural world.” He goes on, “A connection to nature is a human right. All children need nature – not just the kids with parents who appreciate nature, or those of a certain economic class, sexual identity, or set of abilities. Every child” (Louv 2016).

The national discussion regarding *social equity* focuses on the ideals of justice and fairness for both adults and children. The sociologist and professor of public administration H. George Frederickson put forward *social equity* as the “third pillar” of public administration, joining economy and efficiency as values or principles to which public administration should adhere (Frederickson 2010).

As public administrators, school district leaders should establish culturally proficient practices that foster an inclusive and diverse environment. It is our responsibility, then, to ensure all children have an opportunity to appreciate and benefit from nature.

Trees and Outdoor Learning

Outdoor learning can be a successful motivator and alternative to the traditional classroom. Many SBOs have become resourceful to instructional staff working in what is commonly referred to as the “green schoolyards” movement.

Urban planners Sarah Milligan-Toffler and Richard Louv (2020) say, “The typical public schoolyard includes turf grass, impervious surfaces, aging playground equipment, and athletic facilities, all of which provide little to no benefit to the natural environment. Alternatively, imagine schoolyards packed with trees, native plants and grasses, and gardens where children can explore and learn about the birds, pollinators, and other critters in their neighborhoods.”

School budgets should include funding to build natural outdoor learning environments, and SBOs can provide the following support:

Plant trees everywhere.

Plant trees strategically across your school campuses—under the watchful eye of an arborist or someone who has a wide scope of training and certifications in arboriculture. The specialist will take soil samples to determine the nutrient availability and suitability for trees at

different site. The trees’ size, when grown to maturity, will guide their placement with regard to proximity to buildings, structures, light fixtures, and signs. The different species of trees require different amounts of sunlight exposure, including hours of sunlight, reflected light, and heat load. Drainage and root space restrictions must also be considered.

Rising construction and land costs, along with the number of vacant businesses due to the pandemic, may encourage school districts to purchase and repurpose existing buildings, including former malls, warehouses, bank branches, and other non-standard spaces. That does not preclude planting trees.

Districts set aside funds for capital improvement projects to include planting services, tree trimming and removal, excavation, and grading.

Trees can grow successfully in pots on rooftop playground gardens or in sunny inside atriums. Many dwarf tree varieties have been cultivated for just this purpose. Check with your arborist to ensure a potted tree can thrive in your climate zone.

Work with landscape architects.

When a new school is planned, the architects present their visual concepts and proposed building plans. This is the opportunity for local officials and citizens to advocate design features for the project.

Law enforcement officials look for good surveillance from surrounding streets. Fire marshals check buffer zones and egress roads surrounding the buildings to ensure fire apparatus can make sharp turns. In some communities, the public perception is that the project is an opportunity to build athletic facilities with the attached school as an afterthought.

Citizens concerned with “green schoolyards” must attend building committee meetings to review the plans and talk with the architects. This is the time to advocate for fewer expansive lawns and for the inclusion of organic gardens with plants that attract birds and bushes surrounded by fruit trees.

Apart from construction or renovations to the school itself, landscape architects can be helpful in repurposing outdoor spaces. Districts set aside funds for capital

improvement projects to include planting services, tree trimming and removal, excavation, and grading.

Landscape architects may recommend tree density and shrub planting along the perimeter of the site for protection from wind and noise and to serve as a natural boundary. They may advise fencing to separate contained areas such as planting beds and meadow habitat. Permanent outside shelters can be built for instructional projects and for students to have outdoor lunches.

Consider accessibility and groundskeeping concerns.

Expanding learning areas outside of the school building will likely complicate the groundskeeping time schedule—something that must be taken into consideration. Groundskeeping personnel maintain the condition and appearance of lawns, grounds, and practice fields. They handle the mowing, watering, and fertilizing of shrubs and trees. In good weather, maintenance crews may work at several sites in one day.

Teachers often manage outdoor learning areas, including garden beds, as part of class projects. School principals and facilities directors will need to delineate who oversees specific tasks in the outdoor learning spaces.

The district's risk management officer should review the plans for the renovated school grounds and do a walk-through prior to occupancy. Outdoor learning areas must be accessible to staff and students, pursuant to the Americans with Disabilities Act. The landscape architect can offer advice if there are questions about where trees and other plants should not be planted. Also consider groundskeeping. Can groundskeepers safely navigate the “grass berms” and raised garden beds with their lawnmowers?

Planting trees for equity and environmental growth is the mission of many nonprofits.

Recruit nonprofit volunteers and apply for grants.

Planting trees for equity and environmental growth is the mission of many nonprofits. Trees Forever, headquartered in Marion, Iowa, reports it has coordinated more than 7,000 volunteers throughout Iowa and Illinois since its start in 1989. Look for an organization that employs local teenagers to plant and care for trees.

Trees also can be planted as part of an outdoor classroom project, as Nicholas L. Dixon, principal of Foust Elementary School in Greensboro, North Carolina, demonstrated. His school won a grant of \$13,000 from the North Carolina Outdoor Heritage Advisory Council in 2020. He ordered a waterproof chalkboard and desks and chairs fashioned to look like logs. His maintenance workers cleared the needed space outdoors and installed the equipment.

“One of our kindergarten teachers held a model lesson in the classroom and the parents were really enthralled by it,” Dixon says. “It was really good to see parents engage with outdoor learning and be able to ignite even their passion for creating more spaces across the district (Pruitt-Young 2021).”

In Conclusion

Social crusader Rev. Peter Raible said, “We build on foundations we did not lay; we drink from wells we did not dig; and we take shade under trees we did not plant. We must provide the same for those who follow.” Trees provide more than shade—they can be an investment in the future.

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