TAPPING THE POWER OF

OUTDOOR LEARNING

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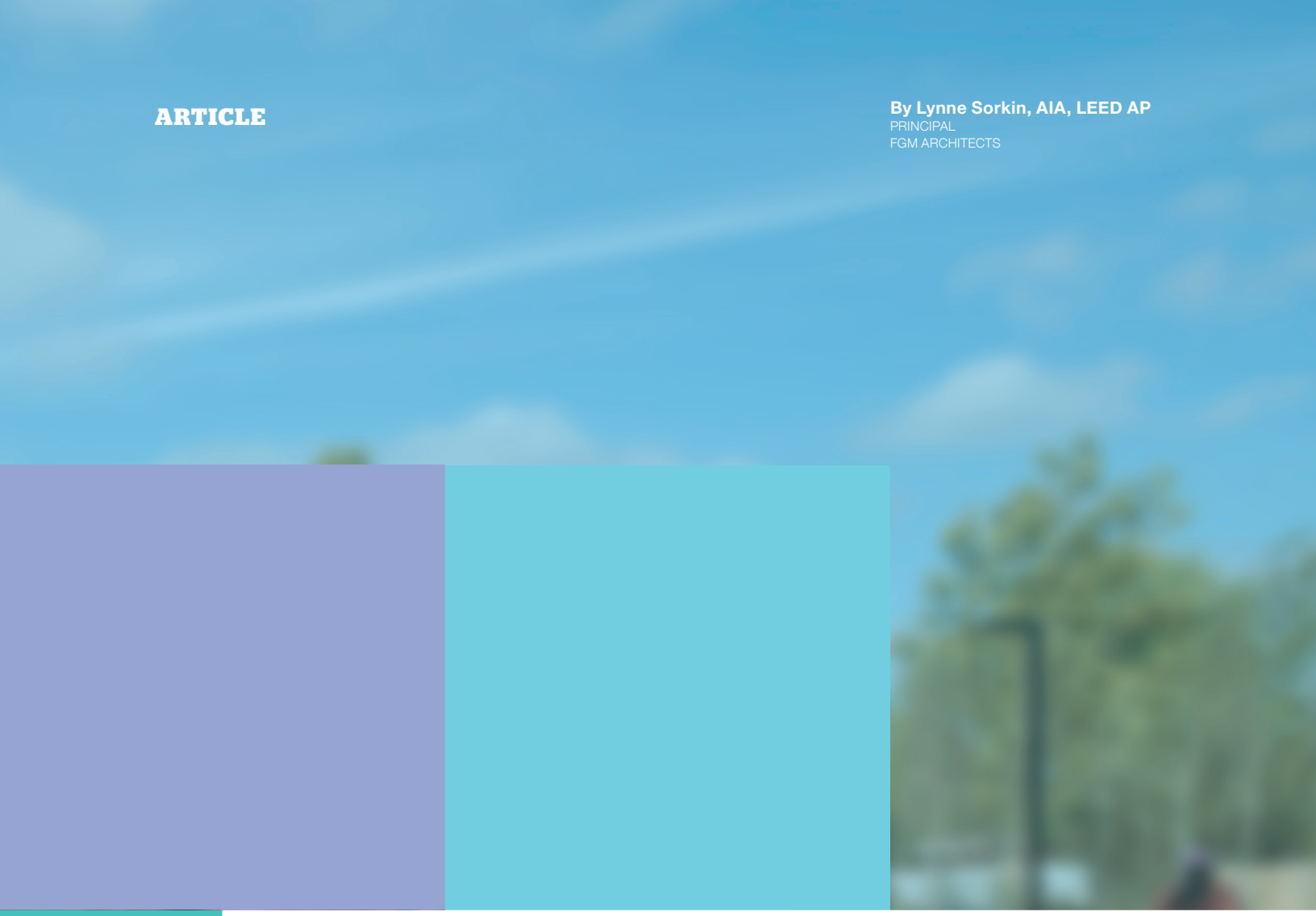

There is growing awareness of the potential benefits of outdoor learning, which has acquired a new urgency as schools reopen in the COVID-19 pandemic's aftermath. Whether your facility is located within a multi-acre natural setting or a compact urban site, carefully planned outdoor spaces can support curriculum goals, increase students' outdoor time and extend community use beyond normal school hours.

While manufactured playground equipment and traditional athletic fields support recess, physical education and competitive sports, other kinds of amenities offer equally important learning and developmental benefits. A strategically selected mix of organic, challenging and creative outdoor learning elements can foster awareness and empathy for the environment, promote healthy habits and encourage socialization and cooperation.

With numerous options to consider for outdoor learning spaces, read on to explore the components that are fundamental to generating positive impact by examining the experiences of two school districts, one suburban and one urban.

EXPLORING THE POSSIBILITIES

Although instruction, group discussions and other work can take place with students seated in open-air settings, the possibilities of outdoor learning are greater than literally moving the classrooms outside. Non-stationary activities such as gardening or building with loose parts also serve as a means for teaching and learning.

Unstructured learning opportunities paired with the right schoolyard installations can challenge students to test their limits, help them develop motor, navigation and executive functioning skills, as well as expose them to the diversity and interrelationships of the natural world.

Prairie Trails | Photo Courtesy of Layne Dixon

KEY COMPONENTS OF OUTDOOR LEARNING

- **Meeting Areas:**
  - » **Large Group Areas:** These spaces can be stepped or flat with fixed seating for instructional purposes. When organized in a circle, these areas promote group discussions. When arranged with stepped levels, such as an amphitheater with a focal point, the installation can support presentations, concerts and dramatic play.
  - » **Protected Open Air Areas:** Sun shading devices, gazebos and other permanent structures provide shelter during hot/rainy weather and can be used for more hours of the day when electricity and lighting are included.
- **Mazes, Paths and Climbing Apparatuses** help children build executive functioning skills by requiring them to find strategies for moving around the game/site while developing balance, coordination and an understanding of special relationships.
- **Natural Activity Areas:** Options for construction and creative play engage children longer and promote cooperation. In contrast to playgrounds where equipment is fixed, children who explore natural elements such as wood, sand and stones gain understanding of the physical world and can learn from each other as they figure out how things work.
- **Physical Areas:** Play at varied heights and speeds helps children learn how to manage their bodies. These activities help build confidence while boosting heart rates and improving muscle tone. Development of gross motor skills is often linked to the ability to think through an action and its result.
- **Sensory Areas:** Hands-on, open-ended experiences make use of children's natural senses of touch, smell, sight and hearing.
- **Sit Spots:** Creation of quiet areas allow children to talk or be by themselves, calm down and enjoy nature.
- **Native Gardens and Diverse Habitats:** Gardens with a variety of native plants, bioswales and other un-mowed areas create rich, bio-diverse environments that attract birds, insects and other small animals. Pollinator gardens attract wildlife.
- **Edible Gardens:** For students of all ages, a hands-on gardening experience offers lessons about life cycles, water and waste management. Through planting, harvesting and interaction with the growing cycle, students can learn to identify herbs, fruits and vegetables. Raised planting beds with clean, fertile soil that facilitates garden growth are easily incorporated into all types of campus environments. A cooking curriculum can integrate farm-to-table lessons from the garden to the classroom, tying together menu planning, kitchen skills and the value of healthy eating.

CASE IN POINT: PRAIRIE TRAILS SCHOOL

River Trails SD 26 recently opened the Prairie Trails School. Designed by FGM Architects, this renovated facility is the community's first "net zero energy" building with all required electricity generated by solar panels on the roof and other energy savings design elements.

Prairie Trails School also features a state-of-the-art natural play and outdoor learning space created by Natural Playgrounds and Terra Engineers in partnership with the district. Activity spaces include a gazebo and adjacent amphitheater seating, raised garden beds, a labyrinth, pollinator garden as well as benches scattered along the edges of the play area. Undulating earth mounds provide opportunities for climbing, rolling and exploring different heights. Other features such as climbing walls, stepping challenges, slides and caves are built into the topography helping children build skills in unexpected ways.

A variety of sensory experiences are also on hand such as a mud kitchen and sand pit (touch), varied plants and shrubs (smell), musical instruments (hearing) and varied textured ground surfaces (sight).

- **Rain Barrels:** Capturing rainwater in barrels provides a natural resource for garden maintenance as well as for cleaning tools and outdoor gear. Keeping some water out of the local sewer system also helps prevent local flooding.
- **Trails Circulation Paths and Wayfinding:**
  - **Interpretive Signage:** Identifying flora and fauna is instructional and serves as a wayfinding tool.
  - **Exploration:** The inclusion of natural elements such as ground limestone and wood mulch help children explore and guides them along trails and paths.

Prairie Trails | Photo Courtesy of Layne Dixon

ACCESSIBILITY

Outdoor spaces should include opportunities for physically impaired children to participate as fully as possible. For example, accessible routes to observation areas should be provided where less mobile students can pause, observe and feel connected to activities. Specific considerations include:

- **Circulation:** Slopes, surfaces and widths to support movement of wheelchairs throughout the site.
- **Gathering Meeting Areas:** Provide space for wheelchairs that is directly adjacent to seating in large group areas. Ensure that fixed tables have needed space for wheelchair seating.
- **Accessible Benches:** Rocks, logs and other natural elements are used for fixed seating; incorporate armless benches with backs where students can transfer from wheelchairs.
- **Fixed Equipment and Features:** Mount chalkboards, easels, musical instruments, raised garden beds and other equipment within reach and located next to paved paths.
- **Plumbing:** Locate drinking fountains, sinks and other water features at age-appropriate heights that can be accessed by wheelchairs.
- **For multi-level activities,** incorporate ramps where possible.

Fernwood Elementary School / Designed by Site Design Group / Photo Courtesy of Scott Shigley

CASE IN POINT: GREENING SCHOOL YARDS & EXPANDING COMMUNITY USE

Across the country, schoolyards are turning from grey to green as grass, turf and other natural and synthetic materials replace impermeable paved play surfaces. Many communities are combining curriculum initiatives with outdoor infrastructure improvements that result in stimulating settings for learning and physical activity.

Public school systems own and occupy significant property in their communities. By improving sites for outdoor learning, larger efforts for climate change can be addressed while new amenities are offered to local residents. Combined with the wide range of features that can support physical activities, a green schoolyard can improve health and wellness for both students and their neighborhoods.

Space to Grow is a large-scale outdoor initiative of Chicago Public Schools. Managed by Healthy Schools Campaign and funded by Openlands, Chicago Public Schools, the Chicago Department of Water Management and the Metropolitan Water Reclamation District of Greater Chicago. The program has successfully transformed 30 hard-scaped play lots into vibrant, outdoor learning environments. Stormwater management is a key consideration for the selection of each project site in and the design of each space includes installation of permeable surfaces such as pavers and rubber play surfaces as well as mechanisms for stormwater collection under new artificial turf fields. Through these investments, millions of gallons of rainwater are captured and slowly released to the storm sewers, preventing the dangers of flooding.

Other features of Space to Grow schoolyards include gardens, play equipment, walking paths, gathering areas and native landscaping. Each project is created with extensive input from students, school staff and residents who also join in planting and workshops. The result is customized spaces that reflect the locations and interests of each community, promoting environmental awareness and a culture of wellness.

DON'T FORGET THE GEAR

Outdoor learning is not without practical challenges, including resistance from staff who worry about inclement weather and the complexities of managing students and their protective gear. While students are also concerned about being uncomfortable, more often, it is the teachers and aides who have anxiety about some types of outdoor activities. In addition, parents and caregivers have realistic concerns about clothing that could be ruined from outdoor play.

When feasible, clothing budgets, grant writing, in-kind donations and other resource procurement should be explored to provide the range of gear needed for outdoor learning. Keep in mind the needs of students as well as the adults who oversee them. Here are additional considerations:

- **Set Expectations:** Provide clear communication with families about the types and frequency of outdoor activities anticipated each season. Work together with students and staff to make sure that everyone stays warm and dry.
- **Create a Gear Library:** Clothing should include mittens, boots, snow pants, hats, rainsuits, rain mittens and base layers. To circumvent conflicts, avoid gendered colors and different brands to better ensure children are wearing similar clothing.
- **Cleaning:** Daily washing is not generally required; rolling in snow or grass can clean off muddy layers! A key decision is whether to have outdoor gear laundered at the school or by families.
- **Repairs and Replacement:** Extend the use of the gear by having duct tape and sewing kits on hand. Although much of the gear might initially be donated or purchased, over the course of the season as items get lost and damaged, they will be more expensive to replace. Plan your budget accordingly.
- **Storage:** Determine if outdoor gear will be stored at students' homes or at school. Students who split their time living in more than one home are likely to forget or have problems accessing their outdoor gear. To make sure everyone is prepared for the outdoors, it may be desirable to have outdoor gear primarily stored at school. If this is the case:
  - » Provide shelving and bins with locking lids to keep out vermin.
  - » When gear and/or gear storage cannot be provided for all students, avoid locating the clothing in a space such as the main office where a student may feel stigmatized when accessing.

Tools and the storage space needed to maintain them are critical to the success of gardening as an outdoor learning activity. If tools cannot be stored close to the garden, a means of transporting them to and from the site is needed.

Classroom access, the provision of water for clean-up and gear storage may affect how and where students get changed for outdoor activities and how they move from inside the building to the schoolyard.

- **Building Entrances:** Consider whether students will circulate from a common corridor/vestibule or directly from a classroom to the exterior and how dirt and water can be managed.
- **Clean Up:** If very messy or muddy activities are planned, provide an ability to rinse off or wipe down before re-entering the building or immediately upon re-entry.
- **Toilet Rooms:** These should ideally be located near the primary entrance(s) being used to access the outdoor space.
- **Dressing/Changing Areas:** Determine where changing will occur, whether in the corridors at personal lockers or cubbies or within the classroom. Consider wardrobe storage that can function like a mudroom to hang up soiled clothing inside or a protected exterior location.
- **Location of Key Site Features:** Determine which outdoor spaces should be located closest to the building, to minimize the time spent transitioning students between indoor and outdoor activities.

Prairie Trails | Photo Courtesy of Layne Dixon

NEXT STEPS FOR CREATING YOUR OUTDOOR SPACE

There are a wide range of features, costs and benefits that can be considered when planning your outdoor learning environment. At a district level you might consider developing a pilot project first to assess the costs, as well as student/teacher community feedback before implementing a program widely across multiple school sites.

As a researcher and professor of Pediatrics and Public Health in the Faculty of Medicine at the University of British Columbia, Mariana Brussoni, recognizes that there are numerous opportunities for children's learning and development in outdoor environments. In her work, The Outdoor PLAYbook, Brussoni has created a framework for assigning qualitative values to customized features of outdoor learning. Based on eight key elements, these metrics can be applied by play type, grade and activity. These criteria (such as sustainability, durability, budget and maintenance) can also be used to assist stakeholders in determining what components best support their outdoor learning environment.

Outdoor learning will continue to grow as a focal point of education. Effective approaches can and should be explored no matter the limitations of budget and even for schools with limited green space. The natural world offers limitless possibilities to learn and develop for people of all ages!

Prairie Trails | Photo Courtesy of Layne Dixon