

Adding Value to Early Childhood Outdoor Play and Learning Environments

The Top Ten Activity Settings

The size, shape, location, and existing features of childcare center outdoor spaces vary greatly. Some may exhibit unique elements such as play equipment and mature trees. Most require additional activity settings to increase play and learning opportunities. Activity settings add value by being designed to support specific play and learning activities; for example, water play, one of the “top ten.” The addition of trees, shrubs, flowers, and grasses further increases play and learning value by connecting children with nature—which in turn supports healthy child development. Including vegetables, fruits, and nuts adds even more value by helping children understand the connection between healthy eating and the Earth as our source of food. The information contained in this *InfoSheet* can be used to add value to the outdoor play and learning environment.¹

1. Indoor-Outdoor Transitions

How indoor and outdoor spaces flow into each other directly affects the ease with which indoor-outdoor programs can be managed. When classrooms open to the outdoors, children and teachers feel intimately connected to the outdoor play and learning environment. Transitional spaces (Figure 1) linking individual classrooms with the larger, shared play and learning area provide an option for directly managing outdoor extensions of the indoor classroom.

Key considerations include:

- *Types.* Transitional spaces can take the form of decks and patios. Depending on area available, planting beds, raised planters or moveable containers can be installed.
- *Enclosure.* Visible boundaries are crucial for communicating that transitional spaces are “private” classroom extensions. On the other hand, enclosures should be unobtrusive and relatively open to allow sunlight to penetrate.
- *Shade.* Vine-covered pergolas can provide a comfortable, semi-sheltered space of flowering vines and edible fruits. Deciduous shade trees can also improve comfort in Summer and Winter.

2. Pathways

Clearly structured, hierarchical pathways in early childhood outdoor play and learning environments provide spatial structure and access to other activity settings. Primary pathways (Figure 2) directly connect indoors to the outdoors and provide easy movement around the outdoors for teachers and children. Secondary pathways (Figure 3)



Figure 1 - Indoor-Outdoor transition.



Figure 2 - Primary pathway.

provide “short cuts” and more exploratory routes between primary pathway segments. Tertiary pathways provide “adventure trails” (in the eyes of children) with little loops off other pathways. All pathways promote physical activity by facilitating walking, running, chase games, and wheeled toy use (riding, pushing, pulling).

Key considerations include:

- **Surfacing.** Hard surfaces such as concrete or asphalt or decomposed granite or similar crushed stone material work best for primary pathways. Woodchips work well for secondary and tertiary pathways.
- **Edging.** Install low rails, metal hoops or small stones to protect planting adjacent to primary pathways.
- **Alignment.** Continuous curves add a sense of exploration and motivate children’s movement.
- **Width.** Make primary pathways at least five feet wide to accommodate wheeled toys passing each other. Other pathways can be narrower.
- **Avoid sharp corners, bottlenecks and dead ends.**

3. Gathering Settings

Gathering spaces (Figure 4) encourage children to meet and work together in small groups (stimulating social interaction and cooperative relationships) and support program activities including art, storytelling, and science exploration. Decks are a type of gathering setting.

Key considerations include:

- **Location.** A variety of gathering settings, large and small, located throughout the area, in high activity zones and adjacent to program bases so that tools and materials are close at hand.
- **Types.** Options range from simple log or stone circles (located in a grove for added comfort), to substantial pergola-type structures. Provide several sizes to accommodate corresponding group sizes. Vine- or fabric-covered teepees are an attractive, inexpensive option.

4. Decks

Decks (Figure 5) are one of the most versatile outdoor structures. In many shapes and sizes, they provide dry, warm, above-ground surfaces, which are especially useful in cold or damp weather. As gathering places for children, decks support diverse social and imaginative play. Larger decks can accommodate educator-facilitated group activities. Designed as stages, decks support expressive group activities, from storytelling to talent shows. Large stones or logs can be placed nearby as seating. Even the simplest deck can serve as an effective anchor for dramatic play.

Key considerations include:

- **Size.** A minimum width of 4 or 5 feet can provide a useful activity space—up to 15 feet affords all kinds of activities.
- **Location.** Straight edge against boundary fence or in fence corner (like sand play settings) works well. Several decks can be located at strategic points in the play and learning area. Avoid differences of more than 6 inches in level



Figure 3 - Secondary pathway.



Figure 4 - Log stumps and deciduous tree create a shady gathering setting.



Figure 5 - Covered deck with wrap-around seating.

between deck and ground.

- **Shape.** Squares, rectangles, hexagons, octagons, are easy to construct with timber as well as polygons constructed to fit particular location dimensions. Avoid sharp corners; they are difficult both to construct and to use.
- **Enclosure.** Especially when located against a fence, trellises or lattices on backs and sides can add a sense of enclosure (and shade), while maintaining visibility for educators. Supplement fence height, if necessary, to comply with local regulations.
- **Shade.** A vine-covered arbor overhead can transform the deck into a shady, fragrant space—alternatively, associate decks with shade trees.

5. Multiuse lawns

Multiuse lawns (Figure 6) support high-energy group games, water play, and the exuberant joy of just running—activities that promote cooperation, team spirit, and gross motor development. Lawns provide an ideal space for play with balls and other types of mobile equipment that require a soft surface. Lawns can accommodate social gatherings such as story time and offer a place for simply relaxing.

Key considerations include:

- Proportion size relative to the entire play and learning area. For preschoolers, 150-300 square feet is appropriate.
- Locate as a central, “green focus” of the play and learning area, connected to primary pathways (see Figure 2 above).
- Lay out in a naturalistic circular/curvy form, with edges defined by low railings and/or shrubs to create calm corners protected from running children (Figure 7).
- Invest in best quality lawn turf in a defined space where the subsurface soil has been appropriately amended for good drainage.
- Install a deciduous shade tree(s) on the south side to create shady spot(s) for social activity.

6. Sand Play Settings

Sand (Figure 8) engages children because it is so easy to move, mold, dig, sift, sculpt, and pour. It is the classic interactive, natural material providing a multitude of opportunities for creative play and social interaction.

Key considerations include:

- **Depth of sand.** Toddlers, 12-18 in. Preschoolers, 18-24 in.
- **Location.** Locate against a boundary fence or in a fence corner (to avoid sand “migration”), away from paths (to prevent slip hazards). Avoid central locations because sand will migrate in all directions.
- **Containment.** Timber construction (with internal benches for sand play and sitting) or logs (vertical or horizontal) or large, smooth rocks, with plant buffers to add natural loose parts.
- **Shade.** Crucial in hot climates. Can be achieved with deciduous shade tree (to allow winter sun) or permanent, suspended, shade cloth (to allow light and rain penetration—to keep sand damp for sculpting).
- **Entry.** Provide single entry (to avoid disturbance of cross



Figure 6 - A deck leads to a multiuse lawn with sensory plantings.



Figure 7 - Multiuse lawn with sand play setting.



Figure 8 - Sand play setting with wrap-around benches located in a corner.

circulation) and threshold of slatted wooden deck to shake off sand if close to pathway or indoor space.

- **Covering.** Use ½-inch to 1-inch mesh net if necessary to protect sand from animals. Do not use tarp as it keeps light from sand, which makes it rancid.

7. Water Play Settings

Water delights children because of its multisensory character and the endless possibilities it offers for exploring interactions with diverse objects such as floating leaves, damming and manipulating water flow with moveable stones, scooping and pouring with containers, splashing, painting with water, and more. The several ways of providing water play include elevated water tables (Figure 9) or in-ground, hard-surfaced streams.

Key considerations include:

- Use potable water supply that drains either into the sewer system or a “rain garden.” Do not contemplate a “recirculating” water supply. For childcare applications, such systems are too expensive and challenging to maintain (e.g. installing sand filter and possible ultraviolet treatment).
- Design to drain at the end of each day to avoid standing water.
- Consult state and local sanitation regulations that may apply to childcare center installations.
- Hard surfaces around water play settings should be non-skid and well drained.
- Elevated water tables can be located in sand play settings as an effective way of combining sand and water play.

8. Edible Landscapes

Edible landscapes include annual vegetable gardens (Figure 10) as well as permanent edible landscape elements (Figure 11) including perennial vegetables (artichokes, asparagus, etc.), fruiting trees, shrubs, and vines—and the fence lines, walls, trellises and arbors that support them. Gardens can be as small as a single bed against the fence and as large as a fully enclosed, managed garden of 200-300 square feet. Edible landscapes support the crucial health objectives of helping children to understand where food comes from and to experience eating fresh vegetables and fruit. The process of gardening includes fine and gross motor activity, sensory stimulation, as well as opportunities for children to cooperate, work together, and experience a tangible product from their efforts.

Key considerations for vegetable gardens include:

- **Types.** Raised beds; large, walk-in beds; tubs and other containers; window boxes, beds along fence lines supporting annual vines (peas, beans, cucumbers, squash, etc.) and whatever you can invent!
- **Size.** Because of the limited reach of small children, beds of all types need to be narrow (24 to 36 inches for double-sided beds).
- **Location.** Sunny, south-facing, low activity area. Adjacent to storage or “potting shed.”



Figure 9 - Raised water tables provide opportunities for water play.



Figure 10 - Raised planters are excellent for growing vegetables.



Figure 11 - A fig circle is both edible and playable.

- *Protection.* To keep children from trampling plants, edge with framed timber between 6 and 18 inches high, or create informal borders with stones, logs or just trimmed tree branches.
- *Layout* (large, fenced gardens). Define clear spatial structure with a single entrance and primary and secondary pathways laid out for convenient access to narrow beds (can be different shapes).
- *Storage/potting shed.* All garden elements need to be near storage for tools and materials. For large gardens, this can take the form of a potting shed, with sufficient glazing for growing seedlings.



Figure 12 - Program base is connected to pathway to allow children access.

9. Program Bases/Outdoor Classrooms

All outdoor play and learning programs need a base of operation and storage for play equipment and materials, including wheeled toys, loose parts, and garden tools (Figure 12). Create an outdoor classroom by adding a greenhouse and/or multipurpose deck or covered porch to serve as an activity space.

Key considerations include:

- *Location.* Access from primary pathway, as close as possible to settings where play and educational programs are held.
- *Access.* If contents are accessible to children, they can learn to take initiative, carry out an activity, tidy up and return items when completed.

10. Shady Places

Adequate protection from the sun is essential for the health and comfort of young children outdoors.

Consider the many ways that shady places can be created:

- *Vegetation.* Use medium-size trees or large shrubs interspersed in and around existing settings or clustered around a deck as a shady grove. Install 2 ½-inch caliper trees to produce sufficient shade in a few years.
- *Structures.* Arbors, pergolas (Figure 13), tunnels, and trellises scattered throughout the play and learning area create multiple patches of shade and a comfortable, three-dimensional space scaled to young children. Experiment with standard construction elements such as light metal grids and netting to create armatures to support vine growth.



Figure 13 - Vine-covered pergola creates a shady place.

1. For more information about preschool outdoor play and learning settings, visit NLI's Preventing Obesity by Design Project (POD), which provided design and technical assistance services to improve the outdoor play and learning environments of 27 childcare centers located throughout North Carolina with the support of the Blue Cross Blue Shield of North Carolina Foundation. For more information visit <http://www.naturalearning.org/content/preventing-obesity-design-pod>.

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