

SOL - Sequential Outdoor Learning Environment

Design Guidelines for Children on the Autism Spectrum

These guidelines were developed to aid professionals in designing outdoor play spaces for children on the Autism Spectrum.

- **CONTEXT AND LOCATION** - Select a location that is tranquil and quiet, with the least amount of distractions possible. Noise from air conditioning compressors, adjacent traffic, and high-pitched or humming noise can be overwhelming.
- **SAFETY AND SECURITY** - Include 6'-0" minimum height fencing that cannot be easily climbed to prevent children from straying outside the area's boundaries, ensuring safety and security. Avoid specifying materials, including toxic plants, that are easily ingested, as all children at some time explore their world through taste.
- **SMOOTH WIDE PATHWAYS WITH CLEAR EDGES** - Provide smooth, wide pathways and surfaces to eliminate the feeling of crowding. In addition, smooth non-glare paving provides a proper surface for children with mobility issues and is important for children with ASDs, many of whom are sensitive to textures and bright light. Provide a clear edge along pathways so that visually-impaired persons are aware of the edge of the path surface.
- **ORIENTATION MAPS** - Provide Orientation maps that illustrate a layout of the garden or play space so users know where they are and what to expect next. Surprises can create anxiety in persons with ASDs.
- **PROVIDE TRANSITIONS BETWEEN SPACES/ACTIVITIES** - Provide transitions between spaces/activities to allow individuals to orient themselves before experiencing something new. Children with ASDs are uncomfortable with change, and providing space between different activities, accompanied by an orientation map, can help them anticipate these changes.
- **SEQUENCE ACTIVITIES** - Sequence activities to introduce elements and ideas slowly and build upon skills and comfort levels.
- **INCLUDE ELEMENTS OF CONSISTENCY** - Include some elements of consistency such as a hedge, stone wall, or an element that creates a comforting, predictable pattern.
- **PROVIDE FIXED AND NON-FIXED ELEMENTS** - Provide fixed and non-fixed elements - unpredictable or changeable elements such as furniture locations, for example, can be disconcerting for persons with ASDs. Create a sequence where the fixed element is experienced first for a sense of security, and further on, areas that are changeable to create a challenge that children have the opportunity to overcome.
- **COMMUNICATION AND SOCIALIZATION** - Provide opportunities for increased socialization such as gardening, that encourage one-on-one interaction.
- **PROVIDE NON-VERBAL VISUAL AIDS** - Provide plenty of visual aids and signage s up to 50% of persons with ASD are nonverbal. Some children with autism use a picture exchange system (PICT) to aid their communication with family members and teachers. Therefore, in designing outdoor environments, incorporating signage with clear, simple pictures to communicate ideas or intended use of certain play and learning elements is an important consideration. Include Braille for visually impaired persons and sign language skill- building to encourage communication between verbal and nonverbal children.
- **OPPORTUNITIES TO OVERCOME SENSORY ISSUES** - Provide opportunities to overcome sensory issues, as many persons with ASDs have an over- or under-responsive sensory system and react differently to sounds, textures, or visual stimuli. Look beyond the five senses and include activities that provide for vestibular and proprioceptive stimulation. Gardening activities are a great way to provide digging, lifting, pushing, pulling and familiarizing kids with different textures and scents of plants in a controlled manner.
- **PROVIDE SOOTHING AREAS TO RE-CENTER** - Provide soothing areas for the user to escape and re-center when overwhelmed, or to watch activities from a distance until comfortable enough to participate —a bamboo tunnel, a low growing tree to hide beneath, or a fence panel with viewing holes.
- **PROVIDE OBSERVATION POINTS** - As many kids on the spectrum prefer to observe before engaging.
- **"TIGHT FIT" PLACES** - hammocks or hammock swings - Provide hammocks or hammock swings for a sense of comfort by being held tightly by something and to be soothed by the swinging motion.
- **OPPORTUNITIES TO DEVELOP FINE AND GROSS MOTOR SKILLS, EXERCISE, COORDINATION AND BALANCE** - Provide opportunities for exercise and for increasing motor skills, coordination, and balance. Beyond play structures, consider adding a walk challenge path or exercise loop. Gardening activities help to increase fine and gross motor skills, body awareness, and motion in addition to providing a calming connection to nature.
- **FOSTER IMAGINATIVE PLAY** - As children on the spectrum have trouble with pretend play.
- **PROVIDE CHOICES** - To create a sense of control and opportunities for varying levels of comfort.
- **BUILD IN CHALLENGES** - Build in challenges to help generalize skills to a real-world environment. It is important to provide a level of comfort but also to encourage kids to overcome common fears. A simple example of this is to sequence a concept, such as transition areas, so they gradually become shorter, or gradually present more directional options for the user.
- **PROVIDE PLENTY OF SHADE** - Provide plenty of shade, both with trees and shade structures, as persons with ASDs are often photosensitive.
- **INCLUDE VOCATIONAL PROGRAMS AT SCHOOLS, DAY CENTERS AND GROUP HOMES**



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