I SENSE INCLUSIVITY

How Can Accommodating Curiosity in Garden Design Foster Learning and Play for Children with Disabilities?

Picture this: nestled within the Boone County Arboretum lies an innovative children's garden poised to foster inclusivity and sensory exploration.

Tailored to accommodate children of different abilities, including those with mobility devices and different mental capabilities, the proposed garden offers a journey through diverse sensory experiences and separate 'low sensitivity' zones. Every aspect is designed to engage the mind, as well as the body.

If you enjoyed my board/presentation, I encourage you to read my complete dissertation - which includes more in-depth information on this project.

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HORT 4092
Spring 2024
Bachelor's of Science in Horticulture
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Existing vegetation

Proposed green space

Arch- entryway

Tree stump (varying sizes)

Cantilever bench seating

Wooden fencing

'Bumps'

Birdhouses/feeders

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Tactile
Tactile refers to that which is concerned with the sense of touch or the perception of touch.

Smell Perception
The sense of smell, or olfaction, is the special sense through which smells are perceived.

Body Awareness
It's also known as kinesthesia, or the awareness of the position and movement of body parts in relation to muscles and joints.

Balance
The vestibular system provides the sense of balance and the information about body position that allows movements in response to any forces.

Visual
Enables you to be aware of color, light level, contrast, motion and other visual stimuli.

Taste Perception
Refers to the relationship to eating or the sense of taste.

Auditory
In this case auditory refers to the awareness of sounds and placing meaning to those sounds.

Socialize
To meet and spend time with people in a friendly way, in order to enjoy oneself.

Playing outside is an important and vital part of child development. Gardening is proven to help children develop locomotor, body management, literacy, and object control skills; as well as indulge in sensory exploration, and visual and cognitive stimulation. Cognitive development is about intellectual skills such as remembering and analyzing information and predicting outcomes. Data compiled by the Rauch Foundation found that 85 percent of a person's brain is developed when they are five years old! Developing these cognitive and physical skills can have an even greater impact on children with mental or physical disabilities. For people living with intellectual or developmental disabilities, gardening (or horticultural therapy) can be a holistic way to learn a new skill while also feeling more grounded. (ALSOAdvocates for Life Skills & Opportunity)

Adults have the privilege to curate a garden to fit specific needs. However, for small children; the focus on safety, durability, engagement, learning opportunities, and more, is out of their control. Children only have the opportunity to experience design elements as well as they are executed. The previous factors can make it easy for the consideration of children with mental and physical disabilities to be forgotten about in the design process. The goal of this project is to implement a garden design that encourages children to have a sensory rich experience while playing, and is inclusive of their physical or mental capabilities. The design product reflects the idea of accommodating curiosity, implying that every plant is touchable, explorable, and safe to learn about (with no exception to different learning accommodations and preferences).

‘Discovery Table’

Pictured here is a small perennial cut flower garden, with a table in the middle. The ‘discovery table’ will have attached magnifying glasses, and other exploratory tools so children can inspect their findings freely. There is also a mural added on the shed for visual appeal.

Oak Allée

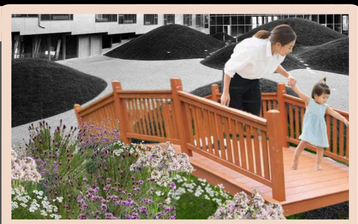
An allée is a garden feature made up of evenly spaced plants in rows and is typically placed along a long driveway or sidewalk. An allee is oftentimes viewed as visual reminder that the journey is oftentimes just as beautiful as the destination. Patterns allow us to convey varying sets of information in a focused and harmonious way.

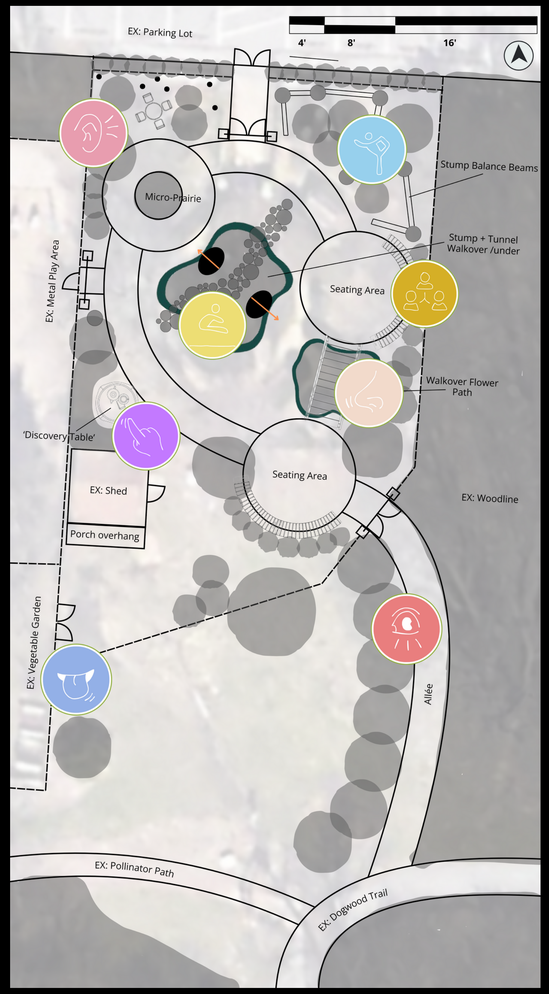
Vegetable Garden

Garden experiences foster ecological literacy and stewardship skills, enhancing an awareness of the link between plants in the landscape and our clothing, food, shelter, and well-being. Here, children have the oppourtunity to collect their own vegetables, and explore it’s taste, smells, and feeling with adult supervision.

Flower Walkover

This walkover path is not only more accessible to mobility devices as opposed to other play areas, but is planted with a variety of fragrant florals with varied and long-season bloom times. This is another area that is meant to slow people down, and encourage you to stop and smell the flowers!





Stumps + Tunnel

The stumps and tunnel structure are designed to not only get children physically interacting with plants, but to encourage the use of body awareness and concious movement - which is an important part of child development.

Tree stump beams

Here, children will improve vestibular balance, movement coordination, and concentration while understanding their body's center of gravity. The balance beam also helps to improve self-confidence, learning stablity and sense of reaction.

Listening Corner

Natural sounds are calming, soothing, relaxing, and melodic. Listening to them is pleasant, and they help us feel better and hear better. This nook is designed to tap into those emotions, with an array of grasses that are meant to rustle in the wind. This will also be the home for a miriade of bird feeders/houses; so that children have the chance to slow down, observe, and listen to what is happening around them.

Seating Area

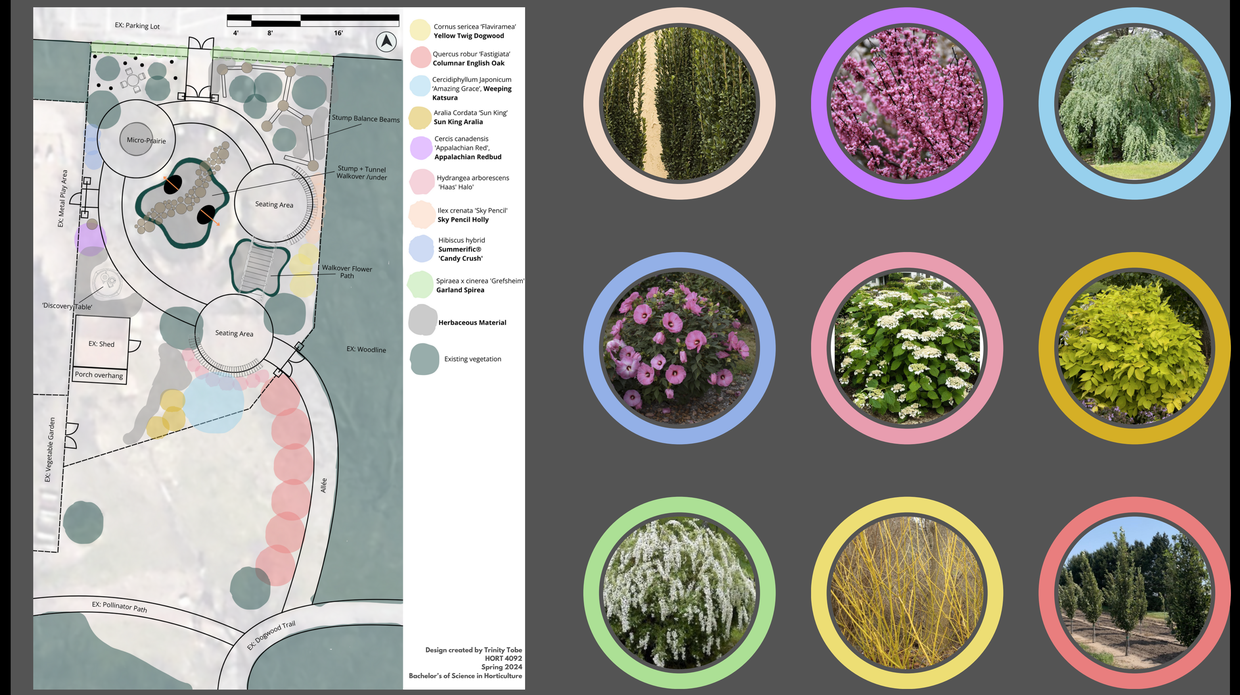
The multiple seating benches throughout the design include adequate space for wheelchair parking, and an open concept to encourage socialization from across any range of the garden. By socializing, children learn to foster empathy, improve language skills, discover the concepts of sharing and teamwork, and grow more confident.

Ballam Bumps Regional Playscape in Australia

Els for Autism Sensory Arts Garden in Florida

Arlitt Nature Playscape in Cincinnati, Ohio

This design was heavily inspured by the Ballam Bumps Regional Playscape, Els For Autism Sensory Arts Garden, and the Arlitt Nature Playscape. The mounding playscape was derived from Ballam Bumps, which uses bumps to add versatility for a variety of age ranges. Els For Autism uses sensory ‘hot’ zones and specifies where to go for both low and high sensory experiences. The Arlitt Nature Playscape uses plants themselves and their natural ability to make sounds and visual effects to explore the senses.



This project is being conducted at the Boone County Arboretum's Children's Garden, which is currently in need of a redesign. Encompassing 121 acres, the Boone County Arboretum is also known as Central Park, and was the nation's first arboretum within an active recreation park setting. (Stone and Selm)

This design includes eight different areas that are dedicated to the eight senses that are important to child development. Typically, only five senses are talked about. So what are the other two?

Vestibular senses are the sensory system that responds to the position of the head in relation to gravity and accelerated or decelerated movement. The vestibular system is the 'dizzy' and balance system. It also integrates neck, eye, and body adjustments to movement.

Proprioceptive senses have to do with the perception or awareness of sensations from the muscles and joints and kinesthesia involves perception of the movement of individual body parts. Kinesthesia and proprioception guide us in understanding where our body is in space.

The plant profile selected is include an array of non-toxic plants; although it is advised that no ornamental plants should be consumed by children and many plants can cause nausea if consumed inappropriately.

This design implores plants that display interest for all four of Boone County Kentucky's seasons. As well as contributing to the sights, smells, sounds, and textures of the sensory garden. Achillea millefolium (Yarrow) for example, is an herbaceous plant with very soft, feathery foliage; as opposed to Rudbeckia fulgida (Black-Eyed Susan), which has a much darker, coarser foliage. Both of these contrast each other, along with the other plants in my design, to provide a more encompassing sensory experience.

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