

Exploring HortPark's Nature Playgarden: Where Children Grow Wild

text by
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Playgrounds provide an environment that helps children develop important cognitive, social and physical skills.

Introduction

Children's playgrounds are found throughout Singapore and typically consist of popular play equipment such as swings, slides, climbing frames and monkey bars. Child developmental research suggests playgrounds provide an environment that helps children develop important cognitive, social and physical skills^{1,2}. Benefits of playground play include honing skills in balance, depth perception, core body strength, hand eye coordination and improved cardiovascular health³. Cognitively, children benefit from practicing perseverance, building resilience, problem-solving and risk assessment⁴. Children also hone their skills in communication, negotiation, patience, empathy and care for others within a shared space^{5,6}. Whilst playgrounds can be either indoor or outdoor, we know both offer (sometimes differing) benefits in terms of tactile and sensory stimuli⁷. Research also suggests that outdoor play improves children's vision and allows children to get enough Vitamin D⁸. Recent studies have further found that the exposure to natural elements, such as biodiverse soil, may play a crucial role in building immunity in children^{9,10}.

A playground without slides and swings

The Nature Playgarden @ HortPark was launched in March 2019 as a part of the National Parks Board's City in Nature vision. Its aim, in part was to encourage children to spend more time outdoors by increasing the diversity of children's play environments and foster stronger connections with nature. The Playgarden juxtaposes typical conceptualisations of children's playgrounds with its distinct lack of man-made infrastructure and notably abounds with nature-based resources, lush trees and open-ended play opportunities. To maximize green spaces for children's wellbeing, landscape architects from the National Parks Board created play spaces where children can connect both with nature and each other. The garden's nine play spaces were curated for various play opportunities including free, imaginative play.



Fig 1.
The Log Valley is a decked-over drain leading to the Secret Den. The play space encourages big physical movements. (Image credit: NParks)



Fig 2.
The Nature Playgarden beckons with a sign that advises one to "Be creative. Take risks, enjoy nature play." (Image credit: NParks)

Visitors to the garden are greeted by a hand-lettered sign re-enforcing the intended use of the space. It reads: *Be creative. Take risks, enjoy nature play.*

Beneath the tall fig trees that shade the Big Fig Adventure, a set of log cookies are arranged in order of height, creating an incline of stepping stones. The tree canopy provides shelter and ensures a steady supply of leaf litter that serves both as a soft layer and loose play material. Nearby, a large pit filled with gravel is novel as it is of a coarser texture not found in most play areas, while the sandpit offers a more familiar option.

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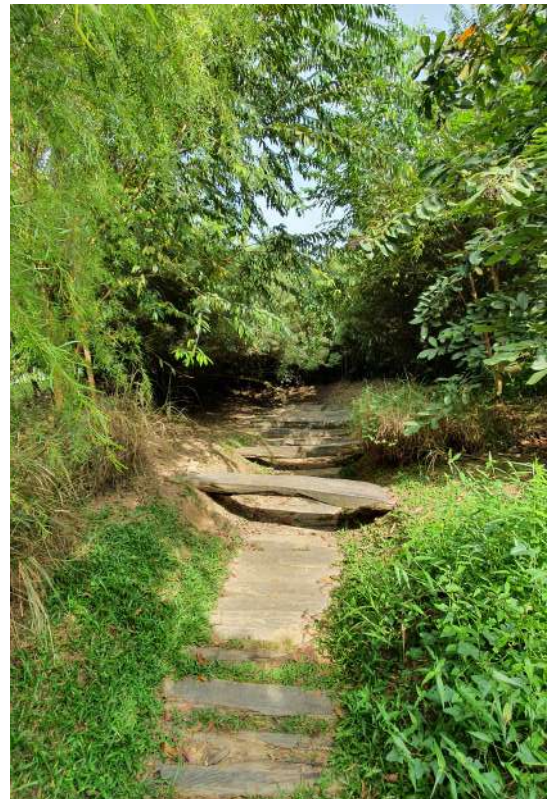


Fig 3.

At The Stream, children can watch how water interacts with their environment. (Image credit: NParks)

Some spaces encourage big physical movements. The Magical Woods contains a tunnel and an original cluster of *Dillenia suffruticosa* which forms a maze. Other spaces are designed with slow play, rest, and retreat in mind. In the Log Valley, wooden logs cover a small drain with planted shrubs on either side. This leads visitors to The Secret Den, a wooden “platform” with bamboo shading a space where one can sit, rest and contemplate.

Some spaces are designed with social and interactive play in mind. The Kitchen Play space includes a wooden table to lay out provisions of loose play materials (rice husks and leca pieces, small clay pellets found easily in gardening supply shops) and small wooden sticks for utensils. A tap installed on hollowed out wooden planks creates a “stream” that allows children enjoy water play.



Top / Fig 4.

The Kitchen Play space is designed with social and interactive play in mind. It includes a wooden table to gather around and lay out loose play materials. (Image credit: NParks)

Bottom / Fig 5.

Wooden logs deck over a small drain and are planted with shrubs on either side at the Log Valley. (Image credit: Jacqueline Chua)

The Singing Seeds play space offers a myriad of musical experiences. A rack of bamboo wind-chimes invites visitors to walk through and mini see-saws or spinning wheels.

The Treasure Trail is a play area tucked to the back of the garden, planted to resemble a small forest. There is signage to help identify species of fruit trees (e.g. *Theobroma cacao*).



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Top / Fig 6.

A bamboo “shelter” provides shade at the Secret Den. (Image credit: NParks)

Bottom / Fig 7.

Beneath the fig trees, a set of log cookie stepping stones are arranged. (Image credit: Jacqueline Chua)

Left / Fig 8.

The Singing Seeds play space offers a myriad of musical experiences, surrounded by lush planting. (Image credit: NParks)

The Importance of Nature Play

Nature-based play spaces, like the Nature Playgarden at HortPark, are growing in popularity around the world. Many children's play spaces incorporate elements of nature in their construction and material choices. Such environments share common elements like natural shelters, rocks, mud, gravel, uneven paths, sand, gardens, trees and bodies of water. Research argues that these types of play spaces result in 'relaxed, focused, engaged, cooperative, creative, nurturing and happy' children¹¹. Natural environments provide a rich setting for children's imagination and fantasy, where exploration and discovery of nature is a significant part of children's play. This in turn fosters learning, curiosity and sustained attention¹².

Research argues that the outdoors offers "rich sensorial experiences to support children's growth and development,"¹³ and that "children should enjoy regular, frequent and meaningful opportunities to play, in a variety of different outdoor spaces including, "field trips to the reservoir or nature reserve"¹⁴. Access to natural environments are believed to enable children to retreat and recuperate from stress, build supportive social networks and increase confidence, have a positive impact on their wellbeing¹⁵.

Not all nature-based play spaces are equal however, according to the literature. One study found that children preferred to play with natural resources that were moveable and malleable, such as sand, soil, and water over fixed natural features such as planting, hard structures or natural surfaces¹⁶.

Such spaces provide not only an opportunity to make individual connections to nature, but also enable safe and productive connections between children and others in the space (including other children, and significant adults in the child's life).

Interestingly, the literature also discusses differences between how adults perceived nature-based playgrounds in terms of things to do and usefulness, compared to children. Aziz and Said (2016, p8)¹⁷ cited Heft (1988) in arguing, "As adults, we perceive the elements in the environment from the point of view of aesthetic values, but children value the elements, either the natural or designed features, from the point of view of "affordances" and "playability" values." They conclude (2016, p18), "For adults, we might perceive the environments as inappropriate for children's play; however, for children, the environments might become among the places that can afford their play. In this context, the children modify the places' functions and their own behaviours to make it suitable for new purposes and make it fit with their needs. Therefore, the environments become a part of their "play" grounds with several affordances".

Adult perception of children's engagement in nature play spaces is significant for two reasons. First, it mitigates children's access. If adults do not see the value in attendance, they are less likely to create opportunities for it to occur. Second, the literature argues for the importance of supportive adults' engagement with children within natural environments in order to enhance children's nature interactions and play¹⁸.

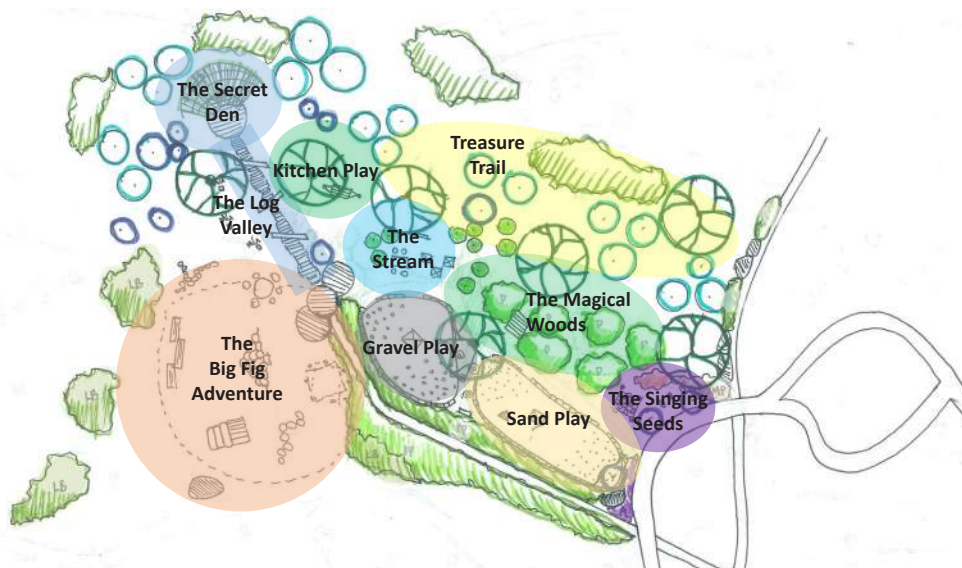


Fig 9.
Map of the HortPark Nature Playgarden and its 9 play spaces.
(Image credit:
Nur Syuhada Limat &
Mukta Kasturia)

Fig 10 & 11.
Intimate spaces within the bigger landscape allow children to regulate their feelings by retreating from busyness elsewhere. (Image credit: Jacqueline Chua)



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Experiencing Play in Nature

The benefits derived from time spent in natural surroundings described in the literature were echoed by participants in a 2019 survey led by NParks¹⁹. The survey consisted of 1054 behavioural observations involving 400 preschool students, accompanied by focus group discussions with 60 educators and parents; and students. The survey in part explored educators', parents' and children's perceptions of the benefits of unstructured nature-based play.

Educators liked how the largely unstructured space meant that children decided how spaces and resources should be used.

“You go to the typical playground (where) everything is well designed for you. But here, it is up to our creativity how we play.” - Educator of 3 to 5 y/o children

“It's more of free play (for children). They decide what they want to do and there are no instructions or rules for them” - Educator of 5 y/o children

Parents agreed.

“It is open-ended and nature based. How they play is not fixed.” - Parent of 3 and 5 y/o children

“Compared to conventional playgrounds, this is actually better. More Nature. It has more variety. Children can think of other ways to play. More open-ended,” - Parent of 3 and 5 y/o children

“I think it's more fun because they can have imaginary play. You can see they were pretending to cook in the hut,” - Parent of 4 y/o child

Parents and educators felt that children played more creatively, communicated more and took initiative in problem solving in spaces designed to be open to interpretation and imaginative play.

“What I really like is that the kids can go in and they are free to explore and they can stop anywhere they want.” - Parent of 3 and 5 y/o children

The lack of prescriptive play equipment meant that children were encouraged to play with elements found in the garden in their own way as their imagination conjured.

“If they want to observe the leaves, we can observe the leaves.” - Parent of 3 and 5 y/o children

However, not all participants in the survey believed that the unstructured nature of the space enabled play to freely occur.

“(The garden) didn’t give any directions. How can they learn anything?” - Parent of 3 and 5 y/o children

“They don’t know what to do. I also don’t know what to do.” - Educator referring to the Treasure Trail

This was coupled with a parental perception therefore that children would not be able to play independently and quickly grow bored, although children themselves did not speak of feeling bored but mostly of discomfort (e.g. too hot, no air-conditioning, creepy crawlies).

“It’s a very nice concept, but maybe something more interactive would be nice. I’m not too sure (my daughter) would enjoy the next few trips. It is just climbing.” - Parent of 3 y/o child

One child’s comment supported this, *“I don’t like the Secret Den because there was nothing to do inside.” - Child, 5-6 y/o*

Despite these comments, there were many examples of children engaging with the garden and evidence of natural elements encouraging sensory play in the space. Tactile engagement with natural resources were most commonly cited within the survey’s findings. Children particularly enjoyed the tactile sensory experience of moving and manipulating malleable resources within the garden such as the sand, gravel, pine bark and soil. This was noted by an educator who reflected on the positive impact on the social dynamics of the group, “There is a lot to explore and children will not fight over limited resources.”

Water was also enjoyed both as a tactile and visual sensory experience and encouraged children to be actively involved in the space. Children used water elsewhere in the space to alter tactile experiences of natural materials like sand and soil, creating mud. One educator of 5-6 year-old children believed the garden encouraged children to “mix different elements together”.

Children also noticed the movement of foliage, small mammals (squirrels) and insects (millipedes and butterflies) found within the garden. Such observations, the survey reported, encouraged children to engage in conversations of scientific enquiry with accompanying adults.

“The children are like little scientists. They are experimenting and trying out different things.” - Educator of 6 y/o children

The importance of understanding nature play

The above findings support claims within the literature that children benefit from access to unstructured nature-based play spaces, like the Nature Playgarden @ HortPark. Most notably is the importance of trusted adults supporting children, making the effort to connect their children with such nature-based play spaces, stepping outside their comfort zones and embracing the possibility of play in new ways.

Where some adults (both parents and educators) did not particularly enjoy the garden or felt they needed more direction to help guide the children’s activities, the literature suggests this may impact children’s own attitudes of the garden. The ways that trusted adults understood and experienced nature-based play can affect children’s ongoing engagement with the space²⁰.

Future research would benefit from further exploration of the impact of parents’ and educators’ hesitancy towards, or lack of knowledge around nature play. Through this understanding we can then move toward encouraging nature-based play. If we can normalise a connection to nature in children’s everyday lives through ongoing supported access to it through our relationships with others during play and learning, the wellbeing of children will improve overall.



Fig 12. Spaces such as the Magical Woods are designed with slower play, rest and retreat in mind. (Image credit: NParks)

Fig 13.

The Log Valley leads visitor to the Secret Den, a wooden platform shaded by tall bamboo where one can sit, rest and contemplate. (Image credit: Jacqueline Chua)



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