

Jacob Ballas Children's Garden

Asia's First Children's Garden

Text by Janice Yau and Winnie Wong Images as credited Designed with an overarching theme of "All Life on Earth
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creative play, within a safe and comfortable environment.

A strong demand for children's programmes in Singapore Botanic Gardens became evident by the late 1990s. Although it was clear that running a children's garden is not without its frustrations and particular challenges, the team at National Parks Board was convinced that a dedicated garden for the children of Singapore would not only be well received, but also provide the boost to fulfil the gardens' mission of connecting children with plants and elevate children's education.

Visits to children's gardens in the US and UK were planned and carried out for the necessary learning experience and knowledge. However, it was only with a major donation from the Jacob Ballas Trust, Dr. Rosslyn Leong, and Reef Holdings that made this dream possible. In appreciation, the garden was named after the late Jacob Ballas (1921-2000), who was a successful stockbroker and philanthropist.

Dedicated to all children, Jacob Ballas Children's Garden is envisioned to create happy memories for children in a fun and wonderful place for the purpose of cultivating awareness and developing appreciation for plants, nature, and the environment—in line with Target 14 of the United Nations' Global Strategy for Plant Conservation (GSPC).

On 1 October 2007, Jacob Ballas Children's Garden opened with a big bang. On the first day alone, it received substantial media coverage and played host to more than 5,000 visitors. Six years on, Asia's first children's garden has seen more than 1.6 million visitors in total.

Highlights at Jacob Ballas Children's Garden

Designed with an overarching theme of "All Life on Earth Depends on Plants", the garden is a destination for children up to 12 years of age to explore, enjoy, and engage in creative play, within a safe and comfortable environment. In their explorations, children can develop a sense of curiosity and wonder and discover how plants provide for their daily needs.

A two-hectare plot of land in Singapore Botanic Gardens was identified and developed. From experience, we know that children learn best when they are having fun. It is through learning of this nature that important lessons remain with the child through his or her formative years, into adulthood.

Thus, the children's garden offers learning opportunities through two broad avenues:

- Informal creative play, exploration, and discovery from the exhibits, interpretative signs, and brochures
- Facilitated learning through organised programmes

Informal creative play

The butterfly form was chosen as a motif in the design of features and interpretative signs in the garden. Besides being beautiful and joyful to look at, butterflies, which undergo a poetic transformation from caterpillars, represent change and new beginnings. To create happy memories around butterflies, plant species that attract butterflies were added to the landscape.

The entrance is marked by a waterplay area with waterjets that can be activated by the touch of a sensor and a sandpit with several play equipment. Beside both are a maze with gates at nine junctions and several tiered-blocks for children to freely rotate and form pictures of plants and animals. The photosynthesis exhibit is an artificial tree with cranks that children are invited to turn to "activate" major elements required in photosynthesis; interpretative plaques explain this process by which plants make food for themselves and other living beings, giving mankind oxygen as a result. These interactive stations allow children to work on their gross and fine motor skills while utilising their imagination, connecting early understanding of concepts through cause-and-effect, all while having fun.





The Fantastic Forest is a place for exploration, adventure, and stimulation. Children walk under overarching fig trees and enter the "forest" by crossing a "wobbly" suspension bridge. Beyond the bridge, young explorers enter a cave, passing behind a waterfall. They emerge to discover a small pond filled with aquatic plants, dragonflies, and other pond animals. Further on, they huddle under an arch of many old, gnarled frangipani trees, planted along a stream. The floating platform at the pond allows children to get up-close with the living pond ecosystem and learn about plant and animal adaptations to water.

Slightly beyond this is a trail along which "mushroom shelters" can be found, where children may be educated on decomposition and nutrient cycling. A favourite destination is the Treehouse, built around several *Ficus benghalensis* trees, with their aerial roots developing supplementary trunks. Eventually this two-level tree house will be completely surrounded by pillar-like trunks, transforming the house into a hidden, magical place. On one side, two slides descend from the Treehouse. On another side, children can climb down (or up) ladders.

In the Sensory Garden, children can touch and investigate plant textures, forms, tastes, and smells. A selection of plants that impact children's everyday life is displayed at Jacob Ballas Children's Garden. They include plants used for dyes, beverages, spices, foods, fuels, and fibre. At the Potting Garden, children are introduced to where their food and everyday items come from, as well as what they look like on the plants before they are harvested for further use.

In another area, epiphytic plants "live on air", while other carnivorous plants "eat" meat. Several visually iconic species were planted, including two species with large and unusual fruits: the Calabash tree (*Crescentia cujete*) and Cannonball tree (*Couroupita guianensis*). Another species that adds to the happy memories is the Saga tree (*Adenanthera pavonina*), which never fails to delight children (and parents) who enjoy picking the hard, bead-like, shiny bright red seeds off the ground.

Facilitated learning

Many children in Singapore have multiple demands on their time today—tuition, music, sports, enrichment programmes, and so on. A result of such hectic schedules is that nature and outdoor play gets relegated to a lower priority in a long to-do list.

"Nature Deficit Disorder" was a term coined by Richard Louv, which describes a condition where a disassociation from nature contributes to a diminished use of the senses, attention difficulties, obesity, and emotional and physical illnesses, which an expanding body of research suggests. Observations through the years have shown that this disconnection from nature is indeed very real. In tropical, humid Singapore, it does not help when the outdoors is perceived as "hot" and playing outdoors tends to make one "sticky and uncomfortable"!

The garden aims to allow learners to delight in the connectedness of the world we live in. Plants connect to not only all subject areas, but also all forms of human experience and expression. According to Kellert's biophilia hypothesis, humans take an instinctive liking to nature. Furthermore, tapping into the restorative powers of nature boosts mental acuity and creativity, promotes health and well-being, and strengthens social relationships and human bonds.

Jacob Ballas Children's Garden also sets out to systematically tackle the misconception of nature and the outdoors with fun, exciting, and engaging programmes. These activities are designed to actively engage learners in sensory, cooperative, and empathetic ways about the environment. The aim of this experiential learning approach is to instill a sense of wonder and appreciation for the natural world and to help learners reconnect with the environment and biodiversity in it.

The garden's initial offering of 21 thematic programmes in 2007 has more than tripled to over 70 different types for children of different age groups and educators. Through more than 750 facilitated programme runs in 2012, Jacob Ballas Children's Garden has directly reached out to more than 34,000 children and their accompanying adults and educators.











- The Jacob Ballas Children's Garden Pond, which is filled with aquatic and semi-aquatic fauna and flora, is excellent for pond life studies and observations (Photo: Singapore Botanic Gardens Education).
- 2. Sandpit with the gondola see-saw in the foreground, a music and sound panel on the left, a satellite dish merry-go-round on the right, and the Party Place in the background (Photo: Benjamin Aw).
- 3. The photosynthesis exhibit, as pictured, is an artificial interactive tree with cranks that children must turn to "activate" photosynthesis (Photo: Winnie Wong).
- 4. Butterflies greet visitors at Jacob Ballas Children's Garden. The butterfly form was chosen as a motif in the design of features and interpretative signs in the garden (Photo: Janice Yau).

- Several tiered, rotating blocks in this corner allow children to match and form pictures of plants and animals that can be found in the garden (Photo: Lim Swee Cheng).
- 6. The floating platform allows children to get up-close with the pond life and learn about their adaptations to water (Photo: Winnie Wong).
- 7. The Treehouse is a hidden, magical place with two slides descending from each of the two levels and ladders for children to climb up and down on the other side (Photo: Winne Wong).
- 8. This "wobbly" suspension bridge is exciting for older children but can be quite challenging for the younger ones (Photo: Janice Yau).

Noteworthy is the "Sara the Botanicosaurus" series of programmes, ships are an effective strategy to push boundaries, to reach out to which begin with children listening to a story, and then participating in a guided walk with Sara and her friends to get up-close with plants importance of plants and tips on how to make green spaces more enjoyable places for plants, animals, and people, the stories also plant action for change. a passion for conservation in our youth.

educational outreach. The garden's programmes complement formal school curricula, especially in reinforcing outdoor and handson learning. Some of the much sought-after programmes, which focus on plants, nature, biodiversity, and the environment, include "Looking at Plants", "Flowers at Work", and "Pond Life". Singapore Botanic Gardens' environmental programmes are also developed and implemented to equip and facilitate learning for older secondary the best children's gardens in Asia. school students

confer the Green Ambassadors Proficiency Badge. Students aged 14 to 15 years old are trained to be Green Ambassadors of Jacob Ballas Children's Garden. They build knowledge and appreciation of green life and give back to the community, and are encouraged to develop various ways. their self-confidence, communication, and leadership skills, which are life skills emphasised by the Ministry of Education. Over 40 girl guides have benefited from this programme since its launch in 2012.

Recognising that educators hold the keys to success in these outreach programmes, training and familiarisation programmes for educators constitute an important strategy for reaching out to students and schools by Singapore Botanic Gardens. These are rewarding investments when trained educators, in turn, pass on the knowledge and Would it not be wonderful if with just a wee nudge on our part, experience gained to their charges.

It is a joy when hard work pays off. In 2011, Jacob Ballas Children's Garden and National Orchid Garden were selected as recommended sites for field-based learning in the new Social Studies syllabus for Primary 1 and 2 levels. In this partnership, National Parks Board supported the Ministry of Education by providing relevant information, facilitating test runs of the finalised field-based learning package, and reviewing students' worksheets for the refined curriculum. Training workshops were conducted for more than 150 teachers in 2012. To date, this new syllabus has impacted more than 7,500 students from 88 primary schools

Whenever events are hosted at Jacob Ballas Children's Garden, a conscious effort is also made to incorporate environment and conservation messages. Likeminded event partners become support systems to spread environmental and biodiversity messages. Partner-

wider audiences, and to boost environmental education programmes with different skills, knowledge, and resources. The ultimate goal is to featured in the storybooks. Apart from educating children on the translate this knowledge into values, build lifelong skills that promote a sense of personal responsibility for the environment, and empower

Every year, the Jacob Ballas Children's Garden Carnival is a fun-filled School children represent a very important audience of the garden's day for the community, and at the same time raises funds for the maintenance of amenities and development of programmes. Marking the fifth anniversary of the garden, the third carnival was held on 18 November 2012, raising funds for the garden's new extension. With this extension, Jacob Ballas Children's Garden will cover four hectares in Singapore Botanic Gardens and enable older children of up to 14 years old to venture into and explore nature within one of

Investing In Man's Future

One example is the collaboration with Girl Guides Singapore to One walking through Jacob Ballas Children's Garden will see a happy place with an abundance of smiles, laughter, and delighted screams. In the past six years since its opening, visitors to Jacob Ballas Children's Garden have given it their endorsement in this and other

To quote William Blake's "To See a World" in Auguries of Innocence:

"To see a World in a Grain of Sand And a Heaven in a Wild Flower, Hold Infinity in the palm of your hand And Eternity in an hour . . . "

children who visit Jacob Ballas Children's Garden are planted with a seed that grows into an appreciation for plants, nature, and the environment? Jacob Ballas Children's Garden serves to be a place for hope and for investing in our future generations. @

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- 9. The fifth storybook instalment in the "Sara The Botanicosaurus" series (Photo: Singapore Botanic Gardens Education).
- 10. The sixth and latest storybook instalment in the "Sara The Botanicosaurus" series (Photo: Singapore Botanic Gardens Education).
- 11. Launched in November 2011, the "Storytime with Sara" series has successfully reached out to over 1,500 young children, between 2 to 4 years old (Photo: Singapore Botanic Gardens Education).
- 12. Green Ambassadors spreading the green message under the Green Ambassador Training Programme (Photo: Winnie Wong).
- 13 "Make A Difference for Wildlife" workshops teach children to respect plants and animals in nature (Photo: Winnie Wong).
- 14. "Creatures in Nature" drama workshops centres on nature and creatures in their natural habitats to develop the character of children (Photo: Winnie Wong).
- 15. Chinese Drama & Art Performances teach children conversational Mandarin in a fun way, using nature- and environmentrelated words, phrases, songs, and nursery rhymes (Photo: Winnie Wong).
- 16. To mark the fifth anniversary of Jacob Ballas Children's Garden, the third Jacob Ballas Children's Garden Carnival was held on 18 November 2012 (Photo: Lim Swee Cheng).