



About Community In Nature

The Community in Nature (CIN) initiative is a national movement to connect and engage different groups in the community to conserve Singapore's natural heritage.

Launched in September 2011, this initiative is aligned with NParks' City in Nature vision and Singapore's National Biodiversity Strategy and Action Plan. CIN brings together all of NParks' nature-related events, activities, and programmes.

Through this, we hope to:

- Connect, educate, and inspire diverse communities to actively conserve and celebrate our natural heritage
- Cultivate champions within the community to protect our natural environments
- Nurture and form partnerships to achieve better biodiversity and social outcomes
- Foster and support community groups and organisations working to reconnect people with nature

One can take things at their own pace, yet have the chance to grow from a casual observer to become a more active participant in acting for our biodiversity. Interested individuals can choose to contribute to any of the three CIN streams – nature education, citizen science, as well as species recovery and habitat enhancement.

To find out more about CIN and our volunteering opportunities, please visit www.nparks.gov.sg/cin, or write to CIN@NParks.gov.sg.

All photographs were taken before the Circuit Breaker or in accordance with prevailing safe management measures.

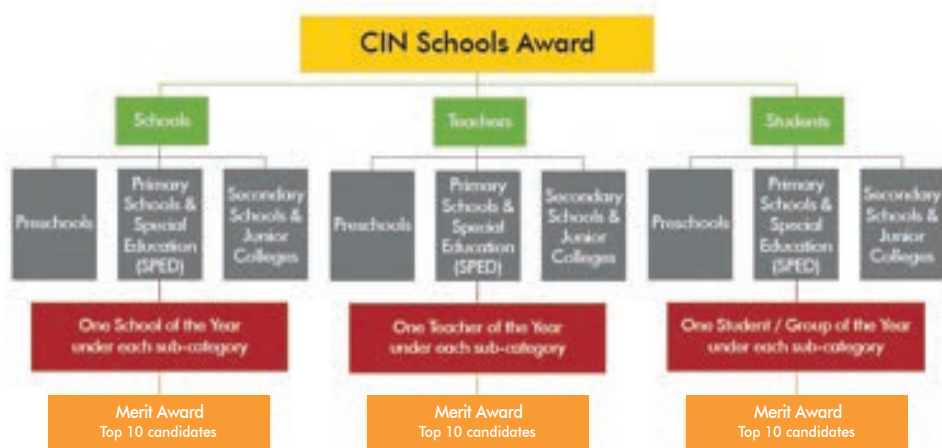
Background

The NParks Community in Nature (CIN) Schools Award is a biannual recognition scheme to acknowledge educational institutions, educators, and students who advocate for the conservation of local biodiversity.

The award aims to:

- Encourage stakeholders from the education sector to take on a more active role to conserve our biodiversity
- Provide a networking platform for educators to exchange biodiversity-related knowledge and experiences

Applicants are assessed based on three main award categories, **Schools**, **Teachers**, and **Students**. Each category is then further divided into three sub-categories, **Preschools**, **Primary Schools & Special Education** and **Secondary Schools & Junior Colleges**. There are two award tiers under each sub-category – Achievement of the Year and Merit award.

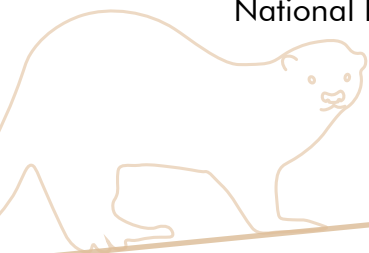


Panel of Judges

The judges for the CIN Schools Award are experts in the fields of education and biodiversity conservation. They come from both the public sector and the nature community. Their diverse backgrounds help enrich the evaluation process while at the same time maintain transparency and objectivity.

Entries were evaluated in two phases by internal and external panellists. Phase One assessments were carried out by judges from the National Biodiversity Centre, NParks. We are extremely honoured to have the following judges represent the Phase Two evaluation panel for the 2022 CIN Schools Award

1. **Mr R. Raghunathan**
Chief Executive Officer, World Wide Fund (WWF)
for Nature Singapore
2. **Dr Vilma D'Rozario**
Director, Singapore Wildcat Action Group
3. **Mr Muhamad Salahuddin Ibrahim**
Master Teacher, Biology
Academy of Singapore Teachers
4. **Dr Adrian Loo**
Group Director, Wildlife Management
Senior Director, Community Projects
National Parks Board
5. **Ms Gina Leong**
Director, Community Engagement
National Parks Board



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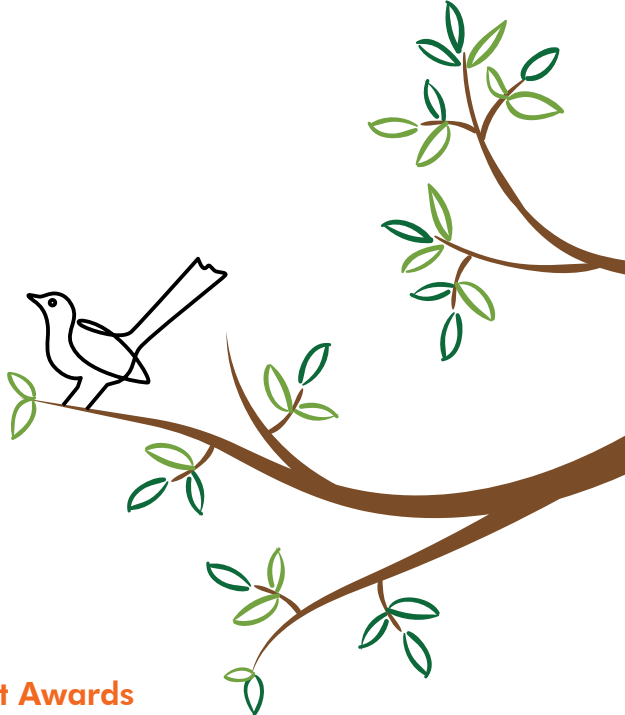
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- 41 Yuvabharathi International School





Teachers

Teacher of the Year

- 45 Ms Fatin Suhaila Binte Omar
Woodgrove Primary School

Merit Awards

- 49 Ms Buanes Wari D/O Vengopal
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50 Mdm Vanishri Shirley
Qihua Primary School
51 Ms Preethi Nair
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Students of the Year

- 55 Si Ling Primary School
57 Commonwealth Secondary School

Merit Awards

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SCHOOLS OF





THE YEAR

Far Eastern Kindergarten

Infusing Biodiversity into the Curriculum

"It is crucial for children to appreciate the beauty of the natural world and experience the joy of its creations. Such love will compel them to exercise more care of the environment instead of abusing the Earth's limited resources." - Mrs Ang-Oh Chui Hwa (Principal)



Students attend an interactive online workshop on sea turtles hosted by NParks.

Green curriculum themes take centre stage at Far Eastern Kindergarten, with the focus on experiential learning in nature across the disciplines of art, mathematics and science. Carried out in the Singaporean context, the lessons learnt are not only relatable but also encourage students to be more observant of the impact of their actions on their immediate environment.

The school's third academic term takes a project approach, with three phases:

Interest – developing a sense of wonder and curiosity towards the topic e.g. through direct observation

Investigation – asking questions and conducting research e.g. performing experiments

Invention – designing activities to raise awareness e.g. putting on a puppet show to champion sea turtle conservation



The Oriental Pied Hornbill surprises all during a birdwatching session.

In 2020, the theme of 'web of life' brought students through different biomes, from land to sea, with fauna such as birds and sea turtles as the topics of interest. Students learnt about the body parts of these animals, their diets and behaviours, as well as their roles in the environment.

In 2021, the theme of 'invisible projects' celebrated less charismatic, but no less important fauna. Students were introduced to insects such as butterflies, which are key pollinators of many plants, as well as common soil inhabitants like worms and microbes, which play major roles as decomposers and nutrient recyclers.



A volunteer from the Bukit Panjang Butterfly Garden shows students a caterpillar.



Students observe pupae after learning about the life cycle of a butterfly.

Far Eastern Kindergarten strongly believes in an immersive education in and outside the classroom. To get closer to nature, the school encourages parents to bring their children to green spaces further afield, such as Pulau Ubin and St. John's Island. Teachers also attend workshops to increase their knowledge on local biodiversity, such as growing biodiversity-attracting plant species. Their next step is to partner nature groups such as the Nature Society (Singapore) and the Herpetological Society of Singapore. By continuing to provide enriching learning opportunities, the school hopes to inspire their young charges to be passionate advocates of our rich biodiversity.

Westwood Primary School

Living and Breathing Biodiversity

"Connecting the young with nature, inspiring them to be nature's custodians who value our natural heritage." - Mrs Naseema Ansar (Lead Teacher, Westwood Primary School)

Interacting with biodiversity is a day-to-day phenomenon that students of Westwood Primary School have come to appreciate and enjoy. From having Science, Social Studies, English and Chinese language lessons that incorporate garden trail activities, to creating a repository of fauna sightings, teachers ensure that the many learning opportunities for students are steeped in biodiversity.



Winners of the 'Appreciating Biodiversity Around Me' contest in September 2020 each walked away with a gardening kit.



Students participate in activities along a garden trail during a Science lesson.

During the height of the COVID-19 pandemic when face-to-face interaction was limited, teachers took to engaging students online through an 'Appreciating Biodiversity Around Me' contest. Students were asked to submit photographs of flora and fauna that they encounter along with a short reflection.

Leveraging on technology, the school also launched a digital version of their annual K2 Outreach Day in 2020. Kindergarten pupils in the vicinity were invited to tour the school virtually, including a segment on their gardens.

As part of the 'Building a Community Nursery' track under NParks' Greening Schools for Biodiversity programme, the school received 30 native plants that students are caring for till of sufficient maturity. Some of these plants, for example, may subsequently be used in reforestation projects. Other external programmes that students have participated in include Conservation International's Mangrove Learning Series and a poster design activity on the theme of 'Restoring the Earth'.



MOE Kindergarten pupils were able to tour the school gardens in 2021 when in-person sessions resumed.



Students repot a sapling into a larger polybag so that it has more space to grow.



Students conduct a fauna survey for BioBlitz for Schools as part of NParks Greening Schools for Biodiversity.

Through a holistic environmental education framework that seeks to nurture a love for nature, the school aims to develop students who both respect and care for the environment.

Check out the Biodiversity@Westwood website here:

<https://sites.google.com/moe.edu.sg/biodiversitywestwood/home>

Kranji Secondary School

Paving the Way for Biodiversity Advocacy

Kranji Secondary School's Applied Learning Programme (ALP), Design Innovation for Sustainable Living, creates interesting opportunities for students by challenging them to design creative solutions to address the needs of users. One such project is the Kranji Marshes Virtual Trail under the NParks' Science Communication for CIN Ambassadors programme.

Developed by the Green Ambassadors under the guidance of ALP teachers and NParks staff, it comes with embedded interactive features and an accompanying activity booklet. Held online, Green Ambassadors were able to facilitate the experience for nearly 70 primary and secondary school students, thereby increasing their awareness of biodiversity.



A student participates in the immersive Kranji Marshes Virtual Trail.



The accompanying Trail activity booklet reinforces learning.

Since 2020, in partnership with Republic Polytechnic, the school has hosted various guest speakers for the 'Living in Harmony With Nature and the Planet Environment Seminar'. Aimed at cultivating environmental consciousness among youths, the seminars seek to highlight the importance of living harmoniously with greenery as Singapore moves towards becoming a City in Nature. Subject-matter experts from organisations like NParks and the Tropical Marine Science Institute covered a range of topics from wildlife management to marine conservation. Over two years, nearly 700 teacher and student participants from more than 30 secondary schools and organisations attended the seminars!



Students work together to assemble a bee hotel.



The assembled bee hotel was installed in the school garden.

In addition, the school taps on programmes offered by community partners to further expose their students to the natural world. For instance, as part of NParks' Greening Schools for Biodiversity, teachers and students established a bee-friendly habitat in the school grounds with pollinator-attracting plants and bee hotels. These support the slew of efforts by NParks to promote the importance of pollinators, tying in with a Planet Environment Seminar on bee conservation where common misconceptions about these insects were debunked.

By taking an innovative approach to biodiversity outreach, the school seeks to nurture thoughtful, compassionate students who have both the environment and community in mind and at heart.



MERIT



SCHOOLS

Agape Little Uni @ Clementi Pte Ltd



Gleaning Lessons from Nature



A student uses a pair of binoculars to observe tiny creatures in the garden.

Teachers and students of Agape Little Uni @ Clementi Pte Ltd can attest to the myriad of teachable moments that nature has to offer. For instance, the sighting of a butterfly in the school's garden led to a student recalling what she had learnt previously about its life cycle. On another occasion, finding an earthworm in the soil was not only an exciting discovery for the students but also an opportunity for the teacher to prompt her young charges to ask thoughtful questions about its role in the garden.

In 2021, the school participated in Green Wave and the Playtime series as part of NParks' Biodiversity Week for Schools. Guided by their teachers, the students planted the butterfly-attracting Red Tree Shrub (*Leea rubra*), bringing them one step closer to fulfilling their aim of creating a butterfly garden in their school.

Through rich learning opportunities in and outside of the classroom, students are able to explore the natural world and be moulded into environmentally conscious citizens.



Students show the newly planted Red Tree Shrubs some tender loving care.

Cherie Hearts @ Charlton Pte Ltd

Promoting Environmental Literacy

Caring for the environment is a core value of Cherie Hearts @ Charlton Pte Ltd, exemplified by their focus on environmental literacy for which lessons are conducted weekly. The impetus to expand their students' knowledge has seen the school involve their students in a variety of programmes, including storytelling sessions using books with environmental themes such as the Playtime and Captain Green series.



Students care for the Mistletoe Fig (*Ficus deltoidea*) under the Green Wave programme.



A teacher conducts a storytelling session with the class using the Playtime activity book from NParks.

The school has also actively participated in NParks' Biodiversity Week for Schools as well as the pilot Community Nursery @ CIN Preschools programme. Under the latter, the school successfully germinated a number of native tree saplings that were subsequently passed to Hougang Primary School for planting out and further care.

With numerous hands-on experiences provided by the school, students not only are able to develop a love for nature but also learn to care for it.



Skool4Kidz Campus @ Sengkang Riverside Park

Incorporating Diverse Learning Experiences

Under Skool4Kidz Campus @ Sengkang Riverside Park's Nature Curriculum, teachers expose students to a wide range of brown, blue and green issues that the Earth is facing. With a garden within their campus, opportunities are also rife for outdoor learning amidst a naturalistic setting.



Students gain an appreciation for ants during a workshop conducted by The Ant Museum and Blossomfoods.



Students dance along to a song about the rainforest during a workshop conducted by the Mandai Wildlife Group.

Whether it is about creatures big and small, or ecosystems as different as grasslands and rainforests, the teachers hope to instil a sense of wonder of our natural world in their students from an early age through myriad activities.

For younger learners, teachers guide them to explore the garden using their five senses. Older students, on the other hand, direct their own learning. On their own, they identify resources in the garden that are relevant to the earlier introduced lesson.



Through play, students learn the different ways in which animals move during a workshop conducted by NParks.

Good Shepherd Convent Kindergarten

Caring for Our Biodiversity

By incorporating environmental education in their syllabus, Good Shepherd Convent Kindergarten aims to create ecological awareness among their students from a young age. For instance, their pre-nursery and nursery students learned more about bees as well as the crucial role they play in the ecosystem as pollinators. Older K2 students, on the other hand, were involved in a beach clean-up that showed them first-hand the threats of marine trash on biodiversity.



Students learn to be more observant of their surroundings through close examination of different types of leaves.



Students work together on the Playtime series activity book provided by NParks as part of its Biodiversity Week for Schools programme.

Whether it is participating in NParks-led biodiversity programmes or those from other partners, teachers guide their students to understand that everyone has a part to play to protect the environment. This sets the stage for forming positive attitudes and mindsets that inspire students to be advocates for change, empowering them to be stewards of nature.

PCF Sparkletots @ Kampong Chai Chee Blk 135



Instilling Environmental Awareness from Young

For the past five years, PCF Sparkletots @ Kampong Chai Chee Blk 135 has been commemorating annual green events such as Green Wave, World Water Day and Earth Day. In the second half of the year, their broad curriculum theme of 'Who Do I Share the World With?' seeks to investigate different environmental themes to educate their students on biodiversity conservation and sustainability.



Students work together to plant a Red Tree Shrub (*Leea Rubra*).



Teamwork makes the dream work!

During NParks' Biodiversity Week for Schools 2021, the school participated in both the Green Wave tree planting and Playtime series. Students from the two levels worked closely together: K2 seniors carried out the planting while their K1 juniors watered these plants. The Playtime activity book 'Bobby and the Lost Seed' served to reinforce their experience, with parents coming on board to support their child's learning. By doing so, the school aims to create a positive feedback loop where everyone learns about and protects biodiversity together.

PCF Sparkletots @ Fengshan Blk 76

Nurturing Nature and Young Minds

Students at PCF Sparkletots @ Fengshan Blk 76 are no stranger to experiential learning. Previous outdoor lessons have seen them do a quick audit of living and non-living things they have observed in their garden, with NParks' Biodiversity Week for Schools 2021 building on that experience.



Students have been monitoring the growth of the Red Tree Shrubs by regularly measuring their height.

For Green Wave 2021, the school planted two Red Tree Shrubs (*Leea rubra*), a species that attracts both birds and butterflies. Teachers also guided students in follow-up activities such as learning about the different parts of a plant as well as its uses.

The Playtime activity book 'Bobby and the Lost Seed' also served to emphasise the importance of caring for plants, with students subsequently doing a short role-play of the story.

Through these experiences, the school hopes to both nurture nature as well as the young minds under their care to develop a love for our natural heritage.



Students classified elements in their garden during an introduction to gardening by NParks' Community in Bloom.

PCF Sparkletots @ Woodgrove Blk 571B



K2 students created a backdrop made out of repurposed materials to celebrate Biodiversity Day.

Celebrating Biodiversity

Biodiversity Day 2021 was celebrated across the levels at PCF Sparkletots @ Woodgrove Blk 571B, with each doing something different. From caring for plants, appreciating the Sun for her life-giving rays, to looking at pictures of the different pigeons found here, the activities sought to raise students' awareness of the importance of caring for the Earth in order to support biodiversity that all life depends on for survival.



Infant care students examine their surroundings using binoculars made out of decorated toilet roll cores.



K1 students clean up oil during a simulated oil spill, learning first-hand about the threats to marine animals.

Through various multi-disciplinary activities offered by the school, students are able to acquire newfound knowledge and experiences of the natural world, thereby fostering a love for nature.

PCF Sparkletots @ Sengkang North Blk 298B

Developing Learners with a Caring Heart

From March to November 2021, teachers from PCF Sparkletots @ Sengkang North Blk 298B rolled out their Innovation Project entitled 'Caring for Our Biodiversity: Local Plants and Local Animals in Our Community'. Focusing on one topic per month, students' introduction to biodiversity included how to identify some local animals, their characteristics, and proper etiquette when encountering them in the community. ICT elements, such as QR codes and videos, were incorporated into the lessons to enhance the learning experience.



On walks outdoors, students are given a magnifying glass to better observe the biodiversity around them.



Students participate in 'Colour That Local Animal', featuring the Common Myna.

Pre- and post-lesson quizzes that assessed students' understanding showed a marked improvement in biodiversity knowledge among the students.

Through this learning journey, teachers also gained new insights into Singapore's natural heritage in the course of familiarising their students with native biodiversity. The simple yet thoughtful activities provided an invaluable opportunity to immerse students in the natural world, allowing them to forge a personal connection with it as well as develop in them a caring heart for nature.

PCF Sparkletots @ Toa Payoh East Blk 45

Discovering Biodiversity Around Us

At PCF Sparkletots @ Toa Payoh East Blk 45, a Discovery of the World learning centre is a prominent part of their classroom. For over a month in 2021, students learnt how to be responsible 'pet' owners by taking care of a Lime caterpillar. Not only did they learn about the life cycle of a butterfly, but they also had the opportunity to observe its major life stages first-hand.



The Discovery of the World learning centre is adorned with colourful, informative signs and observational tools to aid students' learning.



Students follow Bobby and Stella's adventures in the Playtime series activity book.

Books also offer students a rich way to learn about the natural world. During NParks' Biodiversity Week for Schools 2021, K1 and K2 students learnt about Singapore' biodiversity as well as engaged in the interactive activities in the Playtime series activity book 'Bobby and the Lost Seed'. The story also prompted them to share their prior experiences with how a seed grows into a plant.

These avenues are some of the meaningful ways in which the school encourages students to learn more about the world around them, thereby cultivating the next generation of nature stewards.

PCF Sparkletots @ Changi Simei Blk 131

Going Green



Students capture what they have learnt in simple text and illustrations after reading 'An Adventure in a City in a Garden'.

In 2020, PCF Sparkletots @ Changi Simei Blk 131 embarked on an Innovation Guidance Project with the theme 'Our City in a Garden'. Through this project, students learnt about the different types of native flora and fauna as well as the importance of conservation and ecosystem restoration to mitigate the effects of climate change in Singapore.

By learning through exploration, the school aims to mould its young charges into learners with a caring heart for nature.



A teacher conducts a storytelling session on 'An Adventure in a City in a Garden', one of the NParks publications for young learners.



Students follow Peeky the Pangolin on his adventures to learn about Singapore's wildlife.

Ai Tong School

Learning from Nature

To improve the physical environment to support Science lessons and encourage self-exploration by students, Ai Tong School embarked on greening their school grounds. In addition to their original Outdoor Educational Learning Garden, an ECO Garden and a Secret Backyard now provide more opportunities for outdoor education.

Aside from school-led programmes, students have also participated in activities by community partners to learn more about biodiversity, such as assembly talks by NParks and the Waterways Watch Society.



Located on the third level, the Secret Backyard is equipped with a hydroponics greenhouse and an aquaponics system.



Students learn about marine conservation at the Lee Kong Chian Natural History Museum under the HSBC Marine Protection Programme.

To increase access to biodiversity, plans in the pipeline include developing a butterfly garden in the school grounds, organising a nature photography competition, as well as training Green Leaders to conduct garden tours.

Through purposeful and directed learning, the school hopes that each and every student cares for the environment as a way of life, in order to preserve the natural environment for present and future generations.

Anderson Primary School

Acting for Biodiversity



GAIA Club students conduct a biodiversity audit under the guidance of their teacher.

For nearly five years, Anderson Primary School's Green Activists in Anderson (GAIA) Club members have been meticulously documenting the wildlife in their school under the NParks' Greening Schools for Biodiversity programme. They also participated in Green Wave during the NParks' Biodiversity Week for Schools, planting the biodiversity-attracting Red Tree Shrubs (*Leea rubra*) in the school.

Over three months, Primary 1 and 2 students received outdoor education lessons under the Programme for Active Learning (PAL). Activities from the Young Botanist Programme by the Singapore Science Centre were integrated into the lessons.

Students have also been introduced to the mangrove and marine ecosystems. For the latter, broader conservation issues such as the impact of plastic pollution on marine biodiversity were shared through the Keppel Green Seeds Plastic Programme.

The school's commitment to acting for biodiversity is demonstrated not only in its vision and mission in environmental education, but also in the dedication of its teachers to continually involve students in myriad learning opportunities to expand their horizons.



Students measure the length of leaves in the school garden during an outdoor PAL lesson.

Canberra Primary School

Having a Heart for Nature

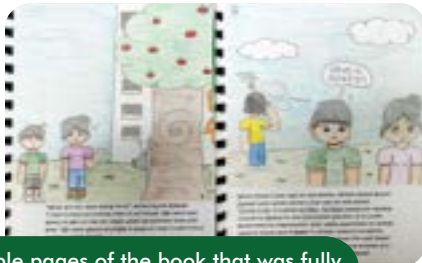
From writing nature news bulletins, birdwatching, to setting up a biodiversity-focused learning trail, teachers at Canberra Primary School engage their students in learning more about our natural heritage in diverse ways.



Students participate in a birdwatching session in their school compound, as part of a workshop conducted by the Nature Society (Singapore).

Even though physical participation in activities such as NParks' Greening Schools for Biodiversity (BioBlitz for Schools and Building a Community Nursery) were not possible due to the prevailing COVID-19 restrictions, teachers turned to virtual lessons to make sure that their students would not miss these learning opportunities.

Under the Global Sustainable Development programme, students created a book and skit on human-wildlife interaction using the design thinking framework. The book seeks to educate others on how to respond appropriately when wild animals are encountered, particularly wild boars.



Sample pages of the book that was fully written and illustrated by the students.



Teachers pose together with the native tree saplings prior to repotting them into bigger polybags to promote growth.

Through these varied ways in engaging with biodiversity, the school hopes to grow in their students the passion for conservation as well as encourage them to raise awareness of green issues in the community.

Greendale Primary School

Eco-consciousness Through the Head, Heart and Hands

Greendale Primary School is green not just in name, but also in their mission in environmental education. Guided by their motto of building an eco-conscious culture in the school through the 3Hs – Head, Heart and Hands, teachers actively involve students in a variety of programmes to expand their knowledge of biodiversity. These include an eco-garden trail in the school for Primary 3 and 4 students to learn more about plants, and a virtual learning trip to Sungei Buloh Wetland Reserve to introduce Primary 6 students to the mangrove ecosystem.



Environmental Club students repot native tree saplings — grown from seed at home — and move them to a purpose-built Community Nursery.



Primary 3 and 4 students carry out spore and leaf printing, as part of activities in an accompanying eco-trail booklet.



Students plant pollinator-attracting species around the school field as part of efforts to increase biodiversity.



Students insert aquatic plants into a floating wetland to enhance their pond habitat for dragonflies.

The school also taps on programmes offered by community partners such as NParks and the Nature Society (Singapore), to increase students' exposure to the natural world.

To create an even more conducive setting for learning, future plans include planting up a new plot each year – for the next five years – with biodiversity-attracting plants, which will see the school being increasingly transformed into a wildlife-friendly habitat. Through experiential learning for biodiversity, the school hopes to nurture environmentally aware students who are passionate about nature conservation and stewardship.

Hougang Primary School

Leading the Way in Conserving Our Natural Heritage

With environmental education fully integrated into its curriculum, Hougang Primary School students are immersed in learning about the natural world from the outset. The school offers a differentiated syllabus under their Life Science Enrichment Applied Learning Programme with each level focusing on a particular topic for the year. The school has also partnered with the Nature Society (Singapore) for their Every Singaporean a Naturalist programme, allowing Green Club members to pick up identification skills of selected fauna and flora groups.



Students transplant the Katong Laut saplings that were grown by children from Cherie Hearts @ Charlton.

A strong believer in working with community partners, the school joined hands with Cherie Hearts @ Charlton, supporting the pilot NParks' Community Nursery @ CIN Preschools programme. The native Katong Laut (*Cynometra ramiflora*) tree saplings germinated by the preschoolers were passed to Hougang Primary School for their further care.



An Orange-winged Resin Bee takes up residence in one of the bee hotels.

In 2021, to create a bee-friendly environment, the Green Club members set up bee hotels in their garden. They did not have to wait too long – after much anticipation, they welcomed their first bee hotel resident, an Orange-winged Resin Bee (*Megachile fulvipennis*)!

Through a strong foundation in environmental education and long-standing partnership with stakeholders, the school aims to encourage a passion for biodiversity in their students, moulding advocates for the environment who themselves lead sustainable and green lifestyles.

Mee Toh School

Connecting With Biodiversity in Diverse Ways

Mee Toh School's Applied Learning Programme in Environmental Education, A3 Eco-Citizens@MTS, engages their students in experiential learning to seed compassion for the environment. This is conducted through Interdisciplinary Project Work and Values in Action projects. For instance, Primary 2 students observed a butterfly's life cycle to ignite curiosity about the natural world. On the other hand, Primary 3 to 6 students took turns to explore the Eco-garden to obtain quantitative data – such as temperature and amount of light in the habitat – for scientific analyses, allowing them to explore factors that may contribute to the biodiversity documented there.



Students explore an Eco-trail in their school using the interactive Trail Shuttle app loaded onto iPads.



Students document the flora and fauna found along the school's Eco-trails.

By involving their students in diverse learning opportunities, the school enables students to make meaningful connections between what they have learnt in relation to the environment, thereby creating opportunities for them to solve real-world problems.

To further expose their students to biodiversity, the school also actively participates in programmes offered by community partners, such as NParks' Biodiversity Week for Schools and the Nature Society (Singapore)'s Every Singaporean A



Nature Lovers Club students research interesting facts about biodiversity to add to their padlet wall.

MINDS Woodlands Gardens School

Forging Meaningful Connections With Biodiversity

Teachers at MINDS Woodlands Gardens School have long been looking to nature to enrich the lives of their students, through the boundless lessons it offers. Since their reading programme was rolled out in 2016, books on flora and fauna have been a mainstay. This is complemented by weekly half hour lessons during which teachers cover topics in biodiversity that correspond to specific events, such as World Water Day in March and Earth Day in May. Students also attempt simple online games and quizzes that increase their awareness of biodiversity.



A student measures the height of a sapling to track its growth. Data is collected monthly and logged into an inventory for monitoring purposes.

In addition, the school taps on external resources to increase their students' exposure to biodiversity. They have actively participated in NParks programmes such as Greening Schools for Biodiversity, Biodiversity Week for Schools (Playtime Series and Green Wave), and the OneMillionTrees movement.



The nursery area for the saplings in the school grounds.

Under the 'Building a Community Nursery' track of the Greening Schools for Biodiversity programme, in support of the OneMillionTrees movement by NParks, the school is caring for 30 native tree saplings. Once they grow to a certain height, they will be transplanted into nature areas island-wide. Guided by their teachers who had received prior training from NParks, students are responsible for caring for each young plant assigned to them.

Through its curriculum of environmental education, the school hopes that its students will be able to forge meaningful connections with biodiversity and also take responsibility for its preservation through collective action.

Raffles Girls' Primary School

Drawing Lessons from Nature

Caring for the environment and turning to the natural world as a third teacher are two tenets of Raffles Girls' Primary School's Environmental Policy. In 2020 and 2021, these were put into practice under the Values in Action programme. Primary 6 students were first engaged in a series of lessons on environmental conservation and biodiversity protection. They were then tasked to share what they had learnt with their Primary 1 juniors, obtaining an increased awareness of green issues in the process through their involvement.



Primary 6 students designed their own hour-long outreach programme on green issues for their Primary 1 juniors that included skits, games, and crafts.



Blood flowers (*Asclepias curassavica*) attract butterflies and beautify the school.

To expand their students' knowledge of biodiversity, the school has also actively participated in external programmes such as Green Wave and BioBlitz for Schools under the NParks' Biodiversity Week for Schools. Students from all levels learnt about biodiversity in Singapore and in their school – the latter encompassing commonly sighted birds and herbs in the garden. Teachers created e-learning resources, including a quiz for students to enrich their learning as well as a call-to-action pledge to raise awareness of how simple changes in lifestyle habits can help to protect biodiversity.

Students from Primary 4 to 6 were involved in the BioBlitz, putting their newfound identification skills to the test by conducting surveys for birds, butterflies and plants in the school grounds. Even after the event had ended, students would still recount sightings of sunbirds and various species of butterflies to their teacher-in-charge!

By providing quality environmental education, the school hopes to equip its students with values and skills to take ownership of conserving biodiversity for current and future generations.

Telok Kurau Primary School

Creating a Butterfly Effect for Nature Advocacy

Butterflies, such as the Lime (*Papilio demoleus malayanus*) and Plain Tiger (*Danaus chrysippus chrysippus*), thrive in Telok Kurau Primary School's butterfly garden. Go Green Ambassadors (GGAs) feel a strong sense of ownership towards the garden, readily checking on and caring for the plants.

To allow others to gain a close-up look at the life cycle of these insects, GGAs – together with their teachers – collected caterpillars and pupae to gift eight nearby preschools. They also shared with the adopters some tips on how to care for them.



GGAs prepare mulch from dried leaves for the butterfly garden.



A student snaps a photo of a caterpillar in the butterfly garden.

The school curriculum also incorporates environmental education into its lessons. For instance, lower primary students are given a hands-on introduction to biodiversity via outdoor education under the Programme for Active Learning. In addition, the school taps on resources offered by community partners, such as the NParks' Roving Biodiversity Exhibition banners, to extend students' learning.

With a mission to promote quality environmental education, future plans include strengthening student advocacy for nature by building on the strong foundation that they already possess. One such plan is to train GGAs to better reach out to the wider community such as hosting preschoolers for a workshop on the life cycle of butterflies, and even creating virtual tours of their garden.

Qihua Primary School

Developing a Love for Biodiversity

At Qihua Primary School, students are exposed to brown, blue and green issues as part of school-wide environmental education. For instance, their food waste digester has allowed them to drastically reduce the amount of food wasted, with the 'black gold' being returned to the Earth to nourish their plants.

To better expose students to biodiversity, the school has also actively participated in programmes offered by NParks such as Biodiversity Week for Schools and the Roving Biodiversity Exhibition. Green Club members have also worked closely with NParks staff to identify as many plants as possible in the school, with the aim of labelling each for educational and outreach purposes.



The River Tarennia (*Tarennia fragrans*), a bird-attracting plant, was planted during Green Wave 2021, to complement the existing flora.



The Giant Milkweed (*Calotropis gigantea*) is one of several biodiversity attracting plant species in the school.

Through environmental education, the school hopes to mould curious learners into innovative leaders and sustainability champions who strive to enact positive change in the world.



Students take care of plants in the garden.

Queenstown Primary School

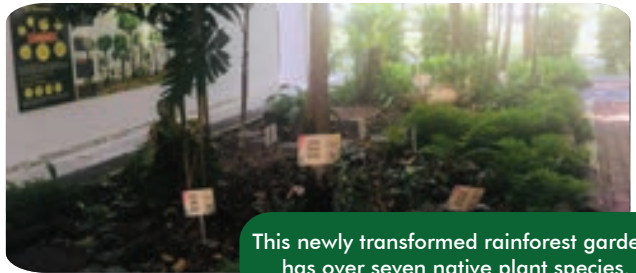
Nurturing Eco-stewards

Through their holistic Applied Learning Programme, Environmental Project-based Learning @ Queenstown Primary School (E-PBL@QtPS), the school is nurturing environmentally literate students who are knowledgeable about brown, blue, and green issues. Comprising two tiers, the first leverages school- and level-wide programmes to educate students on topics such as wildlife and forest conservation, in addition to global warming. In the second tier, student leaders embark on environmental projects within and beyond the school in collaboration with external stakeholders.



Primary 4 students learn about the importance of trees and local efforts to conserve them under the E-PBL@QtPS on forest conservation.

With both physical and learning environments that seamlessly complement the E-PBL, students are able to grow into stewards of nature who are not only well-informed about environmental issues, but who are also ready to take action for positive change.



This newly transformed rainforest garden has over seven native plant species.

In order to create more conducive green spaces within the school grounds for field studies, a team of teachers, through consultation with a plant expert, have transformed previously empty plots into thriving habitats that present exciting new learning opportunities for students.



Students attend monthly lessons on the diversity of plants conducted by a plant expert.

Admiralty Secondary School

Green Actions Speak Louder Than Words

Wanting to further their greening journey following the establishment of their school garden in 2019, Admiralty Secondary School joined the NParks' Greening Schools for Biodiversity programme in 2020. Together with the school's gardener, students from the Environment Club planted nearly 40 biodiversity-attracting plants and also help to care for them. Guided by their teachers, students noted down observations of fauna visitors to their school that will be incorporated into a biodiversity trail in the near future.



Students make stem cuttings of plants.



Students propagate plants together.

To further expand their knowledge of biodiversity, the school took part in NParks' Biodiversity Week for Schools where BioBlitz for Schools and Green Wave tree planting were carried out. In addition, the school hopes to tap on the garden to offer horticultural therapy for at-risk students. Teachers can also tap on the garden as a resource for teaching and learning, such as lessons on plant biology.

By actively engaging students in green activities, the school hopes to empower them with the environmental awareness to enact positive change within and beyond the school for both biodiversity and the community.

Commonwealth Secondary School

Transforming into a School in Nature

Biodiversity is well-infused into Commonwealth Secondary School's (CWSS) curriculum.

With its seven eco-habitats that function as outdoor classrooms, there are manifold learning opportunities across all the subjects taught, be it languages, the arts, or sciences.



Geography students learn about forest structure and adaptations of these plants in the Rainforest eco-habitat.

Outside of the curriculum, Eco Club members gain further exposure to biodiversity. For instance, they have propagated native forest plants in support of the OneMillionTrees movement by NParks, and also participate in learning journeys.



STEM Elective students work in their school's newly constructed Plant Nursery every Thursday.

The zest for lifelong learning is also strongly embedded in the school's DNA, forming the foundation of their non-examinable STEM (Science, Technology, Engineering, Elective and Mathematics) Elective that has environmental sustainability at its core. Focused on experiential learning, students are engaged in various learning experiences that include mentoring by industry practitioners and subject matter experts. In addition, to tackle real-world issues, students are challenged to come up with creative and innovative prototypes.

With 13 years' worth of experience in environmental education, the school has its eye set on even greater heights by transforming into a School in Nature, guided by the five pillars of its CWSS Green Plan. For a Sustainable Singapore, CWSS seeks to nurture stewards of the environment who are empowered to make a difference, both in the school and wider community.

Clementi Town Secondary School

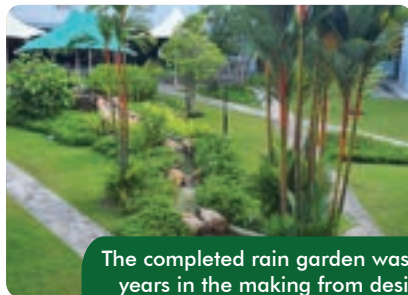
Moulding Green Leaders

Since 2009, Clementi Town Secondary School has been actively participating in the annual Green Wave tree planting, demonstrating its commitment to the environment. Adaptability, self-discipline, perseverance, integrity, respect and empathy are six values that the school aspires towards in their journey to protect the environment, led by an Environment Committee that plans and oversees programmes, projects, and events.

In addition, the school recently unveiled a newly constructed rain garden that boasts different types of plants. Functioning as a living classroom, it allows students to better understand the processes of water purification and the impacts of climate change on the environment.



The rain garden has informative panels on its features, such as the variety of flora found within.



The completed rain garden was two years in the making from design conceptualisation to construction.



Teachers and students plant a Seashore Ardisia (*Ardisia elliptica*) during Green Wave.

To enrich students' learning, the school taps on resources offered by community partners, including the NParks' Roving Biodiversity Exhibition, as well as the 'Living in Harmony With Nature and the Planet Environment Seminar' by Kranji Secondary School and Republic Polytechnic.

By championing a holistic environmental education programme, the school aims for its teachers to be committed role models who involve and lead students to become responsible and proactive advocates empowered to protect the environment.

Kent Ridge Secondary School

For Students, by Students

For the Secondary 3 Kent Ridge Secondary School students in the Science Talent Development Programme, participating in NParks' Greening Schools for Biodiversity is an avenue for them to give back to the school and community while applying what they have learnt. This is in line with the overall mission of the school's Science department that seeks to develop students who care for others and the environment by working together to create solutions to real-world problems.



Students compile a list of flora and fauna to feature in their guided tour.



Top-down view of the butterfly garden in the school.

For instance, having observed that butterflies in their school may have come from the adjacent West Coast Park and Clementi Woods, students decided to start a butterfly garden to create a linkway to improve connectivity between these two green spaces.

Through environmental education, the school aims to develop in their staff and students a good awareness of the habits and green efforts needed for environmental protection and biodiversity conservation. In 2022, the school will infuse a topic on ecology into the Science curriculum to broaden students' knowledge of biodiversity.

Check out their butterfly garden website here:

<https://sites.google.com/moe.edu.sg/krss-butterfly-garden/home>

Marsiling Secondary School

Creating a Biophilic School Environment



The Plain Tiger butterfly (*Danaus chrysippus chrysippus*) is one such fauna visitor that the school has welcomed.

The school also plans to leverage on the new Secondary 2 Science syllabus on 'Ecosystems' to teach students how to identify various species of flora and fauna within the school grounds.

The school also works with community partners such as NParks to increase their students' exposure to biodiversity through active participation in various meaningful activities.

By connecting with the innate biophilia within everyone, the school believes that biodiversity outreach can be used as a vehicle to effect positive changes in students' attitudes and behaviours, enabling them to become responsible advocates of the environment.

Biodiversity continues to be a part of Marsiling Secondary School's environmental education outreach to raise awareness and appreciation of the natural environment. This is exemplified through various school-led initiatives including greening the school grounds with biodiversity-attracting plants, which has allowed them to welcome fauna visitors such as butterflies, bees and birds. For instance, the school introduced a 'Butterfly Landscape' as one of the green learning infrastructures within their Applied Learning Programme and Science curriculum.



In support of the OneMillionTrees movement by NParks, students planted trees at Woodlands Waterfront Park.



Students dissect a squid during a workshop conducted by Young Nautilus to learn about its anatomy in relation to the marine ecosystem it lives in.

Yuvabharathi International School

Creating Fauna-friendly Habitats

Yuvabharathi International School has been creating and increasing awareness of local biodiversity among their staff and students by actively participating in environmental education programmes. Under the NParks' Greening Schools for Biodiversity programme, to encourage bees to visit, students installed a bee hotel in the school grounds under the guidance of their teachers. Bees complement the frequent bird and butterfly visitors that the school already receives owing to their previous greening efforts with biodiversity-attracting plants under the same programme since 2015.



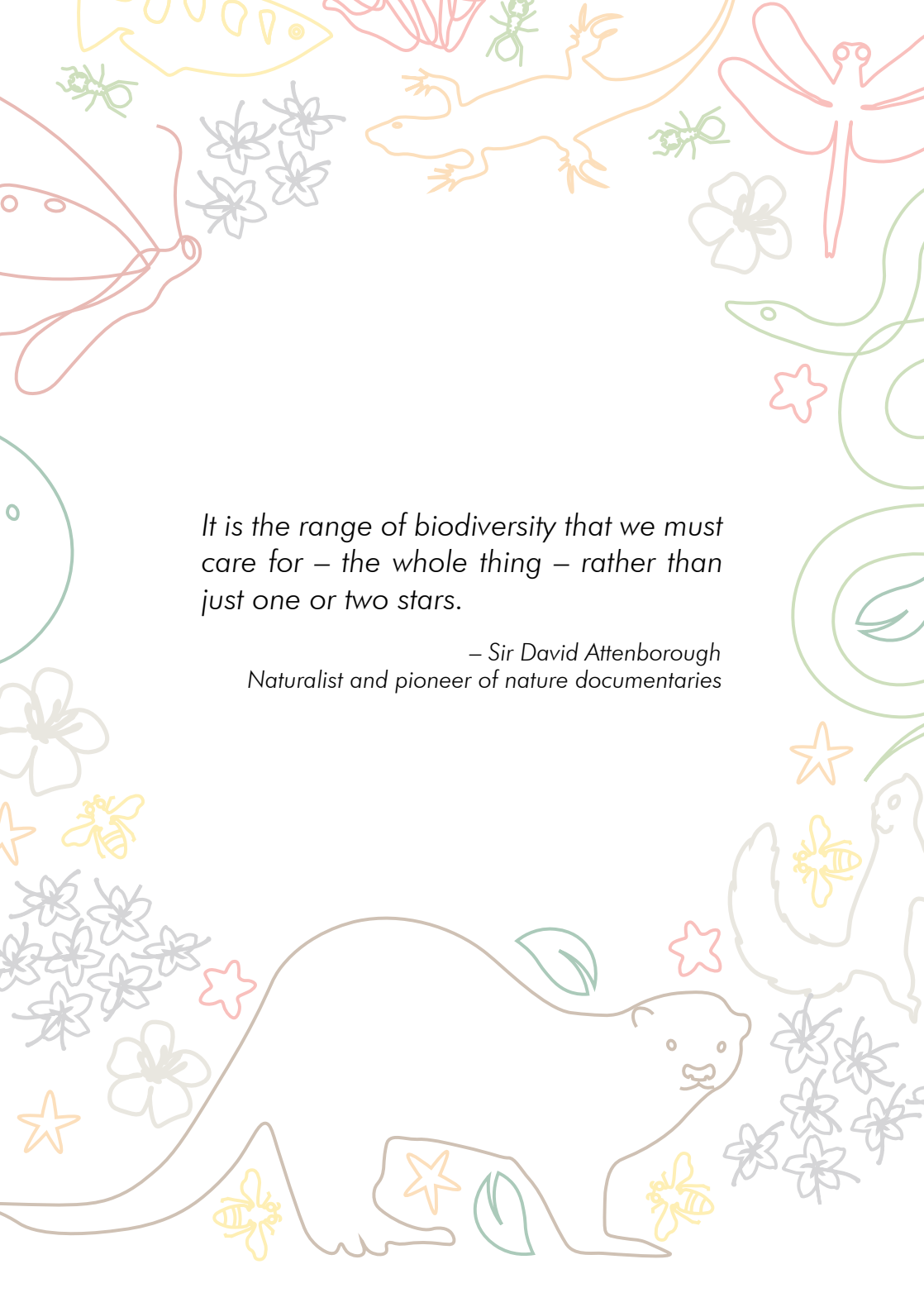
Students water native tree saplings in the community nursery.



Students regularly monitor the bee hotel to record signs of activity.

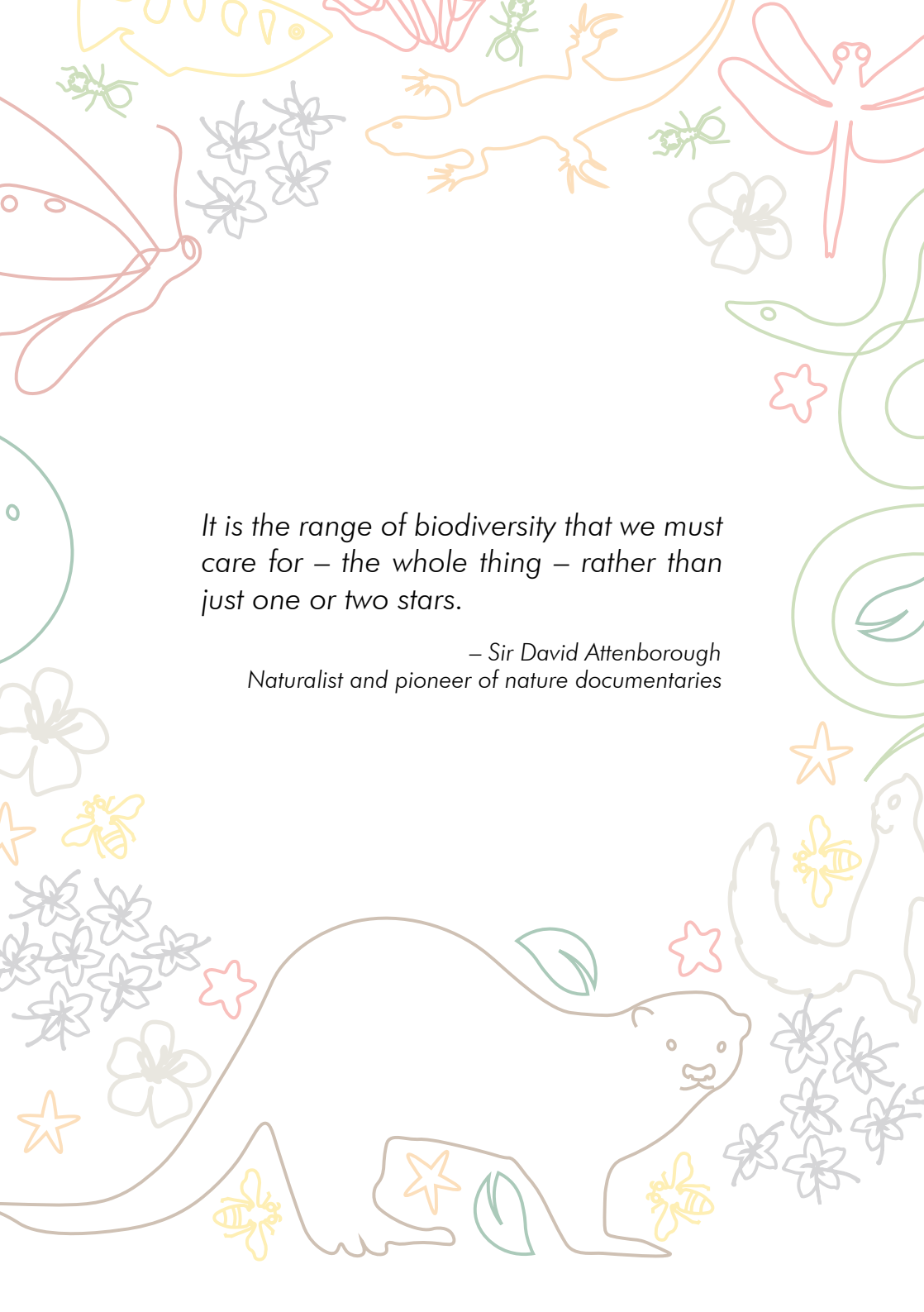
In addition, the school adopted 30 native tree saplings under the 'Building a Community Nursery' track of the Greening Schools for Biodiversity programme, in support of the OneMillionTrees movement by NParks.

By creating awareness of biodiversity conservation from a young age, the school hopes to develop in their students a love for nature as well as the capability to protect it for future generations to come.



It is the range of biodiversity that we must care for – the whole thing – rather than just one or two stars.

– Sir David Attenborough
Naturalist and pioneer of nature documentaries



It is the range of biodiversity that we must care for – the whole thing – rather than just one or two stars.

– Sir David Attenborough
Naturalist and pioneer of nature documentaries

TEACHERS





OF THE YEAR

Woodgrove Primary School



Ms Fatin Suhaila Binte Omar

Subject Head for Science
Green Work Team overall in-charge

"Learning about biodiversity conservation raises awareness on the importance of ecosystem services around us. Armed with this knowledge, I hope students will have a deeper perspective of the 4R approach to reduce, reuse, recycle and rethink and then, create a ripple effect such that as a society, we will be stewards of this fragile Earth." – Miss Fatin Suhaila Omar (Teacher, Level Head/Science)

As the Subject Head for Science and the overall in-charge of the Green Work Team, Ms Fatin Suhaila Binte Omar co-conceptualised a whole-of-school biodiversity programme. The programme focuses on the expansion of green spaces in the school grounds to serve as outdoor classrooms. This creates a more conducive setting for biodiversity to be integrated into the curriculum.

The biodiversity programme was carried out in three phases from 2020 to 2022:

Phase 1 (2020) – Integration of biodiversity into the Art and English curriculum

Phase 2 (2021) – Expansion of green spaces, including a purpose-built nursery

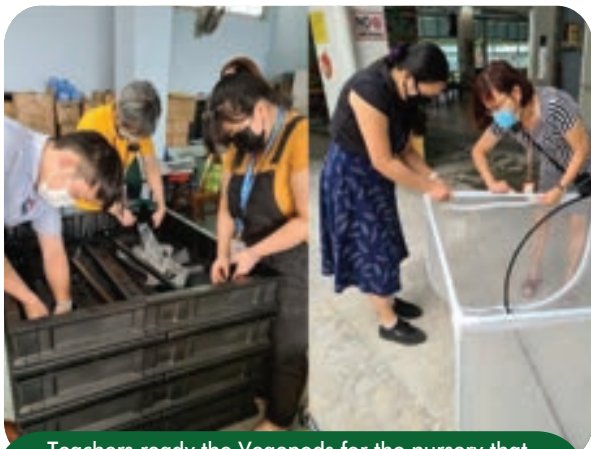
Phase 3 (2022) – Giving back to the community via a Values in Action activity under the Green Club



The Art department organised an exhibition of students' works on how water pollution impacts marine biodiversity.

Walking the talk, she also encourages administrative staff to purchase school supplies that are certified to be greener, and for organic mulch to be used in the garden in lieu of chemical fertilisers.

In addition, Ms Fatin and her colleagues constantly look out for external opportunities to actualise their whole-of-school green vision. These include programmes for students such as NParks' Greening Schools for Biodiversity, as well as grants like the NParks' Skyrise Greenery Incentive Scheme 2.0 and the North West GIRAFFE Fund.



Teachers ready the Vegepods for the nursery that was built to raise awareness of the importance of food security, which is threatened by global biodiversity loss.



Biodiversity-attracting species were planted in the school garden to enhance the habitat for fauna visitors, creating a more conducive space as an outdoor classroom.

Ms Fatin believes that environmental education is not only a cornerstone of moulding students who shine as learners, contributors, and leaders, but also essential to empowering fellow teachers. By equipping them with the skills and know-how in sustainability, she and her team seek to empower eco-stewards who are able to connect how tackling brown, blue and green environmental issues helps to conserve biodiversity.



MERIT



TEACHERS

Qihua Primary School



Mdm Vanishri Shirley

Green Club teacher in-charge
Green Plan Committee second-in-command

Mdm Vanishri Shirley is driven by the conviction that hands-on experiences are the best way to sow the seeds of interest in biodiversity conservation. She continually looks for learning opportunities to engage her students in.

As the teacher-in-charge of the Green Club and the second-in-command of the Green Plan Committee, Mdm Shirley champions programmes that cut across the closely interrelated fields of biodiversity, food security, and waste management.



Informative posters on biodiversity line the school's corridors.



Students are able to directly observe the life cycle of plants by collecting seeds from their previous harvest to sow again.

From developing the 'Grow-my-food' programme from scratch, to creating Zoom lessons on local fauna to complement NParks' BioBlitz for Schools, she strives for her students to benefit fully through myriad avenues and for them to forge a connection with the natural world.

M.Y World @ Admiralty



Ms Buvanes Wari D/O Vengopal

Teacher

Ms Buvanes Wari D/O Vengopal advocates for sustainability, spurred on by the climate emergency. She believes that children should be given the opportunity to appreciate the natural environment, aided by purposeful activities facilitated by adults

such as those under NParks' Biodiversity Week for Schools. With support from parents and the community who donated pots and soil, Ms Buvanes started a gardening project for the students, putting each class on a monthly roster to take care of the plants. Through this experience, students have become more observant and take the initiative to highlight to their teachers if they see anything amiss such as browning leaves.



Through play, students discover the importance of trees to animals in the Marvellous Tree programme by the Singapore Botanic Gardens.



A student participates in the Playtime series, a part of NParks' Biodiversity Week for Schools.

Yuvabharathi International School



Ms Preethi Nair

Eco Club teacher in-charge

Ms Preethi Nair believes that a conducive learning environment is key to her students understanding what it means to be environmentally conscious and aware of conservation issues. Guided by this principle, the Eco Club teacher-in-charge has been implementing environmental activities that involve both teachers and students.

Ms Preethi also continually finetunes the activities so that participants can reap maximal benefits. To date, students have learnt from a variety of environmental and biodiversity focused programmes, such as NParks' Greening Schools for Biodiversity and Biodiversity Week for Schools.

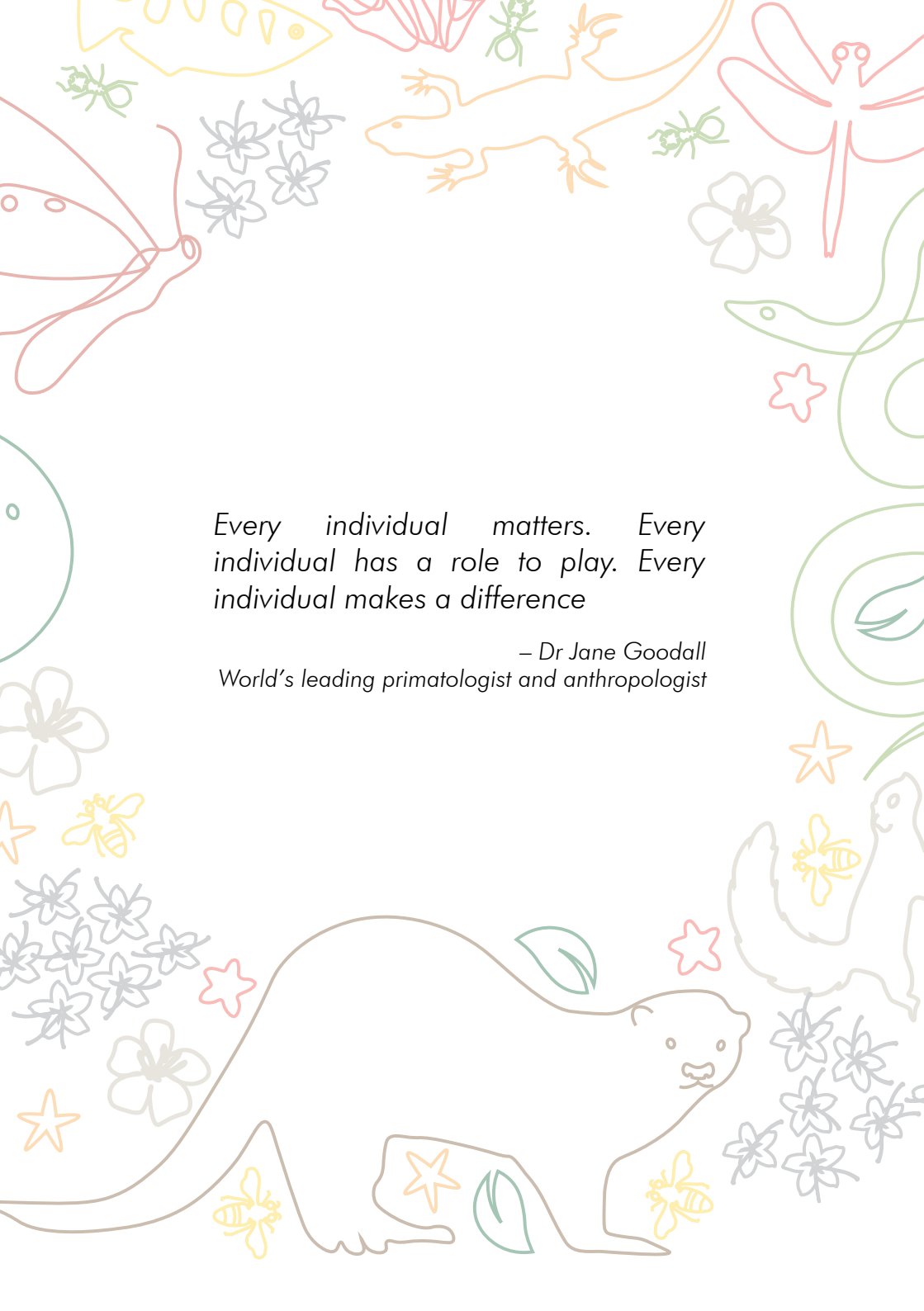


Students are directly involved in caring for plants in the school grounds, such as by watering them according to a roster set up by Ms Preethi.



Ms Preethi learned the process of assembling a bee hotel before subsequently involving her students in doing so for the school.

When opportunities arise, the students share about local biodiversity with a wider audience such as other schools, allowing them to not only put their newfound knowledge to the test, but also enabling them to obtain a more intimate understanding of native flora and fauna.



Every individual matters. Every
individual has a role to play. Every
individual makes a difference

– Dr Jane Goodall
World's leading primatologist and anthropologist

STUDENTS





OF THE YEAR

Si Ling Primary School

Ummairah binte Izrahadi, Garcia Maria Angela Rosas, Jaiyanth Vijayganesh, Zara Qistina Binte Muhammad Gazali, Rhea Raissa Binte Redzwan, Elvis Lau Jun Xiang



We have learnt so much together through this drama experience. The opportunity for us to explore and research about Singapore's rich biodiversity is indeed an enriching one. We also discovered our hidden acting talent. Amazing! - CIN Ambassadors of Si Ling Primary School

For the 'Nature Through Drama' track of the NParks Science Communication for CIN Ambassadors programme, a group of six students worked together to develop a play on human-wildlife interaction in the Singapore context.



Students brainstorm on the traits of characters in the play during a training workshop.

Whether it came to scripting, the delegation of roles, or costume, prop and set design, the students readily took ownership of the tasks under the guidance of their teachers. Through research, they also gained invaluable insights into the perception of wild animals in society, and sought to communicate how people can better coexist harmoniously with them.

For instance, one of the scenes featured Javan Mynas flocking to tables to feed off food scraps on plates that inconsiderate diners had neglected to return. A teachable moment, students incorporated it into the play to highlight that simple changes to human behaviour, such as removing easy food sources by returning their trays, can stop perpetuating the image of wild animals as pests.



Students, dressed as Javan Mynas, act out a scene from a hawker centres.

A nod to their hard work, a video of their 10-minute play 'A Wild Day to Remember' was selected to be featured at the NParks' Festival of Biodiversity 2021 where it was screened to over 800 people!

In addition to learning more about the natural world, the CIN Ambassadors have also become more resilient and confident individuals, having stepped out of their comfort zones while attempting something new. They also better persevere in their studies, having realised their potential and ability through this experience.



Students step into the role of Long-tailed Macaques during the play.

Commonwealth Secondary School

Sam Pei Yi, Dennis Teo Guan Bin, Maira Budhraj



As the President of Eco Club, I am privileged to be leading my friends to be in charge of the efforts we do for environmental education in the school, and to see how the school culture has strengthened over the years. - Sam Pei Yi

As key appointment holders of the Eco Club, Pei Yi (President), Dennis (Vice President, Education and Operations), and Maira (Vice President, Outreach and Publicity) led their peers to contribute to the OneMillionTrees movement by NParks by propagating a total of 53 native forest plants in their school's Plant Nursery.



Students carefully extract seeds of native forest species for subsequent germination in the school's Plant Nursery.

Coordinating this effort during COVID-19 Safe Management Measures, however, was no mean feat, putting their skills to the test. Through creative and thoughtful planning, the trio were able to successfully decentralise activities for their Club mates as well as train the rest of the Executive Committee to take charge of leading smaller groups to carry out differentiated activities.

For instance, at the nursery, groups of students worked in tandem to carry out separate tasks like weeding and transferring seedlings into larger polybags. Over at the planting site, one group of students transported plants from the nursery while another dug tree holes, for example.



Students nurture seedlings in the Plant Nursery.

With sufficient exposure, the student leaders obtained a better grasp of the overall workflow, allowing them to finetune the process to ensure that all the different parts worked well as a whole. Through their experience, they were also able to better appreciate the hard work that goes on behind the scenes in biodiversity conservation projects, thereby developing an even stronger sense of environmental stewardship.



Once the seedlings reach a certain size, students transfer them to individual polybags, affording them more space to grow.



MERIT



STUDENTS

Woodgrove Secondary School

Jocelyn Toh Wan Yi, Angie Hoong, Lim Qi Jie Germaine,
Tengku Siti Rahimah Binte Tengku Muhammad Ariff, Lim Hui En



Fuelled by a passion to share about biodiversity with their schoolmates in spite of COVID-19 restrictions, five students from the Environmental Science Club worked closely together to create an e-Biodiversity Trail in lieu of a physical one as part of the NParks' Greening Schools for Biodiversity programme.

Undergoing nearly 10 hours of training in creating virtual tours, they spent several weeks taking and arranging 360 photographs of their school grounds to form the e-Biodiversity Trail.




A screenshot of the school's Gardens by the Gate in the e-Biodiversity Trail, showing overlaid interactive elements.



Students prepared factsheets on selected plant species, which were incorporated as interactive elements in the e-Biodiversity Trail.

It was no easy feat as the students had to make repeated trips to produce high quality images. Yet, through their experience and perseverance, the group not only picked up invaluable skills but also an increased awareness of biodiversity.

As of end December 2021, about 100 staff and students have previewed the Trail!



"We should preserve every scrap of biodiversity as priceless while we learn to use it and come to understand what it means to humanity."

— E.O. Wilson,
Biologist, writer and world's leading expert
researcher in myrmecology

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