

Background Information for Teachers

Information on Learning Journeys Organisation

Name of organisation	<ul style="list-style-type: none">• National Parks Board (NParks)
When was the organisation founded?	<ul style="list-style-type: none">• 1990
Learning Objectives stated by the organisation	<ul style="list-style-type: none">• Combining the visual delights and rich biodiversity of our parks, gardens & nature reserve with thoughtfully planned recreational activities, NParks facilitates visitors' communion with Nature
What is the purpose of the organisation?	<ul style="list-style-type: none">• NParks conserves, creates, sustains and enhances the green infrastructure of our City in a Garden.• Responsible for providing and enhancing the greenery of Singapore• NParks also monitors and co-ordinates measures to ensure the health of Singapore's biodiversity.
What is the mission and vision of the organisation?	<ul style="list-style-type: none">• Mission: To create the best living environment through excellent greenery and recreation, in partnership with the community.• Vision: Let's make Singapore our Garden
How is the organisation so important to Singapore?	<ul style="list-style-type: none">• The organisation is important as National Parks Board (NParks) is responsible for providing and enhancing the greenery of the City in the Garden.• Beyond green infrastructure, NParks is committed to enhancing the quality of life through creating memorable recreational experiences and lifestyles.• NParks manages over 300 parks and 4 nature reserves. Adding to this is the extensive streetscape, or roadside greenery, that forms the backbone of our City in a Garden.• An island-wide Park Connector Network is also being developed to link major parks and residential areas.• As Singapore's scientific authority on nature conservation, NParks monitors and coordinates measures to ensure the health of Singapore's biodiversity.• This supports the overall thrust of our urban biodiversity conservation model, which aims to conserve representative eco-systems in land-scarce Singapore for future generations.• NParks is also the lead agency in the efforts to continually upgrade the Landscape Industry in Singapore.• It works closely with industry partners to

promote good work practices and create a thriving, innovative and professional industry that will support Singapore's aspirations of being a City in the Garden.

What are the NE messages / NE learning journey objectives that can be highlighted through this learning journey?

NE Messages:-

- Cultivate a sense of ownership for the environment where Singapore is our homeland, this is where we belong.
- Cultivate a sense of nationalism and pride in the students where we have confidence in our future.

Learning Objectives.

- Provide students with relevant knowledge on the importance of natural heritage in Singapore.
- Instil a sense of connection on how changes from the past influence our present.
- Understanding Singapore: Its constraints, Challenges and Opportunities that with the ever changing landscape, our natural history might disappear if no one spreads word of it

In what ways can the learning journey be relevant to students? (This can related to both personal experiences and curriculum matters)

The visit can be tied with:
Primary 4-6 Science
Secondary 1-4 Geography

Theme:	Learning Journeys
Name of Activity:	A Little Piece of Nature
Venue/s:	Lower Peirce Reservoir Park
Duration:	1.5 – 2 hrs
Level/s:	Primary 4-6, Secondary 1-4
Pre-requisite/s	Nil

Introduction:

During the learning journey, students will gain an insight of one of Singapore’s wonderful nature areas. Given the rich biodiversity of tree and plant species, students catch sight of some of Singapore's natural heritage of indigenous flora and fauna. Students can interact with nature and enhance their knowledge and interests in them. At the same time, they will also learn about the importance of conserving our natural heritage and develop a sense of commitment and ownership of the parks and greenery.

Objectives of this Learning Journey:

1. Students will have fun as they walk and appreciate and at the same time learn about nature.
2. Students will learn about the important role of the reservoir and the changes the area has undergone.
3. Students will gain greater awareness of the biodiversity of flora and fauna and enhance their knowledge and interests in the various species that exist in one of Singapore’s parks.
4. Students will learn about the importance of conserving our natural heritage, develop a sense of commitment and ownership of the parks and green, and to protect our home and rich history

National Education Message:

- The importance of national defence where Singapore is our homeland and we must ourselves defend Singapore as no one else will defend her for us.
- This is tied in with the need to protect the natural heritage of Singapore as well because it will be lost if we do not protect them.

Approaches

Programmes/Activities:

- Students will go on a learning journey to Lower Peirce Reservoir Park.
- Guides assisted by teachers from the school, will lead and direct students in making various observations on the flora and fauna that exist here at Lower Peirce Reservoir Park. This will allow students to learn more about the nature and flora and fauna to meet the above objectives.
- Students will complete worksheets and take primary data (e.g. note taking and photographing) of all information which is required for the completion of an assignment or project.

Deployment:

- Guides will do a live commentary on the visit to Lower Peirce Reservoir Park.
- School teachers are deployed to assist and also to help monitor and discipline students on site.

Assessment and Review:

- Students will complete the worksheets and activities individually or as a group.

- Students will be debriefed after the learning journey.
- As a post-activity, students will complete a reflection on their learning journey.
- Students will complete a feedback form.
- Students will complete an assignment or project based on their learning journey.

Lesson	Outline of Lesson	Period/s	Resources	Remarks
Lesson Structure: Pre-Lesson Journey				
Lesson 1 Introduction	<p>Students will be introduced to the growth of plants.</p> <p><u>Worksheet Activity</u></p> <ul style="list-style-type: none"> Students are to answer the questions on what plants need to grow <p><u>*Optional Experiment</u></p> <ul style="list-style-type: none"> Students can conduct an experiment on growing their own radish plant. <p><u>Briefing on Learning Journey to MacRitchie TreeTop Walk</u></p> <ul style="list-style-type: none"> Students are given a briefing on the scenario and learning journey objective. 	30mins	Annex 1a	<ul style="list-style-type: none"> To enable students find out about what plants need in order to grow. To enable students to learn more about what plants need to grow. To prepare students and to provide information on the park that they will be visiting.
Development	<p><u>Exploration of the features in Lower Peirce Reservoir Park</u></p> <ul style="list-style-type: none"> Students are divided into pairs/groups to research on Lower Peirce Reservoir Park. <p><u>Discussion Questions</u></p> <ul style="list-style-type: none"> Each pair/group will work on the question and pen down their answers in the worksheet provided. 	20 mins	Annex 1	<ul style="list-style-type: none"> To enable students to have prior knowledge on Lower Peirce Reservoir Park before going on their learning journey. To motivate the students to learn and have a sense of ownership in their learning. To incorporate the elements of cooperative and collaborative learning.
Closure	<p><u>Reflections</u></p> <ul style="list-style-type: none"> Students to share their thoughts and reflections on Lower Peirce Reservoir Park. 	10 mins		<ul style="list-style-type: none"> To sum up students' learning on Lower Peirce Reservoir Park.

Lesson Structure: During Learning Journey				
Lesson 2 Introduction	<p><u>MacRitchie TreeTop Walk</u></p> <ul style="list-style-type: none"> Students will read the factsheet on Lower Peirce Reservoir Park before commencing on their learning journey. 	10 mins	Annex 2	<ul style="list-style-type: none"> To enable the students to know more about the MacRitchie TreeTop Walk and what they can expect to see during the learning journey.
Development	<p><u>Breakup Session</u></p> <ul style="list-style-type: none"> Students are divided into different groups with the guides to explore the different features and areas. Teachers are to ensure that students ask the guides the relevant questions which are found in the worksheets. 	2 periods (60 mins)	Annex 3 and 4	<ul style="list-style-type: none"> To enable students to explore Lower Peirce Reservoir Park.
Closure	<p><u>Reflection</u></p> <ul style="list-style-type: none"> Teachers to get students to share their thoughts on the visit. 	20 mins		<ul style="list-style-type: none"> To sum up students' learning at Lower Peirce Reservoir Park. To allow students to evaluate how their group works.
Lesson Structure: Post Learning Journey				
Lesson 3 Introduction	<p><u>After the visit</u></p> <ul style="list-style-type: none"> Students are to form into groups of 4-5 and discuss and reflect on what they have learnt. Students are to discuss this using their post-visit reflection worksheet found in Annex 5. 	1 period (30 mins)	Annex 5 (Post-visit Reflection)	<ul style="list-style-type: none"> To allow students to sum up what they have learnt.
Development	<p><u>Task</u></p> <ul style="list-style-type: none"> Each group is read the task in Annex 6 and submit the letter on Lower Peirce Reservoir Park. Rubrics for the submission of the letter can be found in Annex 7. 	4 periods (120 mins)	Annex 6 (Task) Annex 7 (Rubrics)	<ul style="list-style-type: none"> To consolidate students' learning through the completion of the allocated task.

Closure	<p><u>Class Activity</u></p> <ul style="list-style-type: none"> Teachers are to go through the worksheet answers with students. 	1 period (30 mins)	Annex 8(Answers)	<ul style="list-style-type: none"> To sum up students' learning.
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Annex 1a

What are the 4 things that plants need to grow?

- Water, air, nutrients and sunlight

Why did the plants in the cupboard not grow?

- Plants need sunlight to grow and this was absent when the plants were placed in the cupboard.

Annex 3a

Plantain Squirrel and Slender Squirrel

- Rodent, smaller, upper, under, fruits

Clouded Monitor Lizard

- Foraging

Malayan Water Monitor

- Strong, nostrils, crocodile

Long-tailed Macaque

- Long, reliant, dispersers

Common Sun Skink

- Slithering, long, quickly

Giant Snakehead

- Moist, shallows

Asian Arowana

- Chinese dragon, insects

Dragonflies and Damselflies

- Lay, shallow, underwater, harmless

Annex 3b

Tree Ferns

Cyathea laterbrosa

- Four, single

Fish-tail Palm Caryota sp.

- Leaves

Nibong Palm

List some of the uses of the Nibong Palm below.

- The shoots can be cooked as vegetables.
- The stems as fish traps, timber piles, fencing, jetty, kelong stilts or house posts and the hard outer wood as decorative wall panels as well as floor boards.

- Many handicraft items such as large wooden spoons or ladles, chopsticks, bangles and key chains are produced using the Nibong wood.
- The Orang Asli, indigeneous people of the Malayan region, are known to use the spikes as poisoned darts for the hunting of animals.

Leaf Litter Plant

- Treelet, decompose, growth

Mahang

- Home, symbiotic, depends

Lianas

- Vines, old

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