

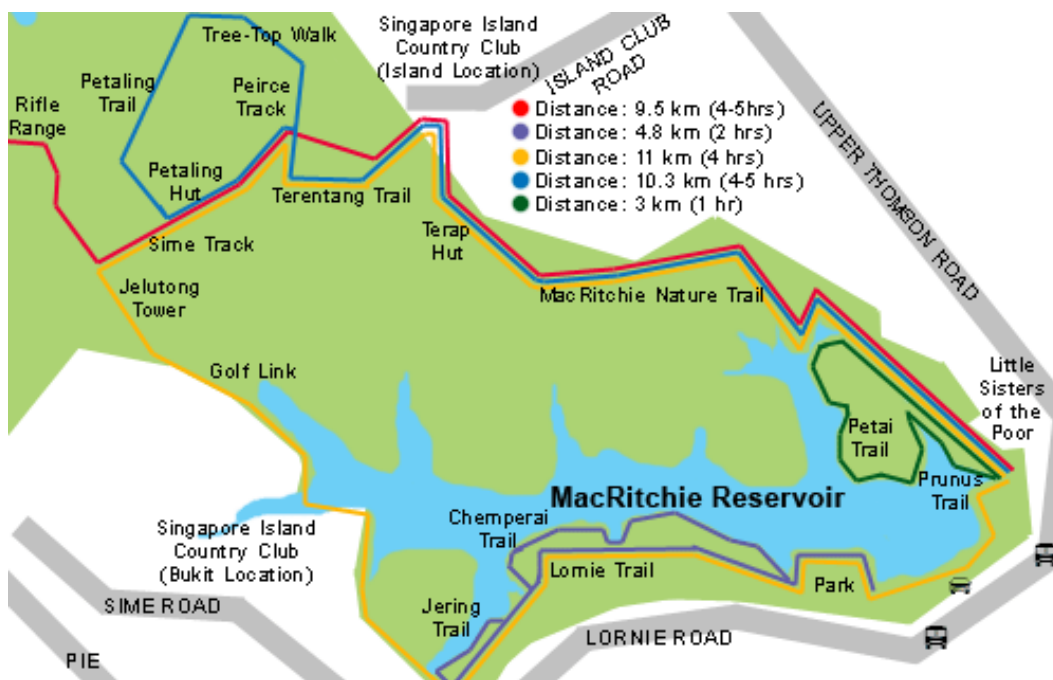
A Visit to MacRitchie TreeTop Walk



Did you know? The suspension bridge at MacRitchie, which is part of the TreeTop Walk, was built at a cost of \$1.6 million and took about two years to complete. The site for the trail was carefully chosen to ensure that plant and animal communities were not disturbed during the building of the bridge.



A Map of the Central Catchment Nature Reserve (MacRitchie)



Research on the Central Catchment Nature Reserve (MacRitchie)

Based on your research, make a list of what you might see during your visit of the TreeTop Walk. E.g. What flora and fauna?



Before setting off on our learning journey, let's learn more about the nature reserves in Singapore.

Singapore's very own Bukit Timah and Central Catchment Nature Reserves are home to more than 1000 species of flowering plants and over 500 species of animals. These include towering trees, climbing palms or rattans, ferns, orchids, gingers and wonderful blooms such as the Bat Lily.

Conduct an online research on nature reserves and answer the following questions.

1. What is a 'nature reserve'?

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2. List down 2 similarities and 2 differences between a nature reserve and a park near your home.

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3. Do you think that the Central Catchment Nature Reserve is important? Give a reason for your answer.

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The TreeTop Walkway is a 250-metres long freestanding suspension bridge spanning across Bukit Peirce and Bukit Kalang, the two highest points in MacRitchie. The bridge allows one to be at a height of 25 metres above the ground. From the bridge, you can take a closer look at the canopy of MacRitchie. You can get to feast your eyes on the forest birds and spot other different wildlife such as Colugos or Flying Lemurs, Clouded Monitor Lizards, Common Sun Skinks, Plantain Squirrels and Long-tailed Macaques in their natural habitat.

Some 80 species of birds and 18 rare trees have been spotted in the forest. At the same time, expect to see trees in a different light as these large and tall trees rise above the canopy. You will have a close encounter with the various interesting trees and plants along the trail. Take pleasure in having a panoramic view of the lush greenery of the Central Catchment Nature Reserve and the placid waters of Upper Peirce Reservoir.

The walkway plays an important role in forest canopy research, because it gives researchers access to areas well off the ground, helps in facilitating surveys, plant identification work and furthering our understanding of how forest ecosystems work.

Flora and fauna found at MacRitchie TreeTop Walk Trail

Common Plants Found Here

Some of the common plants that one will come across here are
and These are sun-loving plants with red leaves and edible
roots. Another common plant is the Palms like this are unique as they
do not stand unaided on their own trunks but they grow taller and longer by
climbing around and over adjacent trees. The sharp at the base of the
rattans can hook on to you. Other plants species such as Heliconias, African
Tulips and rubber trees strongly suggests that this area used to house a former
traditional village known as a

Greater Racket-tailed Drongos

These birds fly around the monkeys as they move through the forest.

Why do you think these birds stay close to the monkeys?

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Fishtail Palms

The presence of Fishtail Palms of a healthy size is a good indication that the
forest is regenerating.

Explain why this is so.

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Did you know? The size and presence of lianas often help to provide an indication of the health and age of the rainforest. The presence of lichens which appear like white round spots on tree trunks are a good indication of the air quality in the forest. The more numerous and the bigger the lichens, the better the rainforest is with regard to the quality of air.

Logs

The trail is lined with several logs from trees that have fallen many years ago. These logs are good examples to illustrate that many tropical trees are commonly made up of dense hardwood that takes a long time to break down.

Take a close look at the surface of these logs. You will see bracket fungus growing on the logs.

Explain the role of the fungi in the rainforest ecosystem.

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Interesting Plant Species Found Here

List down some facts about the following plants.

Simpoh Air (<i>Dillenia suffruticosa</i>)	Mahang Plant (<i>Macaranga bancana</i>)	Elephant Ear Tree (<i>Macaranga gigantea</i>)
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Long-tailed Macaques

Observe their movement and behaviour in their natural habitat and record your findings in the boxes below.

Movement	Behaviour

Why is it important not to feed the macaques?

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TreeTop Walk

Annex 4

List down some information about the suspension bridge and how it was constructed in a sustainable way.

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Different Layers of the Forest

A forest is made up of many layers which start at the bottom and working all the way up. The trees that make up the canopy and tree layers fight for valuable spaces to reach the sun. The Terentang, a sun-loving tree, fills the gaps in the spaces between other trees. As you approach the lower levels, you will see that many different tree roots intertwine with one another on the forest floor.

What are the different layers of the forest?

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What are the kinds of trees that are found towering over the canopy?

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Try and spot these interesting tree species here.

Rusty Oil Fruit

The Rusty Oil Fruit (*Elaeocarpus ferrugineus*) has ruby red emergent leaves which turn rusty, and then green. Its are sought after by birds like Pink-necked Green Pigeon.

Cheng Tng Tree

The of the Cheng Tng Tree (*Scaphium macropodum*) contain brown spongy which expand in water and are used in local dessert, Cheng Tng.

Birds

More than species of birds have been observed. The best time to observe birds is early in the morning. Native forest birds like the Crimson Sunbird, Olive-winged Bulbul and the Greater Rackettailed Drongo can be spotted. The Drongo is a good of the calls of many birds.

Did you know?

There are many other interesting plant species and animals that you can see beyond the TreeTop Walk. Some of these include the Wild Torch Ginger, Chempedek, Wild Durian, Clouded Monitor Lizards, Plantain Squirrels, Giant Forest Ants, butterflies, Common Sun Skink, Pangolin, Malayan Colugo, Spiny Hill Terrapin and dragonfly nymphs.



What is one feature that you like most in MacRitchie TreeTop Walk? Why?

How do you think the features in MacRitchie TreeTop Walk have benefited visitors to the park?

What other features would you like to see at the MacRitchie TreeTop Walk?

As students, what is one thing you can do to help make the MacRitchie TreeTop Walk a better place for park users?

Without NParks, what do you think Singapore will be like?

How do you feel about working in a group? What has your group done well? What can be improved?

Introduction:

The present forest reserves in Singapore cover only five percent of Singapore's land area but house over 50% of our remaining native biodiversity. Ensuring the survival of our forest reserves is paramount to protecting our natural heritage. The role of protection and nature conservation does not just lie with the people managing the nature reserves but also everyone who use the nature reserves. After all, we are the custodians of Singapore's natural heritage.

Your Roles Are:

1. To understand and appreciate the need to conserve the rich biodiversity.
2. To learn about the importance of forest reserves towards this biodiversity of flora and fauna.
3. To generate awareness among the student population about the problems of pollution and poaching in forest reserves.
4. To promote to the school community about the need to protect the forest reserves.

Your Task:

You are part of your school's Environmental and Green Club. Your club members are to visit MacRitchie TreeTop Walk. At the end of your visit, your members are to come up with a poster to encourage students in the school to do their part to protect the forest reserves in MacRitchie.

Some useful questions to guide your members:

1. What is the role and purpose of forest reserves in Singapore and around the world?

2. Who is the organisation behind the management of MacRitchie TreeTop Walk?
3. Why should we visit MacRitchie TreeTop Walk?
4. What are some of the problems (e.g. Littering, pollution) that are found in MacRitchie TreeTop Walk which pose a threat to the biodiversity of flora and fauna found there?
5. What are the areas in MacRitchie TreeTop Walk that should be further conserved and preserved?
6. What can be done for the future of MacRitchie TreeTop Walk as an important park?

Process:

Assign specific roles for your club members.

E.g.

1. Group Leader (Lead and co-ordinate, conceptualise idea)
2. Scribe (Record information, preparing the resources and edit the poster)
3. Photographer (To take and edit photos)
4. Researcher (Search for information on the history, flora and fauna and what to look out for at the park etc.)
5. Designer (To conceptualise and come up with the poster design)

Websites:

1. http://www.nparks.gov.sg/cms/index.php?option=com_visitorsguide&task=attractions&id=64&Itemid=73
2. <http://www.wildsingapore.com/places/ttw.htm>
3. <http://sillydumb.com/portfolio/photography-treetop-walk-macritchie-reservoir.php>

Project Rubrics

Annex 7

Group Members:

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CATEGORY	4	3	2	1
Graphics - Clarity	Graphics are all in focus and the content easily viewed and identified from 6 ft. away.	Most graphics are in focus and the content easily viewed and identified from 6 ft. away.	Most graphics are in focus and the content is easily viewed and identified from 4 ft. away.	Many graphics are not clear or are too small.
Graphics - Originality	Several of the graphics used on the poster reflect a exceptional degree of student creativity in their creation and/or display.	One or two of the graphics used on the poster reflect student creativity in their creation and/or display.	The graphics are made by the student, but are based on the designs or ideas of others.	No graphics made by the student are included.
Graphics - Relevance	All graphics are related to the topic and make it easier to understand. All borrowed graphics have a source citation.	All graphics are related to the topic and most make it easier to understand. All borrowed graphics have a source citation.	All graphics relate to the topic. Most borrowed graphics have a source citation.	Graphics do not relate to the topic OR several borrowed graphics do not have a source citation.
Labels	All items of importance on the poster are clearly labelled with labels that can be read from at least 3 ft. away.	Almost all items of importance on the poster are clearly labelled with labels that can be read from at least 3 ft. away.	Several items of importance on the poster are clearly labelled with labels that can be read from at least 3 ft. away.	Labels are too small to view OR no important items were labelled.
Required Elements	The poster includes all required elements as well as additional information.	All required elements are included on the poster.	All but 1 of the required elements are included on the poster.	Several required elements were missing.

Knowledge Gained	Student can accurately answer all questions related to facts in the poster and processes used to create the poster.	Student can accurately answer most questions related to facts in the poster and processes used to create the poster.	Student can accurately answer about 75% of questions related to facts in the poster and processes used to create the poster.	Student appears to have insufficient knowledge about the facts or processes used in the poster.
Content - Accuracy	At least 7 accurate facts are displayed on the poster.	5-6 accurate facts are displayed on the poster.	3-4 accurate facts are displayed on the poster.	Less than 3 accurate facts are displayed on the poster.
Attractiveness	The poster is exceptionally attractive in terms of design, layout, and neatness.	The poster is attractive in terms of design, layout and neatness.	The poster is acceptably attractive though it may be a bit messy.	The poster is distractingly messy or very poorly designed. It is not attractive.
Title	Title can be read from 6 ft. away and is quite creative.	Title can be read from 6 ft. away and describes content well.	Title can be read from 4 ft. away and describes the content well.	The title is too small and/or does not describe the content of the poster well.
Mechanics	Capitalization and punctuation are correct throughout the poster.	There is 1 error in capitalization or punctuation.	There are 2 errors in capitalization or punctuation.	There are more than 2 errors in capitalization or punctuation.
Grammar	There are no grammatical mistakes on the poster.	There is 1 grammatical mistake on the poster.	There are 2 grammatical mistakes on the poster.	There are more than 2 grammatical mistakes on the poster.

Copyright Acknowledgement

- Some information about the TreeTop Walk found in Annex 2 are taken from <http://www.wildsingapore.com/places/ttw.htm>
- Cliparts and graphics found in the worksheet are taken from <http://office.microsoft.com/en-us/images/>
- Rubrics in Annex 7 is created from rubistar.4teachers.org
- All other information, resources, pictures and photographs are adapted from the National Parks Board and NParks Flora and Fauna websites.

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