



Hong Kong Wetland Park Self-paced Visit Plan “Exploring the Mangroves”

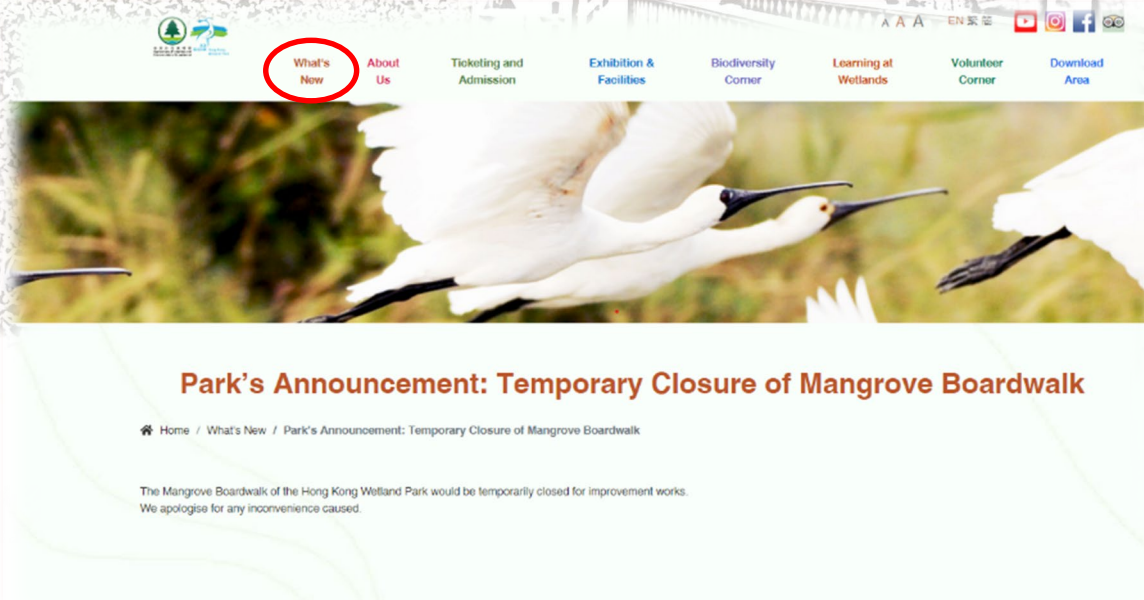


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(2022.12 Version)

Point to Note

- Teachers can visit “What News” at the following link to obtain the latest information of the Mangrove Boardwalk before arranging activities to Hong Kong Wetland Park:

<https://www.wetlandpark.gov.hk/en/whatsnew>



The screenshot shows the website's navigation menu with "What's New" circled in red. Below the menu is a banner image of white birds in flight. The main heading reads "Park's Announcement: Temporary Closure of Mangrove Boardwalk". The breadcrumb trail is "Home / What's New / Park's Announcement: Temporary Closure of Mangrove Boardwalk". The announcement text states: "The Mangrove Boardwalk of the Hong Kong Wetland Park would be temporarily closed for improvement works. We apologise for any inconvenience caused."

Hong Kong Wetland Park “Exploring the Mangroves”



1. Target: Primary 1-6 students
2. Implementation mode: Whole class and group activities (4 students each group)
3. Time required: 165 mins
 - Pre-visit Classroom Activity (30mins)
 - HKWP “Exploring the Mangroves” Field Visit (120 mins)
 - Post-visit Consolidation Activity (15 mins)
4. Best time to visit: April to October

Hong Kong Wetland Park

“Exploring the Mangroves”



5. Relevant Curriculum: General Studies

Level	Primary 2	Primary 3	Primary 4
General Studies	<p>Growth of Animals and Plants</p> <ul style="list-style-type: none"> Observing characteristics of living things 	<p>A Healthy Living Environment</p> <ul style="list-style-type: none"> Concern and action to improve our living environment 	<p>The Environment and I</p> <ul style="list-style-type: none"> The natural environment How human beings are affected by the environment Protecting our environment
Units	<p>Love of Nature</p> <ul style="list-style-type: none"> Living things around us Features of nature <p>Outing is Fun</p> <ul style="list-style-type: none"> Taking part in outdoor activities Personal responsibilities in environmental conservation 	<p>Animals and Plants in Hong Kong</p> <ul style="list-style-type: none"> Wide variety of living things in Hong Kong Basic needs of living things Living things and their living environment Living things and my living environment 	<p>Natural Resources: Water</p> <ul style="list-style-type: none"> Uses of water Water conservation
Level	Primary 5	Primary 6	
General Studies	<p>Physical Environment, Technology and Culture</p> <ul style="list-style-type: none"> The impact of the physical environment on people's life 	<p>Adaptation of Living Things</p> <ul style="list-style-type: none"> Adaptation of living things to the environment Balance of nature affected by human activities 	
Units		<p>Pollution Prevention and Conservation of the Environment</p> <ul style="list-style-type: none"> Different types of pollution in our community: causes and effects Conservation of our environment 	

#Above information is with reference to EDB General Studies Curriculum Guide for Primary Schools (Primary 1-6) (2011)

Hong Kong Wetland Park

“Exploring the Mangroves”



6. Introduction of The Plan

- Through the classroom activity and field visit, students will be able to gain a conceptual understanding of wetlands and mangroves, as well as to realize the characteristics and adaptations of wildlife in mangroves. Conservation awareness among the students will also be fostered.

7. Learning Objectives

- To learn about the definition of wetlands and to understand mangroves as one of the important wetlands.
- To understand the ecology and biodiversity of mangroves.
- To observe mudskippers and fiddler crabs and to understand their habits.

Hong Kong Wetland Park

“Exploring the Mangroves”



Exemplar

Activity	Time	Lecture/Activity Outline	Teaching activity and visit
Pre-visit Classroom Activity	30 min	<ul style="list-style-type: none"> Understand the concept, varieties and functions of wetlands Learn about mangroves 	<ul style="list-style-type: none"> “What are wetlands?”
“HKWP - Exploring the Mangroves” Field Visit	120 min	<ul style="list-style-type: none"> Recognize the ecological values of mangroves Learn about mudskippers and fiddler crabs and their habits Learn the adaptive features of mangroves 	<ul style="list-style-type: none"> Visit the mangrove boardwalk of Hong Kong Wetland Park
Post-visit Consolidation Activity	15 min	<ul style="list-style-type: none"> Consolidate the knowledge of fiddler crabs Train hand-eye coordination 	<ul style="list-style-type: none"> Making origami of fiddler crabs



Pre-visit Classroom Activity



Pre-visit Classroom Activity(30 mins)

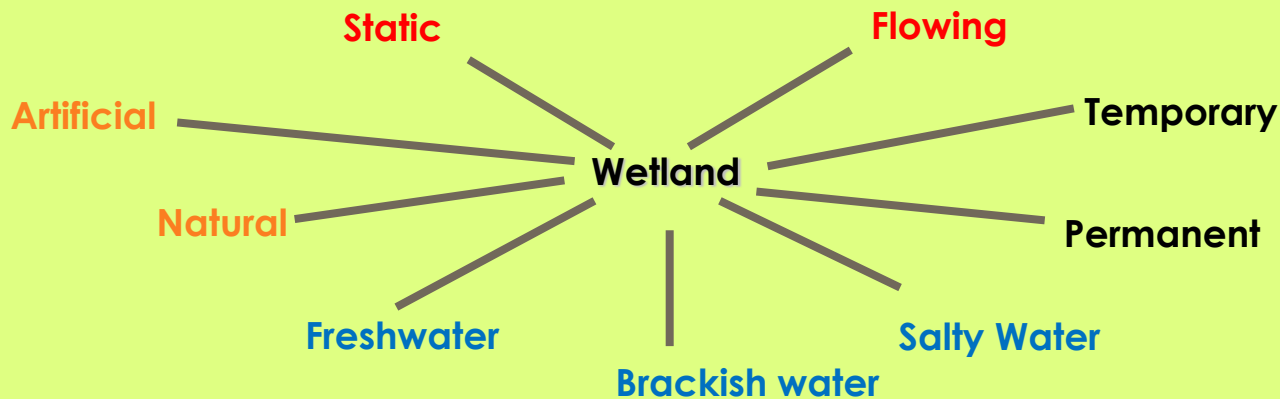


“What are wetlands?”

Learning focus and objectives	Classroom activity	Venue	References
<ul style="list-style-type: none">• Arouse learning motivation• Understand the concept, types and functions of wetlands	<p>What are wetlands?</p> <ul style="list-style-type: none">• Guide the students to tell their own pictures of wetlands• Use Worksheet 1 or cut the photos of the worksheet, then divide the students in groups and ask them to distinguish wetlands.• Reveals the answer and explains the definition and functions of wetlands.• Teacher can propose that mangrove is one of the wetlands to be visited• Teacher can require students to search for the information of mangrove online.	Classroom	<ul style="list-style-type: none">• HKWP Factsheet 2 - Functions of Wetlands• Exploring the Mangrove Worksheet 1

What are Wetlands?

- Places where land and water meet, making up around 6% of land area on earth
- According to the Ramsar Convention, wetlands are defined as areas of marsh, fen, peatland or water that is:

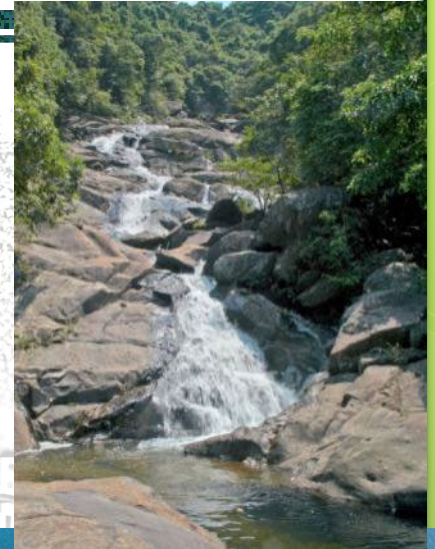


- Including areas of marine water with a low tide depth that does not exceed 6 metres

Examples of Wetlands in Hong Kong



- Ocean : shore, coral communities
- Estuary : intertidal mudflat, mangrove
- River : stream
- Swamp : freshwater marsh
- Artificial : fishpond, shrimp pond, wet farmland, reservoir, pond



Functions of Wetlands



- Store water
- Filter
- Shelter
 - home to more than 100 thousand species of animals *
- Provide
 - more than 660 million of people depend on wetlands to make a living*

* Source: http://www.ramsar.org/sites/default/files/documents/library/factsheet1_why_should_i_care_0.pdf

What is mangrove?

- An intertidal wetland ecosystem
- Distributed at the coastal areas of tropical and subtropical regions
- Receive inputs from regular tidal flushing and from freshwater streams and rivers
- Nourish diverse and distinctive flora and fauna





“HKWP- Exploring the Mangroves” Field Visit



Hong Kong Wetland Park Suggested Route of Visit



“Exploring the Mangroves” Field Visit (120 mins)



“Exploring the Mangroves”

Learning focus and objectives	Visiting activities	Location	References
<ul style="list-style-type: none"> • Arouse learning motivation • Understand the ecological values of mangroves • Learn about mudskippers and fiddler crabs and their habits • Understand the adaptive features of mangroves 	<p>“Exploring the Mangrove”</p> <ul style="list-style-type: none"> • Recap the learning content in class: “What are wetlands?” • Raise the objective of the visit: to visit one of the wetlands - Mangrove • Pre-visit preparation by teachers: Comprehend the information of mangrove (Based on this teaching plan and the provided references) • Through questioning, observing and touching the mangrove plant, teachers introduce the ecological values and adaptive features of mangroves, and the habits of animals living there • Students are grouped to finish Worksheet 2 and present their results. Teachers conclude the learning content of the visit and bring the message on conserving the wetlands in our daily lives. 	<p>Mangrove Boardwalk of HKWP</p>	<ul style="list-style-type: none"> • Hong Kong Wetland Park Factsheet No. 10 – Mangrove Communities • “Know More about Mangroves” Leaflet • “Exploring the Mangrove” Worksheet 2

Introduction to Mangroves

- Mangrove is a unique wetland which grows along estuaries – where the river and the sea meet land.
- Mangrove plants usually grow at brackish intertidal zones, forming mangrove forests which can be found in tropical and subtropical regions.
- Mangrove plants provide food and shelter for fish and other aquatic animals.
- Among the animals living in mangroves, fiddler crabs and mudskippers are interesting and easy to be observed since they feed during low tides.

Reference :

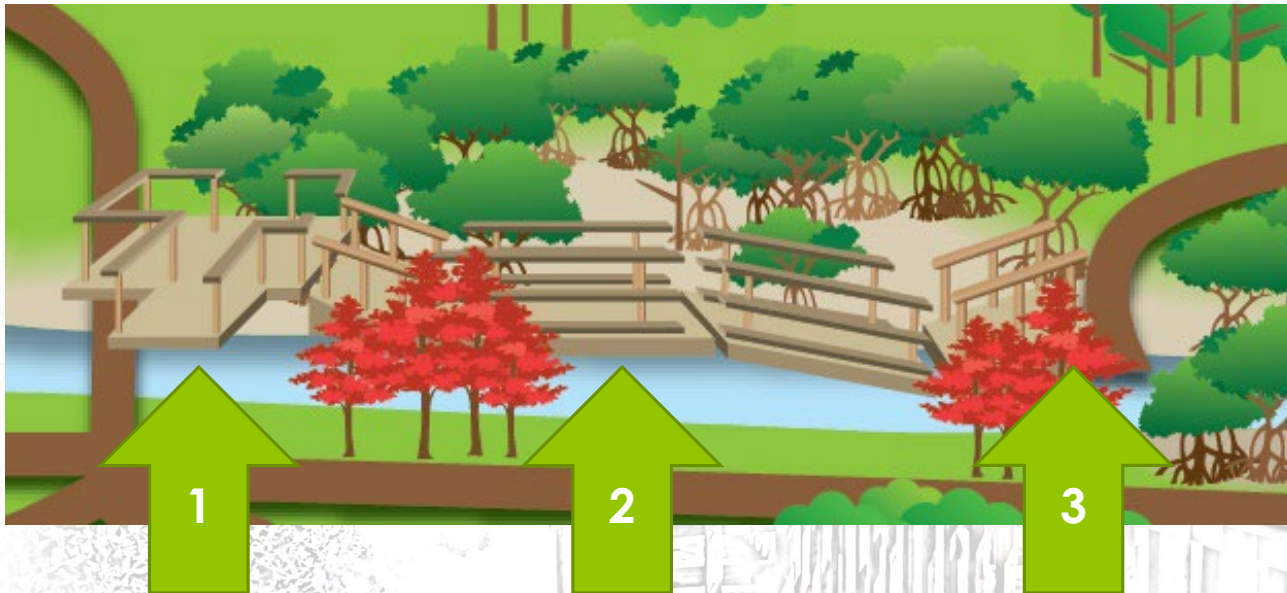
1. Hong Kong Wetland Park Factsheet No. 10 – Mangrove Communities
2. “Know More about Mangroves” Leaflet

Ecological Values of Mangroves

- Canopies and trunks
 - Provide living places
- Leaves
 - Provide food
- Roots
 - Provide shelter and nursery grounds



Suggested Interpretation Points along Mangrove Boardwalk



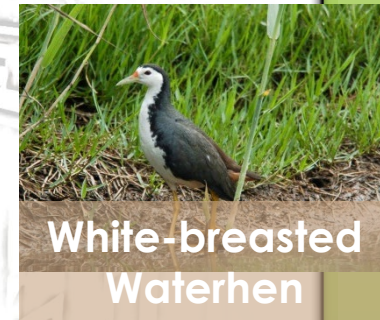
1. Start of boardwalk : Biodiversity of Mangroves
2. Along the boardwalk : Fiddler crabs and mudskippers – their living habits
3. End of boardwalk : adaptation features of mangrove plants (for P5 and P6 students)

Point 1: Biodiversity of Mangroves

What organisms can you find here?



Mangrove Ecology (food chain)



Plankton

Point 2: Fiddler crabs

1. Do all fiddler crabs have a big claw?

2. Do you know why I got the name of “fiddler crab”?



3. What are the functions of my big and small claws?

4. I always dig holes in the mud flat. What are the burrows used for?

Answers

1. No. Only the male has a big claw while the female has a pair of small claws.
2. Fiddler crabs come out from their burrows and feed during low tides. The male crabs wave their big claws while they are attracting mates or warning enemies, in a way that looks like a fiddler.
3. The big claw of the male is for defending their territories and attracting the female, while the small claw is for feeding.
4. The burrow is the place where they hide during high tides or when they encounter enemies. It is also where they lay eggs.



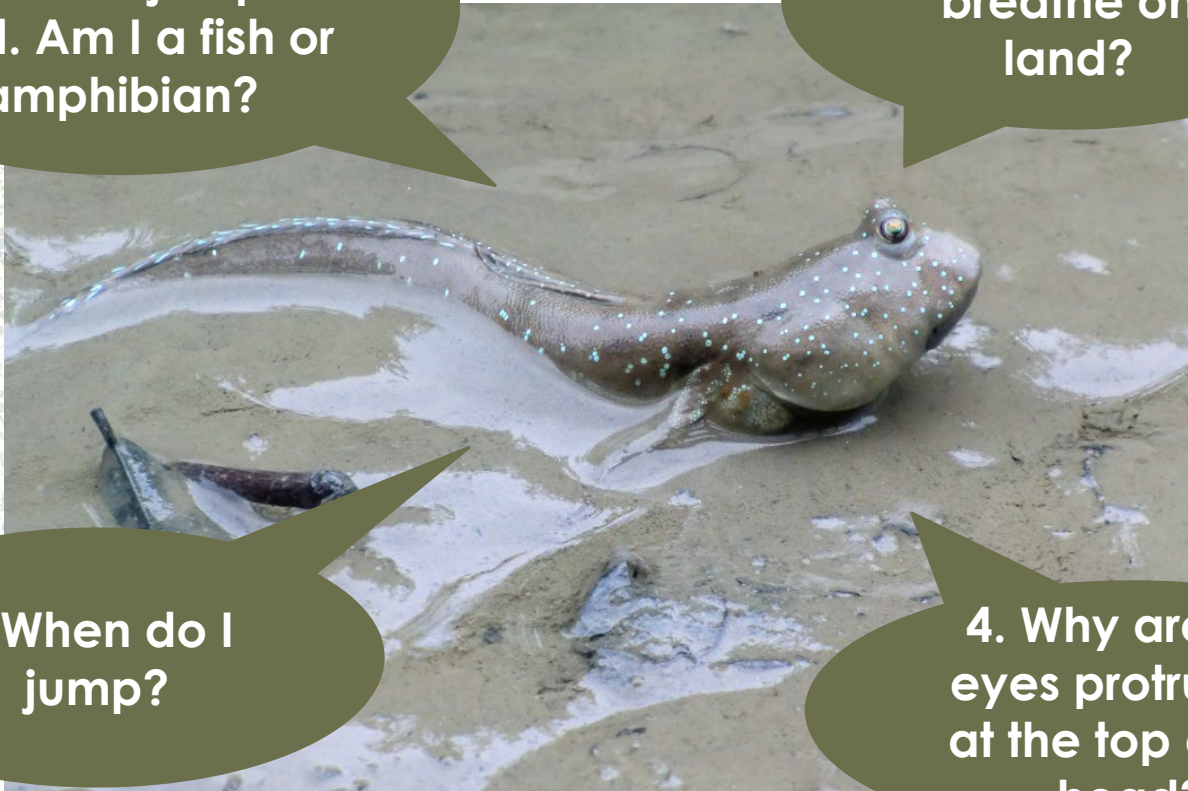
Point 2: Mudskippers

1. I can swim in water and jump on land. Am I a fish or amphibian?

2. Why can I breathe on land?

3. When do I jump?

4. Why are my eyes protruding at the top of my head?



Answers



1. Mudskippers are fish, not amphibians. They breathe with gills, and have other features of fish such as scales and fins.
2. There is a chamber inside the gill of a mudskipper. It can breathe on land temporarily by storing water or gas in the chamber, like how we hold our breath temporarily under water. Also, the moist skin help it breathe on land.
3. Mudskippers jump to drive invaders away or to attract females during the breeding period.
4. The eyes of a mudskipper protruding at the top of its head allow it to notice the predators from the sky such as birds, so as to escape or hide in time.

Point 3 : Adaptation of mangrove plants

- Try to find and observe one of the following propagules (droppers) of mangrove plants:



- How do “droppers” help mangrove plants to adapt the environment?
- Observe or touch these two mangrove species, what are other features that allow them to adapt to the intertidal environment?

Answers



- “Droppers” are the propagules of some mangroves species.
- The growth of mangrove plants is adversely affected by the tidal movement and the soft and unstable soil. Therefore some mangrove species have developed propagules. Mature propagules fall into the soil and develop roots and leaves with a faster growth rate compared to others.



Answers

The adaptation features of Many-petaled mangrove and *Kandelia obovata* are:

- **Waxy / fleshy leaves**

The brightly waxy leaves reduce water loss, while the fleshy structure helps to store water.

- **Stilt roots or prop roots**

These roots grow from the trunk, providing extra support to the plant and holding the soil firmly.



Conclusion



- Mangrove is a type of wetlands.
- Mangrove is home to many animals, such as mudskippers and fiddler crabs.
- To adapt to the environment in mangrove, mudskippers and fiddler crabs develop different habits and physical features.

How to protect mangroves?



- During the visit to mangroves:
 - Do not trample the roots of mangrove plants and their seedlings
 - Do not collect any parts of mangrove plants or wildlife
 - Take away rubbish and avoid polluting the water
- Cherish water in our daily lives, for example:
 - Shorten shower time by 1 minute => save 10 liters of water
 - Never keep the tap running when you are brushing teeth or washing hands => save 5 liters of water



Post-visit Consolidation Activity



Post-visit Consolidation Activity (15 minutes)



Folding a Fiddler Crab

Learning focus and objectives	Class activity	Location	References
<ul style="list-style-type: none">• Consolidate students' knowledges on fiddler crabs• Train the hand-eye coordination of students	<p>What are wetlands?</p> <ul style="list-style-type: none">• Guide the students to share the animals they observed during the visit to the Hong Kong Wetland Park• Guide them to describe the appearance of fiddler crab which lives in mangroves• Revision of the features of fiddler crabs, e.g. male fiddler crab has a big claw, while female fiddler crab has two small claws• Make the 3D origami that are given to schools that join self-paced visit offers	School classroom	3D Origami on website of Hong Kong Wetland Park

References of Wetlands and Mangroves



Hong Kong Wetland Park Factsheet No. 2 – Functions of Wetlands
<http://www.wetlandpark.gov.hk/images/wcms/Factsheet%202.pdf>

Hong Kong Wetland Park Factsheet No. 10 – Mangrove Communities
<http://www.wetlandpark.gov.hk/images/wcms/Factsheet%2010.pdf>

Pamphlet – “Know More About Mangroves”
http://www.wetlandpark.gov.hk/en/download/pamphlets_mangroves.asp

Gadgets - 3D Origami
http://www.wetlandpark.gov.hk/en/download/gadgets_3d_origami.asp



Visiting Hong Kong Wetland Park

Points to note

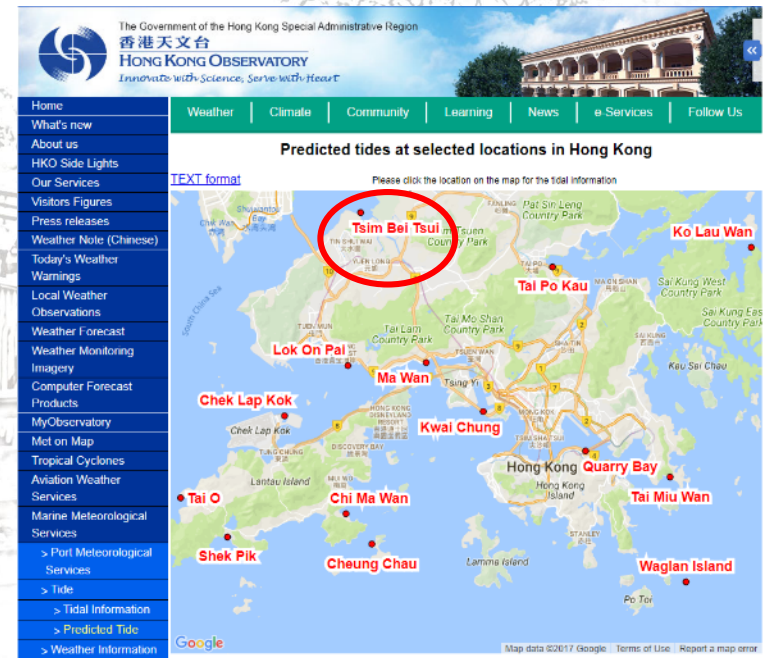


1. Date and Time Selection

- Opening hours of Hong Kong Wetland Park:
 - 10:00 – 17:00

Closes on Tuesdays (except Public Holidays)

- Different themes in different seasons
 - Best months to observe mangrove wildlife: April to October
- Check the tidal level
 - Predicted tides at selected locations in Hong Kong : Tsim Bei Tsui
 - Best time to observe mangrove wildlife: tidal height at or below 1m



Hong Kong Observatory:
<http://www.hko.gov.hk/contente.htm>

2. Mode of Visit

Self-paced visits



Online Booking / Instant Ticket

Self-paced Visit Offers

Ticketing and Admission

Home / Ticketing and Admission / Ticketing / Online Booking for Group Tickets

Online Booking for Group Tickets

Step 1 Booking Information Step 2 Group Information Step 3 Contact Information Step 4 Order Preview Step 5 Confirmation

I. Booking Information

* Mandatory fields:

No. of Standard Tickets *

No. of Concessionary** Tickets *

濕地自遊覽及教員借用服務申請表格

Application Form for Self-paced Visit Offers and Teaching Aids Lending Service

Step 1 Step 2 Step 3

* 查詢詳情

參觀日期 Date of Visit
(請於活動日期前至少7個工作日提交申請) Please submit your application at least 7 working days prior to the date of visit.)

預訂門票數量 Quantity of Admission Tickets

優惠票 (學生) Concessionary Tickets (Students)*

標準票 (成人) Standard Tickets (Adults)*

精美紀念品 (三選一) Souvenirs (Choose One Only)
(每位持票人獲派至可獲發一份) Each ticket holder will receive one selected souvenir)

“Self-paced Visit Offers”

Self-paced Visit Offers

[Home](#) / [Learning at Wetlands](#) / [School Programme](#) / [Self-paced Visit Offers](#)

School Programme v

Public Programme v

Teaching Resource

Schools that are planning to arrange self-paced visits can take an easy step to complete ticket booking and teaching aids lending procedures by filling in the form. Students and teachers will also receive a souvenir while visiting the Park. This programme is applicable to schools only.



[Online Reservation](#)

Enjoy a self-paced visit with:

- Souvenirs
- Ordered tickets

Lending Service of Teaching Aids

Free lending service of teaching aids for schools on their visiting days



Magnetic Puzzle



Today's Lunch (Food-web Game) (Chinese version only)



A3 Tidal Change Pictures



Pictorial Guide for Interpretation



Field Guide of Life Zone/ Birds



3. Arrangement

- Divided into Groups
 - Each teacher is recommended to guide not more than 25 students. Each group take turn to visit the points.
- Meal
 - Self-arranged
 - Places allowed to eat: The Atrium of Visitor Centre and 1/F Viewing Gallery
 - Catering Service: Café at Visitor Centre (Tel: 2617 2030)
- Picnic is not allowed in the Wetland Reserve
- Please keep the venue clean and tidy



The Atrium

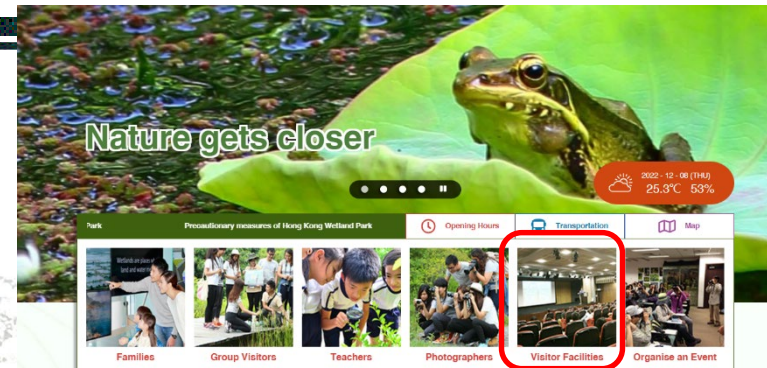


1/F Viewing Gallery

4. Venue Arrangement



- Venue Hiring
 - Multi-function Room 1: 50 persons
 - Theatre : 207 persons



What's New

Rep 30 Upgrading of Exhibition and Visitor Facilities of the Hong Kong Wetland Park

Nov 22 "Amazing Birds' Moment" Photo Collection Activity

Rep 19 The 22nd Inter-school Bird Race

Apr 23 Announcement on School Education Programmes

[More](#)

Event Calendar

December 2022

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
				4	5	6
				7	8	9
				10	11	12
				13	14	15
				16	17	18
				19	20	21
				22	23	24
				25	26	27
				28	29	30
				31		

Note: Pre-registration is needed for specific activities. The programme information is subject to change without notice.

Visitor Facilities



Multi-function Room 1



Theatre

Visitors Codes



- Keep quiet (Especially inside Bird Hides)
- Do not collect any animal or plant specimens
- Pay attention to other visitors, e.g. children, elderlies and wheelchair users
- Do not gather large group of students on main trails during visits
- Follow the instructions of our staff and the signs, e.g. do not enter restricted reserve area

Reminders :

<http://www.wetlandpark.gov.hk/en/information/code.asp>

Teachers' Page



What's New About Us Ticketing and Admission Exhibition & Facilities Biodiversity Corner Learning at Wetlands Volunteer Corner Download Area

Nature gets closer

2022 - 12 - 08 (THU)
25.3°C 53%

Hong Kong Wetland Park Precautionary measures of Hong Kong Wetland Park

Opening Hours Transportation Map

Families Group Visitors **Teachers** Photographers Visitor Facilities Organise an Event

School Programme

Home / Learning at Wetlands / School Programme

School Programme Public Programme Teaching Resource

Some school and public programmes were resumed, please [click here](#) for the latest updates of school programmes arrangement.

Visiting Hong Kong Wetland Park (Notes to Visitors)

Kindergarten Primary Secondary

K P S Park Experience Guided Tour

K P S Other Learning Experiences (Suitable for Secondary Schools)

K P S Soil Visits: Self-guided Visit Option

K Wetland Footprints

K P S Video of "Learning at Wetlands"