



FRESHWATER AND WETLAND SECONDARY SCHOOL EDUCATION PROGRAMME

For Secondary 1 to 7 students

September 2011 to August 2012

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Learning *IN* the environment is an effective strategy for Education for Sustainable Development. The Mai Po Nature Reserve is an open-air classroom for enriching students' learning experiences by developing their interest in, understanding of and concern about OUR environment and climate change, and the relationships with us.

A. EDUCATION PROGRAMME

The Programme aims to promote understanding of wetland ecology and awareness of and concern about the conservation of Mai Po Inner Deep Bay – a Wetland of International Importance under Ramsar Convention. **SIX PROGRAMME OPTIONS** have been developed to suit students' different levels and learning needs.

1. Wetland Encounter (For Secondary 1 to 3)
The programme specially designed for junior secondary students. Students can better understand the uniqueness of wetlands through different interactive activities, including word-guessing game and photo sharing.
2. Who wants to be a Wetland Reserve Officer? (For Secondary 1 to 7)
A field-based programme which enables students to understand the basic concepts and importance of conservation management through action and participation. Students will learn basic ecological surveying techniques and participate in field works in the reserve. <i>(This programme would only be arranged on Tuesdays)</i>
3. Mangrove Ecology in Deep Bay (For Secondary 4 to 7)
Through studying mangrove ecology, students will understand the important functions of wetlands, their roles and threats under various human activities including climate change, then concern about mangrove conservation worldwide. Students will also acquire the skills to identify different mangrove species and their adaptation features.
4. Urban Planner @ Deep Bay (For Secondary 4 to 7)
This programme highlights the different land uses in and around the Ramsar Site with special focus on the historical changes and current conflicts in land use issues. This programme will also enrich students' understanding of the man-land relationship and the land use planning mechanisms in Hong Kong.
5. Wetland Ecologist (For Secondary 4 to 7)
Through interpretation, wildlife survey, field studies and discussions, students will learn about the value and importance of biodiversity, and lastly enhance awareness and concern about wetland conservation. <i>(This programme equipped with "online learning" component. Teachers and students are required to access to the e-learning platform < http://apps.wwf.org.hk/wetlandecologist/eng/ > before visit for a comprehensive learning.)</i>
6. Mai Po Multiplex (For Secondary 4 to 7)
Through introductory trip, interviews and issue-enquiry approach discussions, students will understand the effect of individual actions, social characteristics and national policies on environmental changes and their interconnectedness. Students will use real-life examples in Mai Po and Deep Bay as discussion topics, adopt multiple perspectives to analyze the causes and impacts of the issues, and to investigate the interrelationship between the issues and global events such as climate change and sustainable development.

B. EDUCATIONAL APPROACH

With an issue inquiry approach, the Programme serves as a case study for students to do Project Learning in studying environmental issues. It is conducted through a wide range of learning activities, which include role-playing, interactive games, hands-on experience, wildlife observation and identification, interpretation and debate. Visit route covers our bird watching hide(s), Mai Po Visitor Centre and Education Centre, *gei wai* and boardwalk in the Mai Po Nature Reserve and nearby fishponds (*Remark: only programme options 3 & 4 will cover Floating Boardwalk*).

Related information can be downloaded from WWF Schools and Outreach Education Programmes website
< <http://www.wwf.org.hk/en/whatwedo/education/schoolsoutreach/> >

C. BOOKING INFORMATION

Date of Programme: Weekdays, except Wednesdays and Public Holidays. (Option 2: Tuesdays only)
Time for Programme: AM Session (09:00 to 13:00 hrs) **OR** PM Session (13:00 to 17:00 hrs)
Guidance: WWF Education Officer
Group Size: **30-38 students + at least 2 teachers, but not more than 4 (except special cases)**, must accompany with students for safety and discipline control
Charge: Free of charge (Procurement of service by Education Bureau)
Application Procedure: Complete the online registration and application at <http://www.wwf.org.hk/en/whatwedo/education/schoolsoutreach/secondaryprog/>

IMPORTANT REMINDERS

- Please submit an individual online application for each programme application. Each school may apply for a maximum of FOUR Freshwater and Wetland Secondary School Education Programmes. The closing date for applications is 30 June 2011.
- In view of the limited quota available, *all applications will be processed on a first-come-first-served basis*. Schools which have not joined the Freshwater and Wetland Secondary School Education Programmes during the past two school years will enjoy priority booking.
- WWF will primarily process each school's first application, second application will be considered after reviewing the overall application status.
- Schools will be notified of their application result by **EMAIL**. If no notification received after 30 Sept 2011, please contact WWF
- For any enquiries, please contact our Administration Officer on tel. no. 2526-1011 (choose 2 for English, then press 1, 2, 1, 1) or by e-mail at ihcsc@wwf.org.hk.



FRESHWATER AND WETLAND SECONDARY SCHOOL EDUCATION PROGRAMME (F.4-7)

Mangrove Ecology in Deep Bay Programme Rundown

MANGROVE ECOLOGY IN DEEP BAY is an outdoor “Education for Sustainable Development” Programme specially designed for senior secondary school students. Through studying the ecology of the largest mangrove area in Hong Kong, students will understand important wetland functions and become concerned about mangrove conservation worldwide. In the programme, students will learn how to identify native mangrove species and their adaptation features. They will also gain practical ‘hands-on’ experience via various activities and studies. More importantly, students will be able to understand and explore the wonders of the Hong Kong’s wetland, the biodiversity and resources in it.

BEFORE THE VISIT: Teachers are suggested to read through all visitor guidelines and codes issued by WWF (**Appendix 4**). Students should be notified about what they are going / not going to do, what to bring / dress, and be encouraged to look for relevant background information from the internet. Teachers should divide students into 6 teams and dispatch one set of the student worksheet to each team (Please download from WWF website http://www.wwf.org.hk/en/reslib/resources/edu_resources/)

PROGRAMME CONTENT: The 4-hour programme will be conducted with an interactive approach through a wide range of activities, including wildlife and plant observations, identifications and surveys, discussion and presentation. The route will cover Mai Po Visitor Centre, Bird Hide, Mai Po Education Centre, Roundtable Boardwalk, Floating boardwalk and nearby Fishponds. Teachers should encourage students to use the provided student worksheet during the programme in order to strengthen the learning experiences.

Programme Rundown*	Location	Approx. Time
1 Welcome and programme briefing <ul style="list-style-type: none"> • Registration • Introduction of wetlands and background information on Mai Po Inner Deep Bay Ramsar Site • Understanding the facts about mangrove and mangroves in Mai Po • Illustration of common wildlife in Mai Po • Materials distribution (including binoculars, Wildlife ID cards) 	Mai Po Visitor Centre	30mins
2 Field observation <ul style="list-style-type: none"> • Understand species and habitats diversity in and around Mai Po Nature Reserve. • Understand the value of different wetland habitats to wildlife and human. 	Mai Po Nature Reserve	60mins
3 Mangrove encounter (mangrove survey) <ul style="list-style-type: none"> • Identify mangrove species and study their special features and adaptations through observation and drawings. • Discuss mangrove ecology in wetland. 	<i>gei wai</i>	30mins
4 Growth of mangrove forest <ul style="list-style-type: none"> • Understand the natural profile and succession of mangrove ecosystem, through walking along the floating boardwalk and field observation in the bird hide adjacent to mudflat. • Identify the threats imposed to wetland habitats including mangrove. 	Frontier Closed Area	70min
5 Man and mangrove <ul style="list-style-type: none"> • Realize the value of mangrove in the operation of <i>Gei Wai</i> in past and present. 	<i>gei wai</i> Museum	20min
6 Conclusion and Q&A	Mai Po Education Centre	10mins
7 Return to Visitor Centre	/	20mins
8 End of Programme	Mai Po Visitor Centre	/
Total time		4hrs

* **Important note:** As the programme involves outdoor field studies in Mai Po Nature Reserve, the actual programme rundown on the day will very much depend on the local weather conditions (please refer to Attachment 5 *Poor Weather Condition Guidelines*) and the students’ discipline. WWF reserves the right to alter the rundown without prior notice