



# PANG SOONG LODGE, OUTDOOR EDUCATION AND RESEARCH CENTRE: CURRICULUM BASED ENVIRONMENTAL STUDIES



## Introduction



The Pang Soong Lodge, Outdoor Education & Research is perfectly positioned to provide top class outdoor & environmental education and activities programmes to the international and domestic schools & universities market.

The key attractions can be summarized as:

- Location** – the property is on the edge of a pristine evergreen forest only 45 minutes from, but 700 metres above the city of Chiang Mai. The city itself is well known as one of Asia's best value for money destinations – especially for the education and meetings markets. Our 'classroom' is the stunning 30 sq.km primary evergreen Mae Lai community forest, protected by its custodians the Khon Muang of Ban Mae Lai, who have farmed Chaa miang (fermented chewing tea) on its outskirts for over 200 years.
- Key staff** – Our environmental educational team is led by Mr Adrian Palmer – a well respected ecologist with a strong field research background and many years experience teaching in Thailand's international schools system. The outdoor activities programmes; team building, safety etc., are run by Courtney Goode, a double degree holder in outdoor education. The community service/volunteer programmes as well as Eco-English programmes are run by Monique Toubia – the project manager for voluntourists without borders. The onsite team is well supported by Track of the Tiger T.R.D. an accepted leader in northern Thailand's soft adventure and outdoor education industry since 1986.
- Programme content** – Providing outdoor education and activity programmes is one component of several in our product mix. Providing research based solutions to saving that environment by finding ways for the rural poor to enjoy a sustainable living from it is our main goal.

In addition to providing a world class platform for environmental studies and outdoor activities, the centre allows students involvement in private sector-operated – community owned responsible ecotourism development.

Programme content from at Pang Soong Lodge, Outdoor Education & Research Centre, as well as from our city based affiliated properties can be reviewed under:

**Note\* (See: The Team Building & Outdoor Activity Programmes.PDF.)**

- **Price** – As owner operators of both the Pang Soong Lodge Outdoor Education & Research Centre, owners of Track of the Tiger Tours, and a high volume room supplier through our MICE business, we are confident that we can provide our clients with the best value for money pricing available. Typically pricing for an all inclusive programme from arriving to departing Chiang Mai ranges from Baht 1800 – 3000 per student, per day depending on the following choices: Programme content, Accommodation, Meals, Transport. Pricing is also influenced to a certain extent by group size.
- **Experience** – With 23 years as a recognized leader and innovator in northern Thai tourism, [Track of the Tiger T.R.D](#) (Tourism Resources Development) has a solid reputation, a good repeat client base, and the capacity to deliver well designed, managed and risk assessed programmes.

**Our history in Ed-venture tourism**

Track of the Tiger T.R.D has been a leader in outdoor education in northern Thailand since establishing both field study facilities and educational programmes specifically for International schools at our original property – Maekok River Lodge. Our first client was the Jakarta International School in 1991.

Shortly after that Hong Kong International School became a client, and soon after their then head of Geography and Vice Principal Bryan Massingham, and his wife Rosalind (Rose), a history teacher, joined us as partners to establish a new and larger property in 2002.

Bryan and Rosie remain our partners and now run the new custom designed Maekok River Village Resort & Outdoor Education Centre (opened in October 2008) whilst we, Shane & Sriphan Beary, have moved into Chiang Mai, and have established the Pang Soong Lodge, Outdoor Education & Research Centre just an hour from the city.

**The future of outdoor education**

Historically the focus of outdoor education and activities has been limited to environmental related studies, outdoor activities, community service, cultural tours and/or other options for interaction with the local community and attractions. We are however well aware that the term ‘outdoor education’ has a far wider meaning and a far greater potential client base, and are intent on exploring the full range of possibilities. Consider the following:

**A different classroom** - The outdoors often provide a learning environment in which many students, normally under pressure in a classroom setting, become less inhibited in their exploration of ideas and concepts, and often surprise their teachers by their new found interest in a subject.

A waterfall – can provide lessons in flow, volume etc.

A tall tree – can provide lessons in trigonometry.

A forest walk – can provide inspiration for an essay or a vocabulary exercise.

**A different teacher** – The Elephant Conservation Centre in Lampang recently hosted a programme that saw children with autism interact with elephants. According to the experts the results were quite exciting. In many parts of the world programmes that allow children – disadvantaged or not - access to animals have proven successful in unlocking their inhibitions and encouraged them to take interest.

**A different client** –The fact that we include environmental education and encourage study of our unique private sector – community responsible ecotourism development model, ensures our appeal to many government agency, NGO and aid agency clients for whom access to hands on environmental education opportunities are limited.

### The Facilities & Resources at PSL

(See: The Pang Soong Lodge, Outdoor Education & Research Centre Fact Sheet PDF.)

### Professional development courses for teachers



As International teachers well know there is a difference between knowledge of your subject and the local knowledge required of the environment, geography, people and cultural norms -needed to ensure that you can design and deliver implement the best possible programme you can when on field trips in Thailand.

Our Director of Studies, [Mr Adrian Palmer](#) himself an International school teacher with years of teaching experience (ecology) all over Thailand, and who joins us at the end of 2009, will be putting our professional development programmes together. [Contact him](#) for more detail.

## Curriculum based activities



Pang Soong Lodge will tailor make a course to fit the demands of your school and curriculum. If the course specification is sent to us, then a programme can be designed to fit the objectives in the syllabus on an individual basis.

The programme will include a mixture of taught units, fieldwork exercises and laboratory analysis. Follow up sessions take a variety of forms as required by the subject, including writing up reports, general discussions or debates on environmental issues or role play activities in support of the learning.

All age groups and courses can be catered for.  
PSL. Student Work Book.PDF. (available on request)

### School Grade Equivalent Table.

#### Key Stage 5/High School\*

For IB, A level or AP curriculums we can host classic ecological studies or environmental sciences. As an example IB programmes are outlined below, but this is easily adapted to A level or AP requirements.

IB subjects such as Biology, Geography or Environmental Systems and Societies are often supported by a fieldwork element, but the needs of other courses such as TOK can be well supported by environmental activities and are designed for a mixture of students studying Biology SL and HL, along with Environmental Systems and Societies. We can also support other components of the IB diploma courses such as Group 4 projects or TOK courses.

For Group 4 projects students need to cover the planning discussion sessions in school in advance and then equipment requirements can be arranged to support their studies. TOK courses include a range of supporting lectures and activities to explore how the ways of knowing, sensory perception, emotions, language and reason as ways to understand our environment.

**Key Stage 4/IGCSE/MYP\***

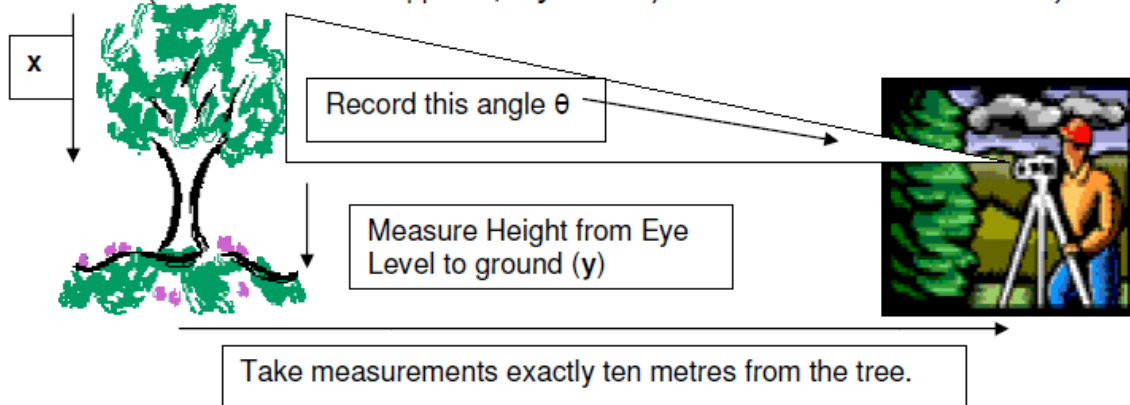
The demands of courses such as IGCSE Environmental Management, Biology or Geography are well met by a field trip to Pang Soong Lodge which can focus on the traditional approaches to these subjects or through case studies of related management issues.

**SAMPLE: environmental studies workbook**

The height will be calculate from trigonometry by using

$$\text{Tan of } \theta = x/10\text{m}$$

(or use  $\text{Tan of } \theta = \text{Opposite/Adjacent}$  if you can and rem.  $\text{Tan of } 45^\circ = 1$ )



The height of the tree equals  $x + y$ .

**Key Stage 3 and Younger Students\***

Pang Soong offers a variety of studies suitable for younger students. Academic studies are enhanced through hands on activities and experiential nature walks designed to stimulate interest and generate enthusiasm for the subject. Younger children delight in the freshwater minibeast studies and earthwalk activities offered.

**Field day themes****Hydrology, Soils and Catchment Management**

Students investigate the contemporary issue of catchment management in relation to the forests and fields of the Pang Soong Valley. Students measure channel discharge in the Mae Lai stream and record infiltration in a variety of land uses and vegetation types along the valley.

Quadrat analysis of the vegetation can be carried out. Soil profiles are sketched, and samples are analysed in the field and laboratory. The field data is combined with secondary data to test hypotheses.

The data is then used to stimulate a debate session, with students taking on different roles to discuss the management of Thailand’s evergreen watershed forests.

**Zonation of Forests in the Mae Lai Valley and local area**

A study of the forest ecosystem and its changes related to altitude and management is carried out. Either an interrupted belt transect is carried out with quadrats of 10 x 10m squared, with the number of samples dependent on time or the group.

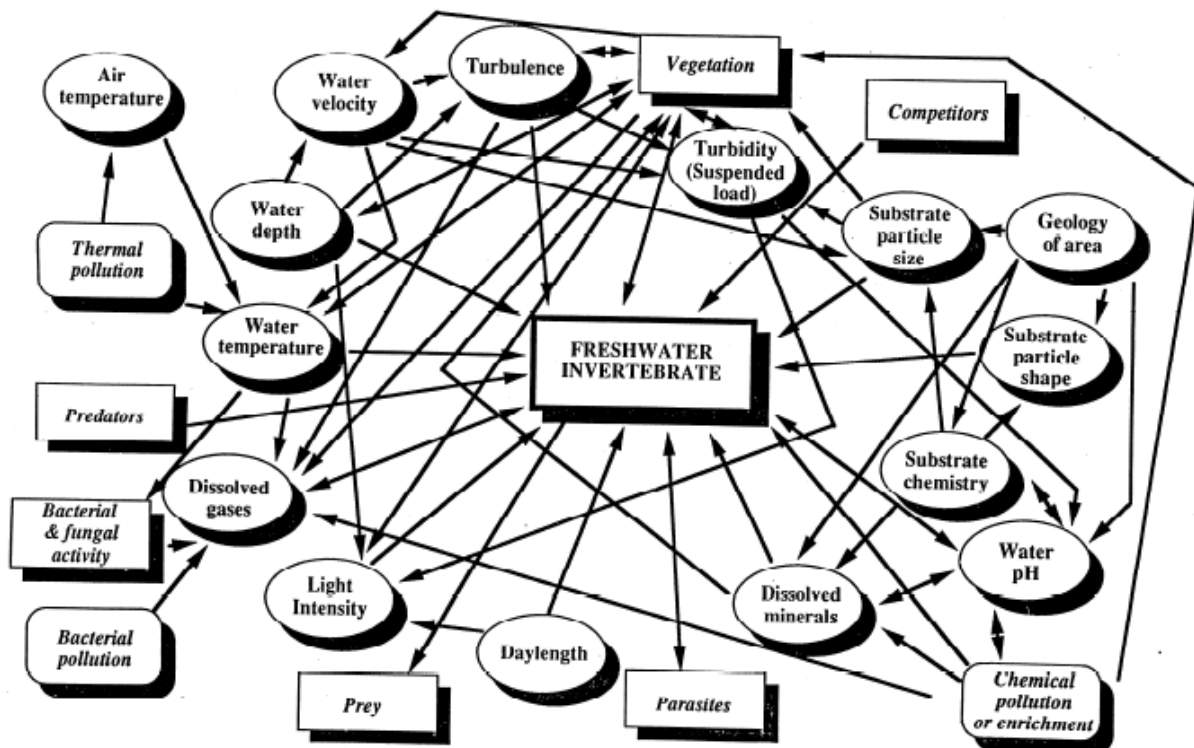
A simpler investigation compares just two sites. Species lists with ACFOR scales for the trees can be carried out, along with soil analysis to see changes in depth and moisture. Random herb layer quadrats and epiphyte counts should be carried out in each quadrat.

**Freshwater Invertebrates – Micro-habitat , Diversity and Adaptation**

Students take kick samples from a variety of different microhabitats in the streams. Details of the niche are described using a 25 by 25 cm quadrat. The adaptation of the invertebrate species is described using careful observation of the species in tanks and under magnification.

**SAMPLE: environmental studies workbook**

FACTORS AND INTERRELATIONSHIPS WHICH MAY AFFECT THE ABUNDANCE AND DISTRIBUTION OF BENTHIC INVERTEBRATES IN A SMALL STREAM.



Simpson's diversity indexes are calculated and compared for the microhabitats and student hypotheses tested. This versatile study can be concluded in a number of different ways. Such as discussing the factors influencing diversity in communities in detail, examining invertebrate evolution in relation to adaptations, or focusing on niche theory and competitive exclusion.

A fun alternative to conclude the day is to give students an opportunity to imitate and identify the species through role play.

### **Freshwater Invertebrates - Indicator Species, Biotic Indexes and Water Quality**

Students compare two sites to investigate the impact of organic pollution on the invertebrate community. Kick samples are taken at Mae Lai and compared with other suitable sites as required.

Students take water samples for laboratory analysis of conductivity (total dissolved solute), suspended sediment (turbidity) and dissolved oxygen. Thailand's "Greenworld Index" is calculated and used to compare with the measurements. Secondary data is used from other sites in Thailand.

This day can be taught independently of the previous, or on the following day allowing for detailed extension of the niche theory concept in relation to indicator species.

Discussion of the value of biotic indexes and of environmental monitoring projects such as the River Ping's RSPY project by Thai schools provides a useful follow up to the day.

### **Invertebrate Biodiversity Studies**

Pang Soong offers a variety of studies into the incredible diversity of invertebrates living its forests. A variety of trapping techniques are used for soil, the canopy and the forest floor, such as pit fall traps, baited pit traps, direct sampling, canopy traps. Light trapping is carried out as an evening activity.

These studies can be linked to the problems of managing habitats for invertebrates, with local examples of extinct species considered. The problems of assessing global biodiversity are considered along with its implications to conservation.

### **Other outdoor education related documents**

**See:** The Eco-English Programmes, Summer Camps & Youth Group Programmes.PDF.

Note\* **The Eco-English programmes** are in and adaption of our excellent 6 Day/6 Module Environmental Studies programme.

They can be taken as a complete course, or clients may choose to take any of the five modules. They are an excellent 'hands on' product.

Module 1 – Sustainability & clean air.

Module 2 – Wildlife.

Module 3 – Land management

Module 4 –Land management urban.

Module 5 – Water management.  
 Module 6 – Sustainability 2.

**See:** Team Building & Outdoor Activities from both Pang Soong Lodge & accommodation in Chiang Mai City.

**SAMPLE: environmental studies workbook**

**Student Information Booklet for the Ecology Field Trip Chiang Mai 2008**

LINNAEN CLASSIFICATION	COMMON NAME	Sample 1	Sample 2	Sample 3
Phylum <b>Platyhelminthes</b>	Flatworms			
Phylum <b>Annelida</b>	True worms			
Class <b>Oligochaeta</b>	Earthworms			
Class <b>Hirudinea</b>	Leeches			
Phylum <b>Mollusca</b>				
Class <b>Gastropoda</b>	Snails			
	Limpets			
Phylum <b>Crustacea</b>				
Class <b>Isopoda</b>	Water Hoglice			
Class <b>Amphipoda</b>	Shrimps			
Class <b>Decapoda</b>	Crabs			
Phylum <b>Chelicerata</b>				
Class <b>Acarina</b>	Water mites			
Phylum <b>Uniramia</b>				
Order <b>Plecoptera</b>	Stoneflies			
Order <b>Ephemeroptera</b>	Swimming			
	Mayflies			
	Flattened			
	Burrowing			
	Squat			
	Prong gill			
Order <b>Hemiptera</b>	True Bugs			
	Boatmen			
	Pond Skaters			
Order <b>Trichoptera</b>	Caddisflies			
	cased			
	caseless			
Order <b>Coleoptera</b>	Beetles			
Order <b>Diptera</b>	True flies			
Family Siimulidae	Black flies			
Family Tipulidae	Craneflies			
Family Culicidae	Mosquitos			
Family Chironomidae	Midges (NB)			
Family Ceratopogonidae	Biting Midges			