

# SIS Field Study Centre Khao Yai

Science  
Biology  
Geography

Our field study programme offers coursework focused study for:

Primary

Secondary

GCSE

IGCSE

A level

AS level

IB

Teacher Training

Adult training



based at:  
St. Stephen's  
International  
School



# Location

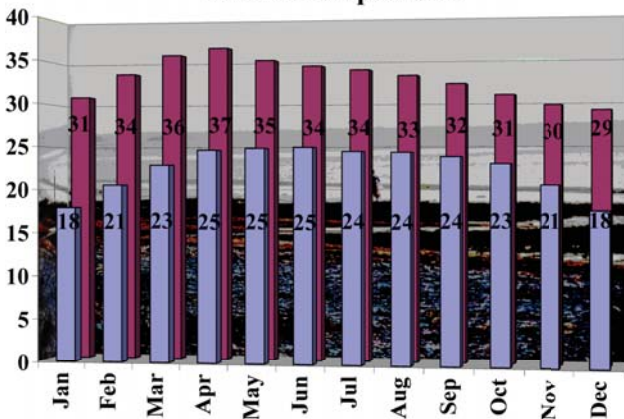
SIS Field Study Centre Khao Yai is based at St. Stephen's International School - a two-hour drive from Bangkok. Khao Yai National Park is only fifteen kilometres from the school and takes less than twenty minutes to reach.

Khao Yai National Park is the oldest and second largest national park in Thailand. 70 mammal species, more than 320 bird and 2500 plant species are confirmed inside the park area, waiting to be explored. Khao Yai National Park is an excellent place to undertake field studies with its diverse ecosystems containing a variety of different rainforest types, long river systems and huge grassland areas.



# Climate

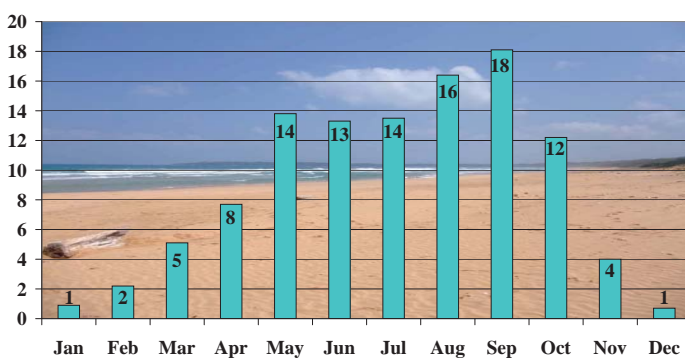
Annual Temperature



The weather at Khao Yai is controlled by the monsoon with four annual seasons:

- December to February: Cool dry season (North East Monsoon)
- March to May: Hot dry season (1st inter monsoon period)
- May to September: Rainy season (South West Monsoon)
- October to November: Retreating Monsoon (2nd inter monsoon period)

Rainy Days per Month



The temperature is comfortable throughout the year, with a cooler period between December and February. Should you plan to visit our field study centre between May and September, expect heavy rain with all its consequences.

The rivers at the national park will carry a lot of water and during the forest walks you may encounter leeches! It is advisable to take into consideration the seasonal variations when deciding when to visit our field study centre.

# Study programme

The educational programmes provided by SIS Field Study Centre will meet the criteria for a range of curricula and syllabuses including IB, IGCSE, AS level and A level. Our Science, Biology and Geography excursions are tailor-made and delivered by experienced science specialists. We run study camps for all age groups from primary, secondary to senior levels.

Our field study programme offers coursework focused study for:

- Secondary
- GCSE
- IGCSE
- A level
- AS level
- IB
- Teacher Training
- Adult training



Teacher training can be offered before your visit to St.Stephen's Field Study Centre to build up practical skills and to preview the nature study sites. Depending on the follow up programme chosen, training can be taken without extra cost.

Our programme can be delivered in English, Thai and German.



# Examples for Biology coursework

## Classification of animals: Insect Studies

Insect studies are available for Primary through to A level/IB. Examining the taxonomy and ecology of insects enables students to understand basic fundamentals of “minibeasts” for young beginners and complex insect plant interactions for higher grades.

- Introduction to the classification of insects and other animal groups
- Understanding of taxonomy and the arrangement of zoological hierarchies
- Use of dichotomous keys for identification of higher taxa
- Scientific methods of insect collection
- Preservation and preparation methods- first steps to build an insect collection
- Insect keeping in guest quarter to study their behaviour
- Wirlgig beetles: Extreme adaptations for a life on freshwater surface



Insect studies can be carried out between March and November. The best period is at the beginning of rainy season in May and June since many insects are triggered to end their diapauses with the first heavy rainfalls.

| January | February | March        | April | May       | June | July | August | September | October      | November | December |
|---------|----------|--------------|-------|-----------|------|------|--------|-----------|--------------|----------|----------|
|         |          |              |       |           |      |      |        |           |              |          |          |
| poor    |          | satisfactory |       | very good |      | good |        |           | satisfactory |          | poor     |

## Gibbon Studies: Behaviour and adaptation to a tropical rainforest environment

The students will follow a family group for several hours and collect primary data on behaviour and adaptations of Whitehanded Gibbons.

- Social behaviour of an arboreal ape
- Habitat use
- Successful adaptations for an extreme habitat
- Unique locomotion: “Branching”



Gibbons can be observed all year, but during the rainy season from July to October precipitation and leeches make it demanding to spend all day within the rainforest.

| January | February | March | April | May | June | July         | August | September | October | November | December |
|---------|----------|-------|-------|-----|------|--------------|--------|-----------|---------|----------|----------|
|         |          |       |       |     |      |              |        |           |         |          |          |
| good    |          |       |       |     |      | satisfactory |        |           | good    |          |          |

# Examples for Biology coursework

## Vegetation Studies: Identifying stages of plant succession within Khao Yai National Park.

The students will learn how to install a transect and will collect plant data and take weather readings. The data will be used to explain the influence of land use and the resulting micro climates on vegetation structure in forest undergrowth flora.

- The influence of micro-climates on vegetation density and diversity.
- How does human activity affect the density and diversity of vegetation in Khao Yai National Park?
- Vegetation changes across a transect. The transect includes different land uses and investigates the influence of natural landscapes (soil type, aspect, slope gradient, changes in altitude, distance to a river, etc.)



Vegetation studies can be carried out throughout the year.

| January                  | February | March | April | May | June | July | August | September | October | November | December |
|--------------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| good throughout the year |          |       |       |     |      |      |        |           |         |          |          |

## Trophic levels and farming systems: Dairy production at Chok Chai, the largest dairy farm in South East Asia.

Secondary and high school students will collect primary data during the investigation on the farm area and during interviews with employees.

- Trophic levels within food chains
- Food crop production and milk production:  
Energy flow and efficiency
- Farming systems for sustainable agriculture



Studies on trophic levels and farming systems can be carried out throughout the year.

| January                  | February | March | April | May | June | July | August | September | October | November | December |
|--------------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| good throughout the year |          |       |       |     |      |      |        |           |         |          |          |

# Examples for Geography coursework

## River studies: Discharge and pollution

Students will be able to plan and conduct river/ hydrological fieldwork investigations and will be introduced to the following:

- The long profile of the river channel - measuring channel gradients
- The bed-load – sediment size, shape and type
- Sediment load – evaluating the suspended load and recognising the way the load is transported at different points along the river
- Discharge – working out the discharge by measuring cross-sectional channel area and velocity
- Pollution – practical kick testing techniques to study invertebrate populations as key indicator species of pollution.



River Studies - Dry Season (Picture P. Schuetz)

River studies should not be done during the peak of the rainy season between August and October, since the river levels are usually very high and practical work would be very risky.

| January      | February | March | April | May | June | July | August | September | October | November | December |
|--------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
|              |          |       |       |     |      |      |        |           |         |          |          |
| satisfactory |          |       | good  |     |      |      | poor   |           |         | good     |          |



River Studies - Beginning of the Rainy Season (Picture P. Schuetz)

# Examples for Geography coursework

## Micro Climate Studies: How does the type of land use affect the micro climate?

Students will learn how to take weather readings at a range of sites. They will later use the collected data in order to explain the influence of land use on the micro climate.

- Identification of study sites and primary data collection
- Data analysis and evaluation
- Explanation of the influence of land use on micro climate sites.



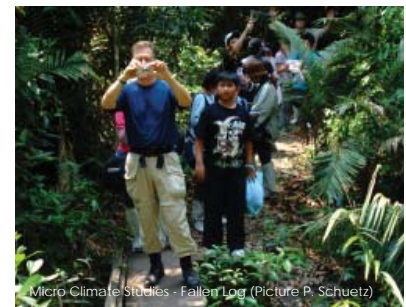
Micro climate studies can be carried out all year around.

| January                  | February | March | April | May | June | July | August | September | October | November | December |
|--------------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
|                          |          |       |       |     |      |      |        |           |         |          |          |
| good throughout the year |          |       |       |     |      |      |        |           |         |          |          |

## Human Impact: Land use and Ecotourism

The students will interview park visitors and national park staff using a questionnaire to collect primary data. The students will be able to learn the origin of the visitors and assess advantages and problems of ecotourism at Khao Yai National Park.

- Assessment of the sphere of influence of Khao Yai National Park.
- Evaluation of positive and negative aspects of ecotourism at Khao Yai National Park.



Human impact studies can be carried out throughout the year.

| January                  | February | March | April | May | June | July | August | September | October | November | December |
|--------------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
|                          |          |       |       |     |      |      |        |           |         |          |          |
| good throughout the year |          |       |       |     |      |      |        |           |         |          |          |



# Examples for Geography coursework

## Ecosystems: Tropical rainforest

Students will take a guided walk through the tropical rainforest and collect primary data in the form of leaves and pictures along the trail. Later this data will be used to carry out analysis on animal and plant biodiversity. Selected species will be chosen to collect background information on their niche and adaptations.

- Understanding a tropical rainforest environment
- Introduction to biodiversity
- Animals, adaptations and their niche
- Forest animals and plants

The best period to do rainforest studies is the cool dry season between November and February. The following months are good as well, until the start of the heavy rainy season at the end of June.

| January   | February | March | April | May | June | July         | August | September | October   | November | December |
|-----------|----------|-------|-------|-----|------|--------------|--------|-----------|-----------|----------|----------|
|           |          |       |       |     |      |              |        |           |           |          |          |
| very good |          | good  |       |     |      | satisfactory |        |           | very good |          |          |



# Sample programme

## Seven Days A Level Science Field Excursion

| Time  | Date | Day 1   | Day 2  | Day 3   | Day 4   | Day 5  | Day 6  | Day 7                                |
|-------|------|---|--|---|---|--|--|--------------------------------------|
| 6.00  |      |   |  |   |   |  |  |                                      |
| 6.30  |      |   | Wake up  | Wake up   | Wake up   | Wake up  | Wake up  | Wake up                              |
| 7.00  |      |   | Breakfast  | Breakfast   | Breakfast   | Diversity of Birds: Bird Watching  | Breakfast  | Breakfast                            |
| 7.30  |      |   |  |   |   | Breakfast  |  |                                      |
| 8.00  |      |   | Leave for Khao Yai National Park   | Leave for Dairy Farm at Khao Yai Area   | Leave for Khao Yai National Park  | Leave for Research Area  | Leave for Sample Area close to Khao Yai NP                                   | Final Data Analysis and Presentation |
| 8.30  |      | Leave Bangkok for St. Stephen's (SIS) Khao Yai  | Khao Yai Visitor Center - Introduction   | Energy Flow through different Trophic Levels                                      | National Park   | Fruit Trees as Habitats and Food Resources   | Insect Biodiversity Secondary Forest   |                                      |
| 9.00  |      |   | Vegetation Fieldwork Investigations  | Cattle Farming at Khao Yai Area<br>Dairy production                               | Gibbon Studies<br>Niche and Adaptation of a highly specialised Ape  | Observation and Documentation of visiting Bird- and Mammal species at a fruiting Fig tree                  | Practical Introduction to Sampling Methods<br>Malaise Traps<br>Pitfall Traps | Sport and Swimming Competition       |
| 9.30  |      |   |  |   |   |  |  |                                      |
| 10.00 |      | Unpack & Orientation  |  |   |   |  |  |                                      |
| 10.30 |      |   |  |   |   |  |  |                                      |
| 11.00 |      |   |  |   |   |  |  |                                      |
| 11.30 |      |   |  |   |   |  |  |                                      |
| 12.00 |      | Lunch   | Lunch  | Lunch   | Lunch   | Lunch  | Lunch  | Lunch                                |
| 12.30 |      |   |  |   |   |  |  |                                      |
| 13.00 |      | Leave for Khao Yai National Park  | Measuring Vegetation Density, Frequency and Diversity along selected Transects | Activities at Bonanza Adventure Park  | One day on the tracks of a Gibbon family:<br>Conversation, feeding behaviour, physiological adaptations to a life in the canopy of a tropical rainforest. | Insect Biodiversity Primary Forest   | Insect Biodiversity on Farmland  |                                      |
| 13.30 |      |   | Practical Identification of Plant Species                                      | Carbon Cycle and usage of Biofuels to reduce atmospheric levels of Carbon Dioxide | Natural Selection leads to adaptation and evolution: Butterfly Biodiversity and different types of Mimicry  | Natural Selection leads to adaptation and evolution: Butterfly Biodiversity and different types of Mimicry | Leaving for SIS Khao Yai   | Leaving for SIS Khao Yai             |
| 14.00 |      |   |  |   |   |  |  |                                      |
| 14.30 |      | Introduction different Ecosystems at Khao Yai NP (Rivers, Waterfalls, Rain Forest Types, Savanna) | Trigonometrical Estimation of Tree Height                                      | Cassava plantations and Starch as source of Biofuel                               | Leaving for Houses at Khao Yai NP   | Leaving for SIS Khao Yai   | Identification and determination Course Methods to preserve Insects          | Leaving for SIS Khao Yai             |
| 15.00 |      |   |  |   |   |  |  |                                      |
| 15.30 |      |   |  |   |   |  |  |                                      |
| 16.00 |      |   |  |   |   |  |  |                                      |
| 16.30 |      |   |  |   |   |  |  |                                      |
| 17.00 |      | Leave for St Stephen's Khao Yai   | Leaving for SIS Khao Yai   | Leaving for SIS Khao Yai  | Dinner  | Dinner   | Dinner   |                                      |
| 17.30 |      |   |  |   |   |  |  |                                      |
| 18.00 |      | Shower  | Dinner   | Dinner  | Night Safari: Larger Mammal Species Diversity   | Dinner   | Bat Cave Visit   |                                      |
| 18.30 |      |   |  |   |   |  |  |                                      |
| 19.00 |      | Welcome BBQ   | Data Analysis and Presentation   | Data Analysis and Presentation  | Data Analysis and Presentation  | Data Analysis and Presentation   | Bat Cave Visit   | Data Analysis and Backup             |
| 19.30 |      |   |  |   |   |  |  |                                      |
| 20.00 |      |   |  |   |   |  |  |                                      |
| 20.30 |      |   |  |   |   | Insect Light Trap  |  |                                      |
| 21.00 |      | Dorm & Bed  | Dorm & Bed   | Dorm & Bed  | Data Analysis and Presentation  | Dorm & Bed   | Dorm & Bed   | Dorm & Bed                           |
| 21.30 |      |   |  |   |   |  |  |                                      |
| 22.00 |      |   |  | Over night at Khao Yai  |   |  |  |                                      |
|       |      |   |  |   |   |  |  | Leave for Bangkok                    |

# Health and Safety

Student health and safety is central at St. Stephen's Field Study Centre Khao Yai. Our long experience has given us the opportunity to establish effective safety policies. A professional nurse as well as security staff are available at the Field Study Centre and during study excursions. All our field study sites, activities and buildings have been risk assessed. We give great attention to hygiene and fire regulations.

## Accommodation

The field study centre is based at St. Stephen's International School, Khao Yai. The campus provides separate boys and girls dormitories with their own bathrooms. All dormitories have separate teacher rooms and AC.

The visiting schools are entitled to make use of all school facilities including:

- Large gym for indoor sports: basketball, volleyball, badminton, etc.
- Soccer field
- Tennis courts with floodlights
- 25 metre swimming pool with lights
- Cafeteria for all meals at school
- Computer labs with 40 modern computers and internet access
- Laundry service

Teacher houses are available at the teachers village for additional staff. For overnight stay at the national park, cottages can be rented, if required. Camping is also possible and is a great way to see wildlife during the evening and early mornings.



Dormitory



Basketball at the Gymnasium



Full Sized Swimming Pool



Camping at Khao Yai NP (Picture P. Schuetz)



Lodge at Khao Yai NP (Picture P. Schuetz)

# Contact

For more information contact our field study camp coordinator, **Mr. Peter Schuetz**. Peter is a professional biologist and has been running our successful study camps for three years. He has excellent knowledge of all camp related activities and field study locations.

Mr. Peter Schuetz studied Biology at University of Hohenheim, Germany, and graduated in 2000 with an MSc in Biology. He was head of Entomology during three international expeditions to tropical rainforests in South America, Africa and South East Asia. In 1994 Peter Schuetz was invited to work on pollination of hawkmoths (Sphingidae) at the Visayas State University (Baybay, Leyte, Philippines) in cooperation with the Gesellschaft für Technische Zusammenarbeit GmbH (GTZ). During 1997 and 2000 he worked as a consultant for the World Wide Fund (WWF, Germany) and TRAFFIC Europe to monitor Insect trade in Germany and adjacent countries.

Between 2000 and 2003, Peter undertook research on insect communities of Litchi orchards at Chiang Mai University, Thailand. This project was sponsored by the German Research Council (DFG) and the National Research Council of Thailand (NRCT).

Since 2007, Peter Schuetz has been working on insects as a protein resource for Whitehanded Gibbons (*Hylobates lar*) at Khao Yai National Park in cooperation with Mahidol University, Bangkok, Thailand.



**SIS Field Study Centre Khao Yai**

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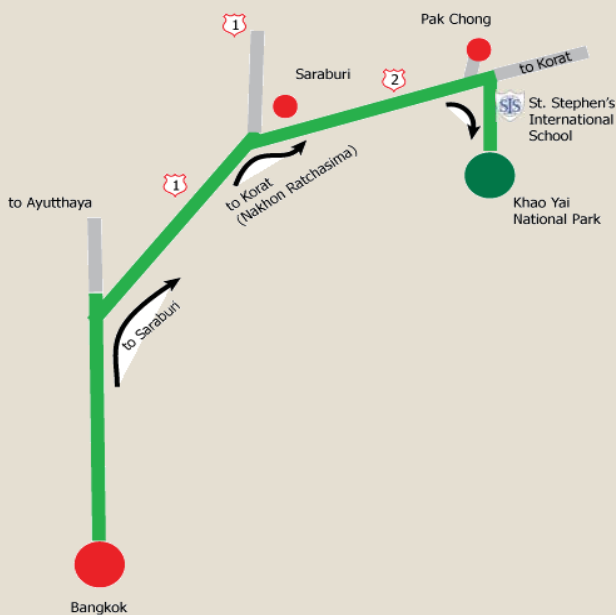
# Location

The SIS Field Study Centre can be reached by car in less than two hours from Bangkok. Take the highway number 1 to Saraburi. As you reach Saraburi turn right and follow Highway number 2 to Nakhon Ratchasima ("Korat") for another 60 kilometres. Do not turn into Pak Chong; stay on the highway, as you pass Tesco Lotus follow the directions to Khao Yai and enter Road 2090. After four more kilometres, turn left into St. Stephen's International School and follow the instructions given by security personnel.



Map of Thailand

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Road Map Bangkok to Pak Chong

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Road Map Pak Chong to St. Stephen's International School

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