Organizing Field Trips in Geography

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assisted by

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Reform Proposal for Education System in Hong Kong

Curriculum design

• To encourage cross-curricular and inquiry-based approaches to learning to help students develop self-learning and life-long learning attitude.

[EMB, Review of Academic Structure of Senior Secondary Education, Executive Summary, 2004]
Workshop on Field Studies

• The Essence and Modes of Field Studies
• Facilitating Field Studies in Hong Kong
• PBL – A New Mode of Field Studies
• The St Mary Church School Experience
Why taking students to the field?

- Illustrate taught concepts with real samples
- Enable students to attain a more complete picture
- Develop an appreciation of the complexities of real-life cases
  - cross-disciplinary nature
  - lack of definitive solutions
- Best venue to train observing and describing skills
- Students enjoy more, learn better
- Teachers enjoy more, teach better
The intangible merits

• To be challenged physically
• Opportunity to work and live collaboratively
• Learn to appreciation of nature and cultural heritage
• Learn to become a responsible member or a team and of Society
Some Fieldwork Approaches

Discovery fieldwork
(teacher functions as animateur)

Hypothesis Testing

Enquiry Fieldwork
(teacher functions as resource provider)

Field excursion
(teacher functions as guide and interpreter)

Earth Education

Emphasis on Quantification
(analytical approach)

Emphasis on Affective Learning
(systems approach)

A comparison of two approaches
(after Principia Cybernetica Project)

<table>
<thead>
<tr>
<th>Analytical approach</th>
<th>Systems approach</th>
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<tr>
<td>concentrates on the values of individual elements</td>
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*Field studies must essentially employ the systems approach.*
Modes of Field Studies

- Teacher-centered, using field as classroom (no prior lecturing)
- Teacher-centered, integrate field learning into classroom teaching
- Teacher-centered, conducting canned exercises in field
- Student-centered, undertaking field project prescribed by teacher
- Student-centered, undertaking field project designed by themselves
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Field Excursions for Geography

- Slopes, Weathering & Badlands
- Faults & Folds
- River Features
- Beaches, Coastal Landforms
- Rocks & Minerals
- Urban and rural development
- Environment, resources and social issues
Slopes and highland streams: Nam Chung, Luk Keng, Wu Kau Teng area

Ping Fung Shan (escarpment)

Nam Chung (wetland habitat)

Hok Dau (entrenched meander)

Wu Kau Teng (raised terrace)
Faults & Folds: Ma Shi Chau, Lai Chi Chong
Rocks: Central, Lamma, North Lantau, Shing Mun River
Field Excursions in HK

• Slopes and highland streams: Lantau, Nam Chung
• Faults & Folds: Ma Shi Chau, Lai Chi Chong
• River features: No good natural river systems, much to see about river training
• Beach & coast: numerous, Sai Kung, Long Ke, raised beach
• Rocks: Central, Lamma Is, North Lantau, Shing Mun River
• Weathering: Cheung Chau, Lamma Is., Ninepins
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Common Field Problems

• Variation in students’ level and ability
• Dominance by few bright students
• Lack of interaction among students
• Constrained thinking in set exercises
• Lack of opportunities to observe and reason
• Solution-driven (analytical approach)

*Advantages of field teaching not fully utilised
Example: Description of Rocks

How do we normally do it?

• What are the major minerals in the rock?

• What kind of rock is it, igneous, sedimentary or metamorphic?

• What is the name of the rock?
Example: Weathering

How do we normally do it?

- What do you call this kind of weathering feature?
- How does it happen?
- What kind of weathering is it? Chemical or physical?
What are in the student’s mind?

Did I learn about it in class?

I think I should know...
I know I know...
Darn! I am just a pig!

What’s the answer?
What’s the answer?
What’s the answer?
Can these practices be enhanced in the field exercise?

- Observe
- Describe
- Infer
- Hypothesize
- Propose investigation methods
Redesigning the questions!!

What are the major minerals in the rock? WHAT can you describe about the rock? For example, colour is obviously one. WHAT ELSE?

What kind of rock is it, igneous, sedimentary or metamorphic? How may you measure these properties?

What is the name of the rock? What does each of the properties tell you about the rock?
WHAT can you describe about the properties of the rocks? For example, colour is obviously one. WHAT ELSE? CAN YOU LIST AT LEAST 9 OTHERS readily determined properties? What does each of the properties tell us about the rock? (Group)

<table>
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<tr>
<th>Property</th>
<th>How to measure</th>
<th>What does it say about the rock</th>
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<td>Colour</td>
<td>Eye-ball</td>
<td>Composition? Minerals? Freshness?</td>
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What do we call this kind of weathering feature?

Describe this exposure. What are the most remarkable characteristics?

How does it happen?

What caused the distinctly different colours in the rock?

What kind of weathering is it? Chemical or physical?

Why did oxidation occur at those particular locations?

*Technical terms vs. Generic terms*
How did rectangular joint intersections produce rounded core stone?

*Guided thinking vs. Constrained thinking*
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The analytical approach

How did the wave-cut platform form?

• Erosion
• Hydraulic action by waves
• Abrasion by sediments
• ….
The systems approach

Considering the coastal landform as an open system, use a system diagram to depict the processes and elements of this system.
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