

# **Developing Students' Thinking Skills**

through the non-language arts elective modules

# Ice breaker

To what extent do you agree or disagree with the statements?

- I teach my students thinking skills every day.
- Teaching thinking skills is as important as teaching language skills in an English class.
- Teaching thinking skills implicitly is more effective than explicitly.
- My students like learning how to think in an English class.
- My students are good at higher order thinking.

# Aims

- To understand the concept of higher order thinking skills and how to promote these in the non-language arts classroom.
- To consider ways of approaching the teaching of generic skills in an integrated way.
- To take part in and reflect on lesson demonstrations that promote an integrative use of generic skills.

# **Workshop schedule**

- **Introduction**
- **Practical Demonstration 1 – Plastic Ocean**
- **Break – 15 minutes**
- **Practical Demonstration 2 – Sport in Hong Kong**
- **Designing Tasks to Promote Holistic Thinking**

# Non-Language Arts Modules

- **Learning English through Sports Communication**
- **Learning English through Debating**
- **Learning English through Social Issues**
- **Learning English through Workplace Communication**

- Provide learners with opportunities to apply subject knowledge and skills (i.e. the four skills, grammar, communicative functions, vocabulary and text types) through following a particular approach or exploring a particular topic which may or may not be covered in the Compulsory Part.

- Enhance the further development of generic skills such as communication, critical thinking, creativity and collaboration.

# Non-Language Arts Modules

Let's try integrating the modules.

## Examples

- Explore a social issue then debate the issue
- Sport as a social issue – writing an article/doing a survey/survey report
- Issues in the workplace – debate the issue
- Researching an organisation focused on a specific issue (e.g. NGOs , charities)

# Holistic thinking skills

## Critical Thinking Skills

Critical thinking is drawing out meaning from available data or statements, examining and questioning their accuracy and credibility, in order to **establish one's views** and **evaluate** the arguments put forward by oneself and others.

## Creativity

Creativity is manifested in **new** ideas, acts, or products. It emerges spontaneously or through deliberate processes of divergent and convergent thinking. It involves the integration of general or domain-specific knowledge for a meaningful purpose. Creativity brings in **changes or transformations**.

## Problem Solving Skills

Problem solving involves using various skills to resolve a difficulty. The process includes investigating the problem, synthesizing information and **generating ideas to determine the best course of action**. Learners need to **adjust and evaluate strategies**, as well as consolidate experience for knowledge construction.

# Higher-order vs lower-order thinking skills

**HOTS**



**LOTS**

**Creating**

**Evaluating**

**Analysing**

**Applying**

**Understanding**

**Remembering**

# Higher-order vs lower-order thinking skills

1. When did the characters meet?
2. Where did the characters decide to go?
3. Why did the characters want to meet?
4. What would you do in this situation?
5. How was their meeting this time different from their usual meetings?
6. What are the strengths and weaknesses of the story?
7. Can you think of a better ending? What and Why?

# Collaborative problem-solving

Collaborative problem solving skills, an example of integrative use of generic skills, refer to students' ability to solve problems with synergised efforts through effective **division of labour**, as well as incorporation of information from **multiple sources of knowledge, perspectives and experiences**.

Compared to individual problem solving, collaborative problem solving has distinct advantages because it enhances the creativity and quality of solutions through stimulation brought by the ideas of other group members

# **Lesson Demonstrations**

## **PD1 – Environmental Issues (Plastic Ocean)**

- **A blend of Social Issues and Debating NLAs**

## **PD2 – Sport in Hong Kong**

- **A blend of Sports Communication and Social Issues NLAs**

# Plastic pollution

Aims:

- To understand the issue of plastic waste.
- To explore the issue through research and propose some ideas/solutions.
- To express personal opinions.
- To take part in a mini debate around the issue.

# Plastic pollution

Approach:

## Critical-thinking skills

Asking questions, exploring issues, identifying main ideas and clarifying information.

## Creativity

Brainstorming, generating ideas and fine tuning decisions.

## Critical-thinking and Problem Solving Skills

Comparing options and solutions, considering from multiple perspectives, developing a plan of action, evaluating and reflecting on the completed task.

# Plastic pollution

## Lead-in discussion:

Which products made of plastic do you use?

How do you dispose of the plastic?

What happens to the plastic you throw away? Do you know?

# Plastic pollution

First Viewing – Comprehension Task

[https://www.ted.com/talks/dianna\\_cohen\\_tough\\_truths\\_about\\_plastic\\_pollution](https://www.ted.com/talks/dianna_cohen_tough_truths_about_plastic_pollution) (0'44" – 3'54")

# Plastic Ocean

## Second Viewing – Language

How are opinions stated in the video?

- *We've got to go out there and clean this thing up.*
- *Then why don't we call it what it is?*
- *It's not just that gyre of plastic that I was concerned about. I'm also concerned about the plastic in the refrigerator, and I'm concerned about the plastic and the toxins that leach from plastic into us and into our bodies.*
- *So this is a big issue for us.*
- *... this is a huge problem in the oceans, but this is a problem we've created as consumers and we can solve.*

# Plastic Ocean

## Research Phase – Critical Thinking

### Headlines

**Hong Kong searches for a culprit as garbage piles high on beaches**

**What a mess: Hong Kong to discuss rubbish deluge with Guangdong authorities**

**Hong Kong school children urge McDonalds to stop serving drinks in plastic bags**

**400 syringes, 200 drug phials: the medical waste plaguing Lantau beach next to Hong Kong Disneyland**

# Plastic Ocean

## Research Phase – Critical Thinking

Video from Sky news (January 31<sup>st</sup> 2017):

[https://www.youtube.com/watch?v=aNd1Nh\\_IFUc](https://www.youtube.com/watch?v=aNd1Nh_IFUc)

Video from RTHK (September 26<sup>th</sup> 2017):

<http://news.rthk.hk/rthk/en/component/k2/1356102-20170926.htm>

# *The World Is Blue: How Our Fate and the Ocean's Are One*

by Sylvia A. Earle

## 1. Studying the **book cover**

- Describing visuals
- Studying title, subtitle, author, awards received, blurbs, etc.
- Speculating book content

## 2. Reading **quotes** from the book

- Comprehension check: matching
- Responding to quotes
- Choosing quotes that resonate with them
- Vocabulary-building

"People ask: Why should I care about the ocean? Because the ocean is the **cornerstone** of earth's life support system, it shapes climate and weather. It holds most of life on earth. 97% of earth's water is there. It's **the blue heart** of the planet — we should take care of our heart. It's what makes life possible for us."

**Irresponsible  
humans**

"The single **non-negotiable** thing life requires is water."

"One kind of blue-green bacteria, *Prochlorococcus*, is so **abundant**...that it alone is responsible for about 20 percent of the oxygen in the atmosphere. Put another way, this nearly invisible form of life generates the oxygen in one of every five breaths you take, no matter where on the planet you live."

**All is not lost**

"Let's talk **trash**.... Only we humans make waste that nature can't **digest**."

**Our  
dependence  
on the blue**

"We still have a really good chance to make things better than they are. They won't get better unless we take the action and **inspire** others to do the same thing. No one is without power. Everybody has the **capacity** to do something.."

# Plastic Ocean

**What can be done to alleviate the problem?**

We need....

Why don't we.....

We have to....

We should....

We ought to....

We could.....

Language items and communicative functions

Modals to make suggestions and proposals

# Plastic Ocean

**Rank the following solutions.**

Consider what criteria you will use for your decisions.

A. Collect the plastic and make artworks out of it.

B. Urge companies to use recycled plastic e.g. Watsons water.

C. Coordinated government action between Hong Kong and China.

D. Set up a special 'Trash Police' that can fine on the spot.

E. Start a campaign to limit single use plastic items.

# Plastic Ocean

## Different perspectives

How might these people react if the solutions are implemented, or not implemented?

**The Police**

**The  
Government**

**Fishermen**

**The Plastics  
Industry**

**Restaurant  
owners**

# Plastic Ocean

## Presenting your ideas

### **Solution**

Considering the scale of the problem, we feel that...

### **Reason**

We think that this is the best option because...

### **Impact**

As a result we think this will lead to.....

Language items and communicative functions:

A variety of tenses, the passive voice, adverb phrases to find and provide evidence for a conclusion

# Plastic Ocean

**Problem Solving and Critical Thinking: student evaluation and reflection**

- Task accomplishment – quality of outcomes.
- Invite and evaluate feedback from peers.
- Process the feedback to improve the solutions presented.

# Plastic Ocean

## Debate

**This house believes that in order to save the ocean from further plastic pollution, there should be a ban on single-use plastic items.**

# Plastic Ocean

Approach recap:

## **Critical-thinking skills**

Asking questions, exploring issues, identifying main ideas and clarifying information.

## **Creativity**

Brainstorming, generating ideas and fine tuning decisions.

## **Critical-thinking and Problem Solving Skills**

Comparing options and solutions, considering from multiple perspectives, developing a plan of action, evaluating and reflecting on the completed task.

# Plastic Ocean

## Reflection Questions

1. Which language skills did the lesson develop?
2. How did this lesson develop holistic thinking skills?
3. What other impacts on learning does the lesson have?

# Sport in Hong Kong

## **Aims:**

- To develop a better understanding of the place of sport in the community.
- To understand the process of conducting a survey.
- To analyse, organize and present the survey results in a report/article.

# Sport in Hong Kong

Approach:

## **Critical-thinking skills**

- Asking questions, exploring issues, identifying main ideas and clarifying information, considering from multiple perspectives.

## **Creativity**

- Brainstorming, generating ideas and fine tuning decisions.

## **Critical Thinking and Problem Solving Skills**

- Developing a plan of action, evaluating data and reflecting on the completed task.

# Sport in Hong Kong

## Discussion

How important is sport:

- In your school?
- In your community?
- In your city?

# Sport in Hong Kong

In the 2016 Rio Olympics Team GB won 67 medals.

[https://en.wikipedia.org/wiki/2016\\_Summer\\_Olympics\\_medal\\_table](https://en.wikipedia.org/wiki/2016_Summer_Olympics_medal_table)

This sparked a lot of comment here in Hong Kong:

‘Chief Executive Leung Chun-ying wants to nurture young potential Olympians in schools modeled after the winning Team Great Britain.....’

Leung said Hong Kong can learn from the UK, which surpassed China and was ranked second in the gold medal tally with 27, in terms of how the government can cooperate with schools to promote sports.’

<http://www.thestandard.com.hk/section-news.php?id=173209>

Flora Chung Aug 24, 2016

# Sport in Hong Kong

## Different perspectives

‘...however, while promotion at schools has been a factor, it would be misleading to overplay this factor. The major component was funding.

.....is he prepared to fork out HK\$51 million for each Olympic medal - which is Britain's estimated cost for these Games?

Sports development in Britain is funded by the national lottery, so that it's unaffected by budgetary changes. Today, 75 percent of Britain's Olympic funding is paid through the lottery. As it prepared for Rio, related funding had soared to HK\$3.6 billion.’

<http://www.thestandard.com.hk/section-news.php?id=173244>

Editorial Aug 25, 2016

# Sport in Hong Kong

## Different perspectives

‘Hong Kong has to decide if it is serious about sport and follow a successful model like Great Britain’s or continue in a fragmented and half-hearted way, leading sports administrator Mark Sutcliffe says.’

<http://www.scmp.com/sport/hong-kong/article/2010245/borrow-uk-blueprint-urges-hong-kong-soccer-chief-mark-sutcliffe-he>

Staff Reporter Sunday, 28 August, 2016

# Sport in Hong Kong

## Suggestions

- Establish a Governmental Agency or NGO with specific responsibility for all sport across Hong Kong (like UK Sport).
- Prepare a Hong Kong Sports Strategy defining the priorities, objectives and targets. The plan should cover facilities, participation, events, structures, systems and resources.
- Set up specialist sports schools e.g. the Singapore Sports School that helped deliver its first gold medal in swimming in Rio.

# Sport in Hong Kong

## **Research question**

How can Hong Kong improve its' sporting performance at the Olympic Games?

# Sport in Hong Kong

## The Survey

Please try the survey created with 'survey monkey'

<https://www.surveymonkey.com/r/698CHSV>

# Sport in Hong Kong

## Survey Questions – Analysis

Are the questions:

- Closed questions with finite responses to generate statistical analysis?
- Open ended questions which allow the researcher to get a more in depth understanding?

# Sport in Hong Kong

## Writing survey questions – Grouping Students

- Whole class brainstorm on research topic.
- Put the students into small groups to brainstorm and write questions - each group writes one question.
- Swap the questions and refine in their groups.
- Collect all the questions and copy for all the groups.
- The groups order and design the questionnaire.

# Sport in Hong Kong

## Presentation of Data

The survey monkey app/website allows you to present your data in charts straight from the website which you can copy and add to your presentation and report.

# Sport in Hong Kong

## Survey Report Structure

- Introduction.
- Methodology.
- Survey Results.
- Analysis of Survey results.
- Conclusion and recommendations.

# Sport in Hong Kong

## Survey Report Structure – matching

<b>Introduction</b>		Details of the responses to the survey using charts or statistics
<b>Methodology</b>		The purpose and background information about the survey
<b>Survey results</b>		An interpretation of the survey results
<b>Analysis of survey results</b>		A summary of the findings, the implications, and suggestions
<b>Conclusion and recommendations</b>		Information about who and how

# Sport in Hong Kong

Language items and communicative functions:  
Analysing and Presenting Results

Tenses, e.g. **the past tense** to report survey process and the **present tense** to explain findings and conclusions. **Passive voice** – The survey was conducted in order to.....

Linking words:

- **to contrast** – **whereas, on the other hand, however;**
- **to add ideas** – **additionally;**
- **to show consequences** – **as a result, consequently, therefore;**
- **to sum up** – **in conclusion, finally.**

Numerical expressions e.g. percentages to describe data

# Sport in Hong Kong

Approach recap:

## **Critical-thinking skills**

- Asking questions, exploring issues, identifying main ideas and clarifying information, considering from multiple perspectives.

## **Creativity**

- Brainstorming, generating ideas and fine tuning decisions.

## **Critical Thinking and Problem Solving Skills**

- Developing a plan of action, evaluating data and reflecting on the completed task.

# Sport in Hong Kong

## Reflection Questions

1. What stages do students need to go through to produce a survey?
2. What generic skills were developed and how?
3. How would you adapt the procedures to fit your students?

# Designing tasks to promote holistic thinking

## Aims:

- To introduce a lesson framework for the planning and development of lessons promoting holistic thinking.
- To review collaboration in the classroom and consider some important factors.

# Designing tasks to promote holistic thinking

## Key Actions

### Creativity

- Generating new ideas and fine tuning decisions.

### Critical-thinking skills

- Asking questions, rating and selecting, comparing options.

### Problem-solving skills

- Finding solutions and developing a plan of action.

# Designing tasks to promote holistic thinking

## Basic Framework

- Consider the examples.
- Order the activities.
- Match the activities to the generic skills involved.

# Topic: Hunger

Learning Activities	Generic Skill
<ul style="list-style-type: none"><li>- research on the Internet and collect information about hunger from different sources (e.g. reports from the World Health Organisation, websites of NGOs).</li></ul>	Critical Thinking
<ul style="list-style-type: none"><li>- select three hunger-stricken places and identify the different causes and effects of hunger in each place;</li></ul>	
<ul style="list-style-type: none"><li>- organise and synthesise the information using a graphic organiser such as a fishbone diagram, a spider map;</li></ul>	
<ul style="list-style-type: none"><li>- brainstorm as many solutions to hunger in these countries as possible, including unconventional solutions and new possibilities;</li></ul>	Creativity
<ul style="list-style-type: none"><li>- discuss and compare the cost and benefit of each brainstormed solution from multiple perspectives;</li></ul>	Critical Thinking
<ul style="list-style-type: none"><li>- evaluate and rate the possible solutions based on their feasibility and effectiveness and select one best solution for each of the countries;</li></ul>	
<ul style="list-style-type: none"><li>- predict different stakeholders' reactions to the three solutions and anticipate adverse impacts;</li></ul>	Problem Solving
<ul style="list-style-type: none"><li>- fine-tune the three solutions by suggesting precautionary measures against the problems arising from stakeholders' negative reactions.</li></ul>	

## How would you approach the lesson(s)?

1. Think about the questions you would ask the students.  
What would you ask?
2. How would you need to scaffold certain parts of the lesson(s)?
3. What materials would you need to make?
4. What resources would you use? How would you use these?
5. How much time would you give the students to complete each section/lesson?

# Collaboration in the classroom

- All members of the group must give input into decision making.
- Group members are responsible for the thinking, teaching, and monitoring of all members in the group.
- Each member makes an equal contribution to the whole work.
- Group members must identify and build on their individual strengths so that everyone makes a significant contribution to the task – everyone has a role.
- A variety of communication channels, e.g. Group discussion, chat on apps.

# Your Takeaway

- What will you use from the workshop today?
- When?
- With whom?

# References

Plastic Ocean

<http://learnenglishteens.britishcouncil.org/study-break/video-zone/plastic-ocean>

News Articles – Plastic waste

<http://hongkong.coconuts.co/2015/03/25/hong-kong-schoolchildren-urge-mcdonalds-stop-serving-drinks-plastic-bags>

<http://edition.cnn.com/2016/07/06/asia/hong-kong-beaches-pollution/index.html>

<http://www.scmp.com/news/hong-kong/health-environment/article/2052212/400-syringes-200-drug-phials-medical-waste>

News Articles – Hong Kong Sport

<http://www.scmp.com/comment/insight-opinion/article/2011100/sports-development-going-round-circles-hong-kong-chases>

<http://www.scmp.com/sport/hong-kong/article/2010245/borrow-uk-blueprint-urges-hong-kong-soccer-chief-mark-sutcliffe-he>

