

EDB PDP

# Developing Students' Thinking Skills through Non-Language Arts Elective Modules

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# AIMS

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

# SCHEDULE

- Icebreaker and Introduction
- Thinking skills: Illustrations and Exercises
- Practical Demonstration 1 – **Social Issues: Plastic Ocean**
- Break – 15 minutes
- Practical Demonstration 2 – **Sports: Lesson Planning**
- Designing Tasks to Promote Holistic Thinking
- Conclusion and Discussion

# ICEBREAKER

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

Drag your dot! 

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

# Thinking about Thinking

What is thinking? How would you describe it?

Is thinking ability an inborn ability (like an instinct) ?

Is it an automatic behavior (like the heartbeat or reflex)?

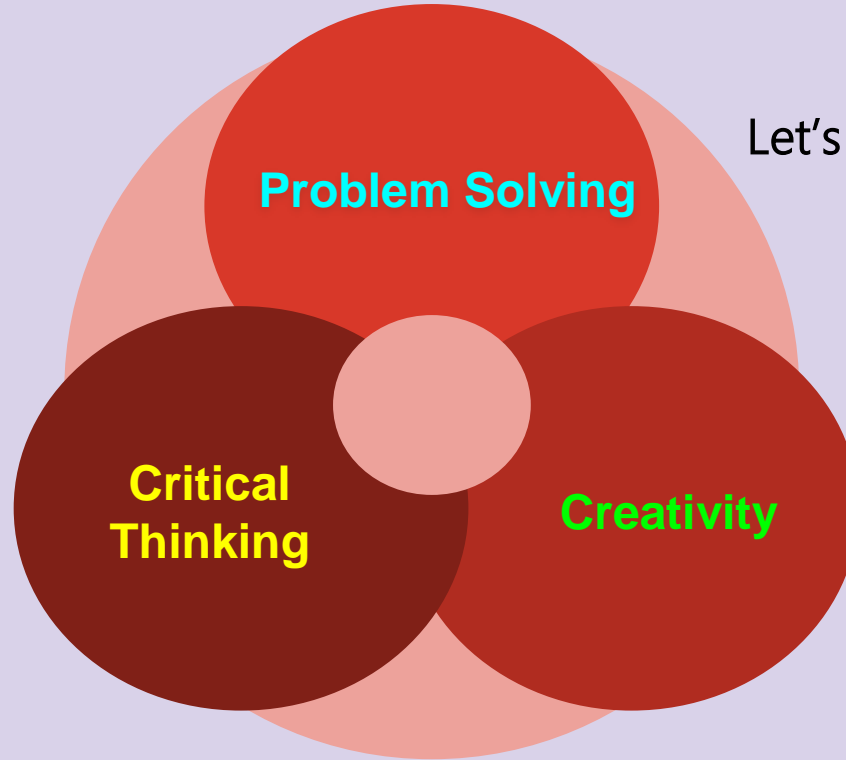
Is it more of a skill that needs to be trained (like juggling)?

Q. Think of an appropriate metaphor for thinking.

A. "Thinking is \_\_\_\_\_."

Thinking Skills for  
NLA English  
Electives:  
**Holistic  
Thinking  
Skills**

Let's break it down...



"When completing a more complicated learning task, the generic skills are often applied in an integrative manner rather than in isolation." (ELEKLACG, 2017)

# Problem- Solving

**Problem solving** involves using various thinking skills to resolve a difficulty. The process includes:

- **investigating** the problem
- **synthesizing** information
- **generating ideas** to determine the best course of action

Learners need to **adjust and evaluate strategies**, as well as **consolidate experience** for knowledge construction.

# Problem Solving

## Question 1

A bat and ball cost \$1.10. The bat costs one dollar more than the ball.  
How much does the ball cost?

A: \_\_\_\_\_

## Question 2

How many animals of each kind did Adam take onto the Ark?

A: \_\_\_\_\_



# Problem Solving

Teaching Problem Solving Skills:

1. **Collaboration/Consultation** (Speaking)
2. **Comparison** with similar problems (Experience)
3. **Good guessing/Hypothesising**: brainstorm, evaluate, trial and error (Speaking, Writing)

# Creativity

**Creativity** is manifested in **new** ideas, acts,<sup>10</sup> or products. It emerges spontaneously or through a deliberate process. It involves:

- divergent thinking
- convergent thinking
- the integration of general or domain-specific knowledge for a meaningful purpose

Creativity brings about **changes or transformations**.

# Creative Thinking

## Task 1

With your groupmates, list as many possible uses as you can for a paperclip.  
Write them down:

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# Creative Thinking

## Task 2

Label the different uses:

- most common
- most surprising
- most original
- most important
- most interesting
- most humorous
- most \_\_\_\_\_

# Creative Thinking

Teaching Creative Thinking Skills:

1. Approach questions and problems indirectly (lateral thinking)
2. Give time and space for thinking different (slow thinking)
3. Generate as many answers as possible (divergent thinking)
4. Compare answers to label, weigh & agree (convergent thinking)

# Critical Thinking Skills

**Critical thinking** involves:

- drawing out meaning from available claims, data or ideas
- examining their accuracy
- questioning their credibility

Critical thinking assists students in **evaluating** arguments and **establishing their own views.**

# Critical Thinking

Task: Silent Discussion

Consider the following question carefully for 2 minutes:

Children should not be allowed to have mobile phones until they are 16 years old.

1. What is your opinion? Write it in one sentence on a Post-it.
2. Choose a person from the list that may have a different point of view. Write a sentence for that person on another Post-it.
3. Place the Post-its on the card as instructed.

# Critical Thinking

## Teaching Critical Thinking Skills

Teachers and students:

1. Ask and answer higher order thinking (HOT) questions (speaking and listening)
2. Consider and determine all relevant context issues (research, speaking and writing)
3. Clarify complementary and contradictory information (consultation, discussion, note-taking)
4. Synthesizing diverse points (speaking and writing)



# Asking Questions

This essential teaching skill  
can be used to help  
students climb the steps of  
higher order thinking

# Bloom's Taxonomy

Create:

Evaluate:

Analyze:

Apply:

Understand:

Remember:

# Bloom's Taxonomy

## Create

Can you think of a better way to write this scene or the ending of the story (e.g. the consequences of the meeting)?

## Evaluate

What are the strengths and weaknesses of this scene?

## Analyze

How was this meeting different from their usual meetings?

## Apply

What would you do in the same situation?

## Understand

Why did the characters want to meet?

## Remember

When did the characters meet? Where did they go?

# INTEGRATING NON-LA MODULES

## Examples

- Explore a **social issue** such as pollution: **debate** the issue
- Explore **sport as a social issue**: write an article/do a survey/write a survey report
- Explore **social issues** in the **workplace**: **debate** the issue
- Research an organisation focused on a specific **social, athletic or workplace issue** (e.g. NGOs, charities)

<p align="center"><b>SUMMARY: Planning Learning Activities for NLAs Lessons</b></p>	<p align="center"><b>Generic Skill</b></p>
<p><b>Tips from Introduction:</b></p> <ol style="list-style-type: none"> <li>1. <u>Give time and space</u> for thinking differently (slow thinking)</li> <li>2. <u>Approach questions and problems indirectly</u> (lateral thinking)</li> <li>3. <u>Generate as many answers as possible</u> (divergent thinking)</li> <li>4. <u>Compare answers</u> to label, weigh and agree (convergent thinking)</li> </ol>	<p align="center"><b><i>Creativity</i></b></p>
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## SPEEDY REFERENCE FOR INTEGRATING THINKING ACTIVITIES

The following activities help students practice one or more specific kind of thinking skill:

- ASK and ANSWER different kinds of questions
- TAKE TIME to generate a variety of responses
- LISTEN TO and UNDERSTAND different perspectives
- CAREFULLY CONSIDER the merits of different points of view
- DIVIDE topics or problems into smaller parts
- ASSIGN a 'weight' to the importance of something.
- DETERMINE the value of something.
- UNDERSTAND how ideas/stories/experiences/information are 'framed'.
- ALLOW 'fun' or 'entertaining' alternatives to be considered.
- UNDERSTAND and ARTICULATE the difference between 'acceptable' and 'correct'.

# **Practical Demonstration 1 (PD1)**

## **Environmental Issues: Plastic Ocean**

(a blend of **Social Issues** and **Debating NLA's**)

# Integrating Thinking Skills in NLA's Lessons: Planning Suggestions

1. **Choose and adapt the topic and materials** according to students language, learning styles, ability and interests.
1. **Focus on fewer meaningful learning objectives** rather than many narrow ones, allowing for clear progression, generic skills development and organic learning opportunities (serendipity)
1. **Focus on language learning objectives** based on the curriculum guidelines, prior learning, cross-curricular content, assessment objectives and the principle of comprehensible input/output
1. **Integrate a balance of problem-solving, critical thinking and creative thinking opportunities** throughout the tasks and activities



# 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 do you regularly use that are made of plastic?

How do you dispose of the plastic that you use?

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

What?

If you don't know, make an educated guess.

# Plastic pollution

## Key Vocabulary

Match the vocabulary with the correct definition and write a–h next to the numbers 1–8.

- |        |                         |    |  |
|--------|-------------------------|----|--|
| 1..... | a crisis                | a. | an area where waste is buried under the ground                 |
| 2..... | to degrade              | b. | a small part of something                                      |
| 3..... | a landfill site         | c. | a difficult or dangerous situation that needs urgent attention |
| 4..... | to dump                 | d. | a diver who holds their breath under water                     |
| 5..... | to endure               | e. | in perfect condition   |
| 6..... | a free diver            | f. | to get rid of something quickly without worrying about it      |
| 7..... | a fraction of something | g. | to suffer  |
| 8..... | pristine                | h. | to break down into smaller substances                          |

# Plastic pollution

## First Viewing – Comprehension Task

Question: What is the significance of these numbers?

- 11 \_\_\_\_\_?
- 80 to 90% \_\_\_\_\_?
- (Identify another number) \_\_\_\_\_?

# Plastic Ocean

## Second Viewing – Language Focus

Language Questions: What language is used to state opinions?

- *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):

Video from SCMP (August 28<sup>th</sup> 2018):



# *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

Draw lines to match the image to the answer:

Irresponsible  
humans

- "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."

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

All is not lost

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

- "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. 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."

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? **Problem-solving**

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

- Student
- Businessperson
- Consumer
- Politician

# Plastic Ocean

**Rank the following solutions - Evaluating**

*Consider the criteria you will use for your decisions.*

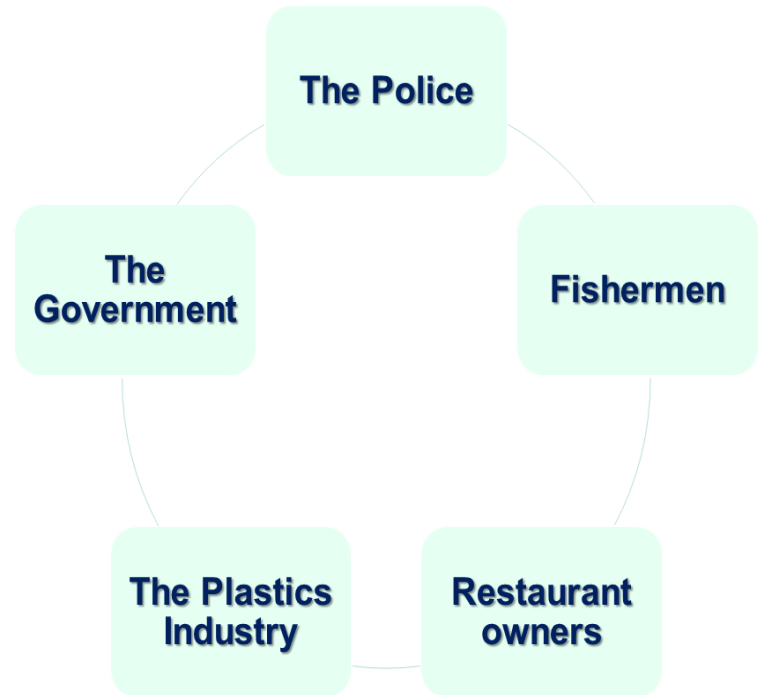
- A. Collect the plastic and make artworks out of it.
- B. Urge companies to use recycled plastic e.g. Watsons water.
- C. Coordinate government action between Hong Kong and China.
- D. Set up a special 'Trash Police' that can fine on the spot.
- E. Start a campaign to limit single use plastic items.

# Plastic Ocean

Consider different perspectives/Evaluate

## Different perspectives

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



# Plastic Ocean

## Presenting your ideas - Consolidating Experience

### **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.....

# 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?

# **Practical Demonstration 2 (PD2)**

## **Sports: Lesson Planning Activity**

(Blending Sports Communication with other NLA's + Generic Skills)

# Sports Lessons

## Possible Aims

- **To discuss the value of winning and losing** in sports competition, including students' own experience and ideas.
- **To research and introduce an obscure sport** (e.g., dog sledding, fencing, curling, wrestling, etc.)
- **To conduct a survey of students** about which new sports should be introduced in school (or other sports-related topic)
- **To analyse, organize and present the survey results** in a report/article.

# Sports Lessons

## Approaches

### **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.

# Practical Demonstration 2 (PD2)

## Sports Lessons

Suggest activities that can integrate objectives from the compulsory part of the curriculum, NLA's and some higher thinking skills. For example:

- Meaningful sports topic
- Sports Vocabulary
- Language skills focus
- Relevant text type or discourse type focus
- Problem-solving, Critical thinking and/or Creative thinking skills

# Sports Lessons: Motivating Content

Read *The Guardian* review for the Netflix series “Losers”

Winners are boring! The genius Netflix doc that celebrates losers

Watch the trailer for “Losers”

Suggest a reading/writing OR a listening/speaking activity that incorporates:

sports vocabulary; language skills; a specific text type and 1. problem solving;  
2. creative thinking; or 3. critical thinking activities.

# Sports Lessons: Motivating Content

Watch the trailer for “Zion”

Summarize the trailer.

What ‘life lessons’ can sports competition teach us? As participants? As observers?

How does sport help us to overcome adversity?

Is winning the most important purpose of competition? Explain.

# Workshop: Designing NLA Lessons

## Some steps to develop students' thinking skills

1. Think about the questions you would ask the students. What questions would you ask to promote HOT?
2. How would you scaffold the lesson(s) to progress from: motivation to comprehensible input to language learning and thinking practice?
3. What resources would you use? How would you use these?
4. What materials would you need to make?
5. How much time would you give the students to complete each section/lesson?
6. What are strategies for balancing learning and practice time with adequate progress in covering the curriculum?



## Integrating Generic Thinking Skills Worksheet

SUMMARY: Planning Learning Activities for NLAs Lessons	Generic Skill	Suggested Activities
<p><b>Tips from Introduction:</b></p> <ol style="list-style-type: none"> <li>1. <u>Give time and space</u> for thinking differently (slow thinking)</li> <li>2. <u>Approach questions and problems indirectly</u> (lateral thinking)</li> <li>3. <u>Generate as many answers as possible</u> (divergent thinking)</li> <li>4. <u>Compare answers</u> to label, weigh and agree (convergent thinking)</li> </ol>	<p><b><i>Creativity</i></b></p>	
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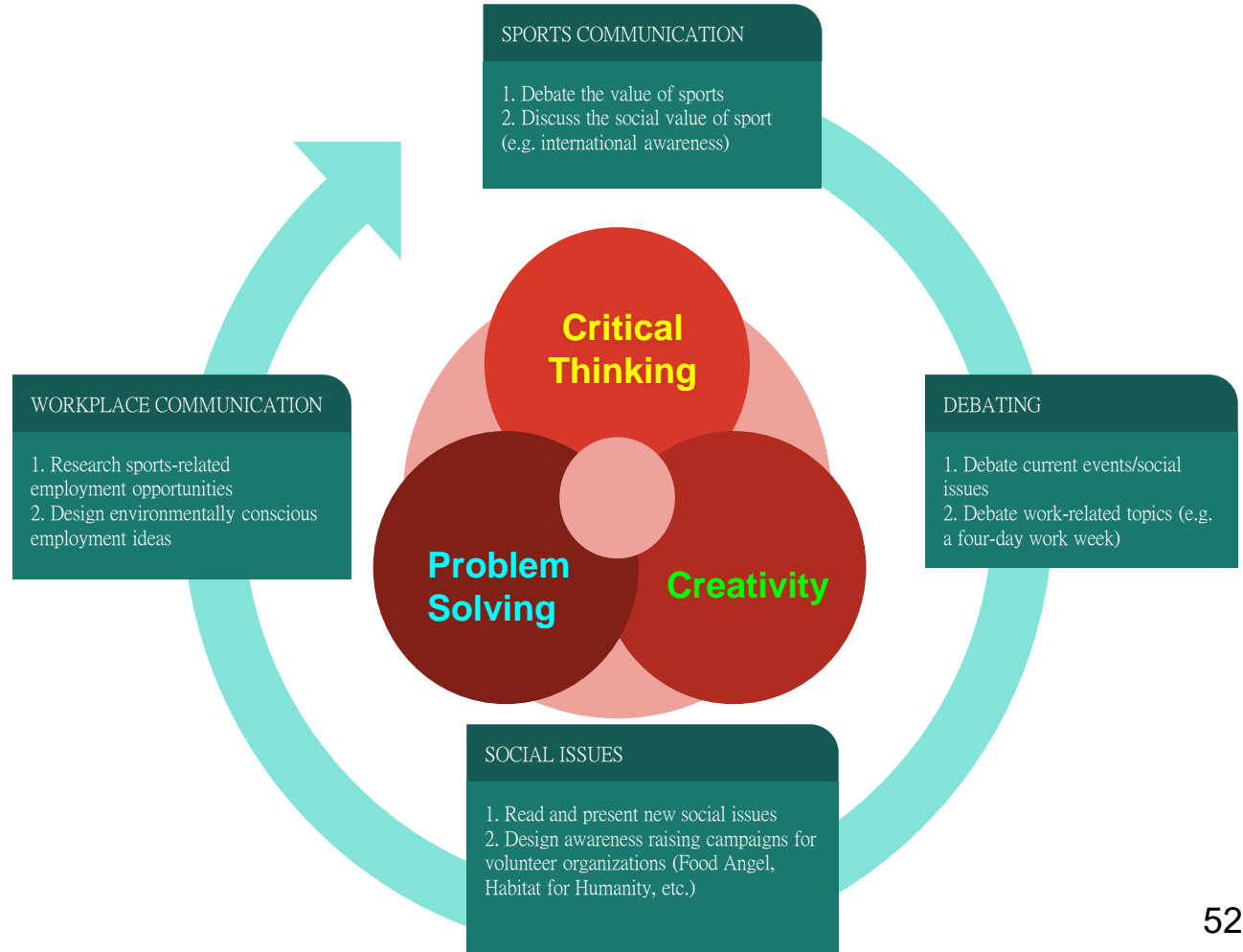
## Integrating Generic Thinking Skills: Sample Suggested Activities

<b>Suggested Activities</b>	<b>Generic Skill</b>
<ul style="list-style-type: none"><li>● <b>brainstorm as many solutions as possible</b> to the problem of physical inactivity among students, including unconventional solutions and new possibilities;</li></ul>	<b><i>Creativity</i></b>
<ul style="list-style-type: none"><li>● <b>discuss and compare</b> the cost and benefit of each brainstormed solution from multiple perspectives;</li><li>● <b>evaluate and rate</b> the possible solutions based on their feasibility and effectiveness and <b>select</b> one best solution for students of your school;</li><li>● <b>research</b> on the Internet and <b>collect information</b> about obscure sports from different sources (e.g. reports from Olympic journalists, websites of sports organizations and informational articles).</li><li>● <b>select</b> three obscure sports and <b>identify</b> the different skills required to succeed in each;</li><li>● <b>organise and synthesise</b> the information using a graphic organiser, such as a fishbone or spider diagram;</li></ul>	<b><i>Critical Thinking</i></b>
<ul style="list-style-type: none"><li>● <b>predict the students' reactions</b> to the survey questions;</li><li>● <b>prepare recommendations to the principal based on survey results</b> anticipating problems arising from diverse opinion and other obstacles.</li></ul>	<b><i>Problem Solving</i></b>

# Integrating Generic Thinking Skills: Share Your Ideas

<b>Suggested Activities</b>	<b>Language Focus</b>	<b>Generic Skill</b>
		<i>Creativity</i>
		<i>Critical Thinking</i>
		<i>Problem Solving</i>

Thinking Skills for NLA  
English Electives:  
**Integrating  
NLA's and  
Thinking  
Skills**



# Takeaways

## Discussion

- **Can you share ways that your school integrates thinking skills in NLA's?**
- **What new ideas/information from today's workshop will be useful?**
- **Do you foresee any challenges or obstacles in integrating thinking skills and other generic skills in NLA's?**
- **What more information or resources do you need?**

# Thank you for participating!

Any follow up questions or comments?

Please contact me at: [ttaylor@eduhk.hk](mailto:ttaylor@eduhk.hk)

Or call me on: [2948 7228](tel:29487228)

# References

## **Curriculum Documents**

<http://www.edb.gov.hk/elegc>

## **English Language Education Key Learning Area Curriculum Guide (Primary 1-Secondary 6) 2017**

[https://www.edb.gov.hk/attachment/en/curriculum-development/kla/eng-edu/Curriculum%20Document/ELE%20KLACG\\_2017.pdf](https://www.edb.gov.hk/attachment/en/curriculum-development/kla/eng-edu/Curriculum%20Document/ELE%20KLACG_2017.pdf)

## **CDC-HKEAA English Language Curriculum and Assessment Guide (Secondary 4 - 6) 2007 \*[with updates in November 2015]**

[https://www.edb.gov.hk/attachment/en/curriculum-development/kla/eng-edu/Curriculum%20Document/EngLangCAGuide\\_Nov15.pdf](https://www.edb.gov.hk/attachment/en/curriculum-development/kla/eng-edu/Curriculum%20Document/EngLangCAGuide_Nov15.pdf)

# 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>

## **Losers Trailer and Review**

<https://www.youtube.com/watch?v=909qosDbalU>

<https://www.theguardian.com/tv-and-radio/2019/mar/01/winners-are-boring-the-genius-netflix-doc-that-celebrates-losers>

## **EDB Assessment for Learning Workshop: QUESTIONS**

<https://www.edb.gov.hk/attachment/en/sch-admin/sch-quality>