

Developing learning to learn capabilities through a cross-curricular reading project

Language Learning Support Section, EDB Shatin Tsung Tsin School 20th June, 2016



Why Reading across the Curriculum?



- been the school's major concern.
- Current practices in promoting reading

 explicit teaching of reading skills and strategies
 - a reading scheme and morning reading sessions
 - including language arts in the curriculum
- Using English to teach GS (1 unit in P.5 and P.6)
- An increasing number of graduates are allocated to schools adopting English language as a L/T medium in some or most of the subjects

Why Reading across the Curriculum?

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Direction for **fine-tuning**

the measures to promote reading?

If different KLA teachers work together...

Learning and teaching effectiveness enhanced?

Easier to achieve the target of getting students to read widely and intensively?

Why Reading across the Curriculum?

to help students make connections between the reading texts across various KLAs and their experiences, prior knowledge and global affairs
 to expand the knowledge base of students and broaden their horizons

Prepare senior primary students for learning at secondary level Prepare senior primary students for lifelong learning

Participants in the RaC project

General Studies (P6) Chapter 3: Environment



English Language (P6)

6B Chapter 3: Save Our Earth 6B Chapter 4: Animals in Danger

Co-ordinators:

- ✓ Curriculum Leader
- ✓ English panel heads

Members:

- ✓ GS teachers
- ✓ GS panel head
- ✓ Chinese teacher
- ✓ Chinese panel head
- ✓ Teacher-librarian

Trial:

6A 29 higher ability students

6B 30 higher ability students

6C 22 lower ability students

* 6A & 6C tried out some of the L/T

activities and materials



Learning to learn capabilities to be developed:

- Reading skills
- Note-taking skills
- Ability to search, organise and synthesise information
- Generic skills (e.g. critical thinking skills, creativity, communication skills, collaboration skills, self-management skills and self-learning skills)



Design of the RaC module





Roles of the Teacher-librarian

- Enrich the resources (non-fiction books of English and G.S.) in the library
 Recommend and display the non-fiction books
 - ✓ Display related newspaper clippings
 - Support students to read non-fiction books about environmental protection in library lessons
- ✓ Facilitate the reading of e-texts



Launch an extensive reading scheme to encourage students to read non-fiction books

P.6 Reading Themes	Date: Title: Author: Publisher: Illustrator/Photographer:	Date: Day: Title:
1. Festivals around the world	Find out the causes of the environmental problems and their effects from the book. Complete the diagram below.	What have you learnt from the book? Identify an environmental problem and its solution from the book. Complete the diagram below.
2. Environmental Protection	Problem 1 *Endangered animals / Pollution / Acid rain / Global warming / Climate change / The ozone hole / Deforestation / Others:	Problem
3. Global World	Effect	Solution
4. World Classics	Effect	Solution Solution

Students borrowed non-fiction books about environmental protection from the library and completed the graphic organisers after reading .



Encourage students to read e-texts during morning reading sessions

General Studies

Use the K-W-L chart to activate students' background knowledge, identify their interests and help them summarise the ideas learned

Sa	we our Earth - Environmental Proble	ms
What I Know	What I Want to know	What I have Learned

General Studies

Use the K-W-L chart to activate students' background knowledge, identify their interests and help them summarise the ideas learned

What I know

- All students know that air pollution, water pollution, noise pollution and global warming exist.
- A lot of students know polar bears are endangered and the landfills in H.K are hitting the saturation point.
- Some students wrote details about different types of pollutions (e.g. causes and effects)
- A few students wrote interesting points:

Global warming leads to the temperature rising in the ocean. If the water temperature rises by 8 °C, the world may return to the geologic period a million years ago. 95% of living things will be dead.

Water pollution causes the death of many turtles and whales and leads to an explosion in the jellyfish population.

General Studies

Use the K-W-L chart to activate students' background knowledge, identify their interests and help them summarise the ideas learned

What I want to know

- Many students want to know the causes, effects and solutions of different types of pollution.
- [©] Some of them want to know why the polar bears are endangered.
- A number of them are interested in knowing about the landfills (e.g. their capacity, how full they are...)
- Some students raised interesting questions

> How does gas cause global warming?

What can we do to bring the ozone layer back to full strength?

How many tons of rubbish is produced every year? How many kilograms of rubbish is produced every day?



• Demonstrate how to apply reading skills to comprehend information in the G.S. textbook

•Encourage students to read newspaper articles about pollution



English P6 Reading non-fiction texts: Overview

Save our Earth: Endangered animals

Save our Earth: Pollution

Lesson 1-4	 Causes, effects and solutions of different kinds of pollution <u>Note-taking skills</u> 	
Lesson 5-6	 Use 'so much' and 'so many' to talk about the quantities of things Use 'should/should not' to talk about ways of protecting the environment 	
	 Use connectives to add ideas and to show the cause-effect relationship 	
Lesson 7	 Reading skills for reading non-fiction books (text features, locate specific information) 	
Lesson 8	 Reading skills for reading informational texts (identify the main ideas of each paragraph by reading the topic sentences) 	
Lesson 9	 Reading skills for reading informational texts (Understand information presented in charts and graphs) 	

11 lessons

14 lessons

16

English P6 Reading non-fiction texts: Overview

Save our Earth: Endangered animals

Save our Earth: Pollution

Lesson 10	 Read informational texts about different kinds of pollution Use graphic organisers to organise information about the causes, effects and solutions of different types of pollution
Lesson 11-12	 Write an article about the causes, effects and solutions of environmental problems with the help of the graphic organiser
<u>Lesson</u> <u>13-14</u>	 Watch the video 'Smokey Mountain in Manila' Read a newspaper article 'Hong Kong's growing mountain of rubbish' Use graphic organiser to organise information about the problem and causes of land pollution Think about solutions from different perspectives Present the solutions to the class

11 lessons

14 lessons

English P6 Reading non-fiction texts: Overview

Save our Earth: Endangered animals

Lesson 1-2	 Activate background knowledge (endangered animals) Project learning (Introduction)
Lesson 3-4	 Reading skills for reading non-fiction texts THIEVES Analysis of text structures (description, cause and effect, problem and solution) using the article 'Crocodiles' Use of graphic organisers to take notes, organise information and identify main ideas of the paragraphs
Lesson 5-6	Read informational texts about endangered animals
Lesson 7	Explore the causes of animals becoming endangered
Lesson 8	Use 'Therefore' to link up the causes and effects
Lesson 9	Project learning (Preparation)
Lesson 10-11	Project learning (Presentation)

Impact of the project

Student level

Reading

- Increasing amount of reading
- Increasing motivation in reading
- Improving ability to comprehend non-fiction texts

Knowledge

- Broadening the scope of knowledge about different types of pollution, environmental protection, endangered animals and ways to conserve them
- Improving ability to search, organise and synthesise information

Generic skills

- Developing critical thinking skills (thinking about solutions from different perspectives)
- Developing self-management skills
- Developing collaboration skills
- Developing communication skills
- Developing self-directed learning skills (e.g. note-taking skills)

Values and attitudes

• Understanding and caring about the environment and endangered animals

Impact of the project

School / Teacher level

A mechanism for collaboration was set up with the roles of different parties well defined (e.g. PSMCD, Teacher-librarian).

Teachers' competence in planning a coherent curriculum to develop students' reading to learn capabilities has increased.

Teachers learned how to teach reading and HOT skills explicitly.

Problems and solutions

Books

Problems	Solutions
 Insufficient stock in the school 	Selection of books
library	need to know what kinds of
 Limited budget for the purchase 	books students need and which
of books	levels they can handle
 Difficulty in getting a large 	Content
number of non-fiction books	✤ Headings
about environmental protection	Illustrations
and endangered animals which	Glossary
were suitable for primary 6	✤ Index
students	borrow books from the public
 When students developed the 	library
habit of reading, the demand for	read e-articles
books became greater.	

Problems and solutions

Getting different subjects on board

Problems Solutions Teachers were skeptical Involving the curriculum about the need for leaders in the project implementing Reading Setting clear rationale, across the Curriculum objectives and expectations Teachers were afraid that Involving panel heads who shared the same goals in the the teaching schedule would be impeded pilot project Teachers were concerned Creating space (time & workload) for collaboration about the workload generated by the RaC project

Problems and solutions

The English curriculum

Problems	Solutions
 The syllabus was already very packed Teachers' workload was heavy 	 Prioritise different measures Stocktake the resource bank to see if existing L/T materials or programmes can be used or adapted

Facilitating factors

Alignment with school's major concerns

Building on the existing measures for promoting reading

Planning with the end in mind

(preparing senior primary students for studying at secondary level and for life-long learning)

Adoption of a gradual approach

Collaborative culture in school

Way forward

Promoting STEM education through Reading across the Curriculum

Reading informational texts → laying a foundation for STEM education

G.S. : Electricity English : Inventions, materials IT? Art? Chinese? How to read e-texts ????





Organise the ideas of causes, effects and solutions of environmental problems.





Save our Earth: Pollution

Reading non-fiction texts

- 1. Watching the video 'Smokey Mountain in Manila'
- 2. Reading the newspaper article 'Hong Kong's growing mountain of rubbish'
- 3. Organising ideas using a graphic organiser









Save our Earth: Pollution

Reading non-fiction texts

5. Thinking about solutions from the perspective of a student from Manila







Save our Earth: Endangered animals

Project learning

Objective

Students synthesise information from different sources (English textbooks, G.S. textbooks, Chinese and English books and websites they have read).

Context

The principal has asked the P.6 teachers to organise a showcase to deliver the message of protecting endangered animals.

Task

Students form expert groups and each group works on a project to learn about an endangered animal. The expert groups explore the living habits of the endangered animal, causes of endangerment and the ways to protect it.

English Save our Earth: Endangered animals Project learning

planning skills

Group members:	1	2
	3	4
Endangered mimal: ✓ as appropriate)	 1. giant pandas 2. Chinese white dolphins 3. Asian elephants 4. polar bears 	 5. black-faced spoonbills 6. chimpanzees 7. Galapagos penguins 8. green turtles
essages of resentation:	 Describe its habitat, food sc Explain why the species is i Explain the effects of pollut actions on the endangered a Suggest ideas of how people 	in trouble tion, deforestation and human mimals
Target audience:	P.2 students	
Mode of presentation: as appropriate)		al presentation (with ppt slides) iimal interview
Date of presentation:		
ime limit:	5 minutes	
Procedures:	 Researching Planning for the presentatio Brenering for the presentation 	
f granhic o		organis

C. Use of graphic organisers

- Use graphic organisers to organize the information collected.





Points to note

Remember to look for reliable information when you browse through the websites.

i.	Presentation skills			
	Speak clearly so that everyone can he	ar.	- 1	
: .	Make sure the microphone is working	well.	1	
1	Make sure you can say all the words.			
	Look at your audience.		- i -	
i -	Smile.			
! .	Remember when your turn is.			
-	· · · · · · · · · · · · · · · · · · ·			
	resear	rch skills		
	What to do	rch skills	Deadline	Completed
	· · · · · · · · · · · · · · · · · · ·	Resources needed (e.g. props, computer,		Completed (*)
	What to do	Resources needed		
(e.g	What to do , write a presentation script, read books for information, make props)	Resources needed (e.g. props, computer,		
(e.g	What to do , write a presentation script, read books for information, make props)	Resources needed (e.g. props, computer,		
(e.g	What to do , write a presentation script, read books for information, make props)	Resources needed (e.g. props, computer,		
(e.g 1. 2. 3.	What to do , write a presentation script, read books for information, make props)	Resources needed (e.g. props, computer,		
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(e.g 1. 2. 3.	What to do , write a presentation script, read books for information, make props)	Resources needed (e.g. props, computer,		
(e.g 1. 2. 3. 4. 5.	What to do , write a presentation script, read books for information, make props)	Resources needed (e.g. props, computer,		
(e.g 1. 2. 3. 4.	What to do , write a presentation script, read books for information, make props)	Resources needed (e.g. props, computer,		

presentation skills



Save our Earth: Endangered animals

Explicit teaching of text features

English







Be greedy!

THIEVES!! (Manz, 2002)

- Title Title "sneak" into a book and Headings "steal" the information before reading
- Introduction
- Every first sentence in a paragraph
- Visuals and vocabulary
- Everything you know about the topic Summary

English Explicit teaching of text structures





Introduce the concept that writers use different text structures to organise information



Explicit teaching of text structures

Teach the signal words for each text structure



for example

for instance

(no.) types of

(no.) kinds of

characteristics

looks like

such as

include



with '-est', best, least, etc.]

Case title: Developing learning to learn capabilities through a cross-curricular reading project 20160620

English

Explicit teaching of text structures

Different text structures for different paragraphs

Description Crocodiles

All crocodilians are reptiles. Members of the crocodilian family include alligators, crocodiles, caimans, and gavials. Crocodilians live in warm weather throughout the year and they spend part of their time in the water and part of their time on land. Almost all crocodilians grow to be very large, with the largest more than twenty feet long. There are two kinds of alligators, fourteen kinds of crocodiles, eight kinds of caimans, and one kind of gavial. The crocodilian characteristics are eyes on the top of the head, heavy scales, tough skin, a powerful tail, four short legs, huge powerful jaw filled with large pointed teeth.

Compare & contrast

Alligators and crocodiles are very much alike. These crocodilians are reptiles with snouts, long tails, four short legs, tough skin, and sharp teeth. There are some differences, however. Some people say that alligators and crocodiles differ in the shape of their snouts and the positioning of their teeth. Crocodiles have longer, more V-shaped heads than alligators. On the other hand, alligators have shorter, wider heads that are more U-shaped than crocodiles. Zookeepers say that crocodiles move faster than alligators and they are fiercer than alligators.

Sequence

In June and July, the females begin building nests on dry ground. Between November and March the female lays 40 - 60 eggs in a nest. The eggs take 90 days to develop. When the little crocs are about to hatch, they make chirping sounds in their eggs. After hearing the sounds, the mother digs at the nest to expose the eggs. At the same time, baby crocodiles use their "egg tooth" on the end of their upper jaw to break open the egg to free themselves. Finally, after all the babies are found, the mother takes them to the shallow water. She then watches over them for weeks or months until they are able to look after themselves.

Cause & effect

On the river banks of the Nile River, there are many kinds of birds, sometimes called crocodile birds because they are always hopping around crocodiles. The big crocodiles and the birds are useful to each other for several reasons. The birds eat flies and leeches on the crocodiles' skin and mouths. In this way, the birds get a good mean and the crocodiles get rid of the leeches and flies. Sometimes an enemy frightens the birds who scream and fly away. As a result of the noise, the birds give the crocodiles a warning of danger.

Problem and solution

In most parts of the workd mere are not as many crocodiles as there used to be. This is a problem because crocodiles are becoming endangered. Many crocodiles have died because people dried up the swamps and marshes where the crocodiles live. Poachers have also made the problem worse as crocodiles have been desired for their strong, smooth, leathery skins. In order to preserve these mighty creatures, people must take care of the crocodiles' environment and stop hunting them.

Description

Crocodiles

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Adapted from:

Making Nonfiction Texts Come Alive by Kathy Pike and Jean Mumper (Pearson, 2004)




Scan the signal words to predict the text structure

Paragraph 1

Crocodiles

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- 1. What are the signal words?
- 2. What text structure is it?

Description

English) Explicit

Teach & model the use of graphic organisers to go with each text structure

Handout

Pg. 3



Help students to

- anticipate and predict what to expect
- identify the most important parts of the paragraph
- recall information

Paragraph 1

Crocodiles

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The main idea of the first paragraph is to _____.

- A. compare the four kinds of crocodilians
- B. tell the problems that the crocodiles face
- C. tell the causes why crocodilians become endangered

D. describe the appearance and living habits of crocodilians

Handout

γ<u>g</u>

Student level

Reading

Improving ability to comprehend non-fiction texts

Pre-test & post- test

- Text 1: The MTR (Description)
- Text 2: Rubbish Causes Big Problems (News article)
- Text 3: Food Wastage (Exposition)



Pre-test Post-test

Student level Reading

Improving ability to comprehend non-fiction texts



Student level Reading

• Improving ability to comprehend non-fiction texts

Identifying main ideas of the paragraphs by reading topic sentences

Identifying the cause and effect structure

Identifying words related to the topic

Student level

Reading

- Becoming more confident readers
- Improving reading speed
- Reading longer and more difficult texts

Prepare senior primary students for learning at secondary level

Knowledge

Student level

- Broadening the scope of knowledge about different types of pollution, environmental protection, endangered animals and ways to conserve them
- Knowledge about the topic from different subjects

You are going to write an article for the school newsletter to explain the causes, effects and solutions of some environmental problems. Write the article in at least 150 words. The following mind-map can help you.



Student level Knowledge

• Broadening the scope of knowledge about different types of pollution, environmental protection, endangered animals and ways to conserve them

Chinese debate

Hong Kong is not a green city.



Student level Knowledge

 Broadening the scope of knowledge about different types of pollution, environmental protection, endangered animals and ways to conserve them

Chinese debate



Student level Knowledge

- Broadening the scope of knowledge about different types of pollution, environmental protection, endangered animals and ways to conserve them
- Improving ability to search, organise and synthesise information

Project

• Developing self-management skills, collaboration skills and communication skills

What to do	Resources needed	Deadline	Completed
(e.g. write a presentation script, read books for information, make props)	(e.g. props, computer,		(✔)
	stationery)		

Self-management skills

Generic skills

managing time

Student level

 matching up a list of tasks to a schedule and monitoring the progress

Communication skills

- listening actively
- asking questions
- using visual aids to convey ideas
- doing presentations

Coll	abc	oratio	on s	kill

- allocating resources and responsibilities to ensure that all members of the team can make maximum contribution
- working collaboratively to achieve a common goal

Prepare senior primary students for learning at secondary level

Student level Values and attitudes

• Understanding and caring about the environment and endangered animals

KWL

We should not hurt animals and sell animal products made from their skins and organs.

Polar bears are endangered and their number is decreasing.

The death of animals at the North Pole is caused by human activities.

Some countries start to formulate policies to protect animals, e.g. giraffes.

Water pollution causes the death of birds.

Deforestation causes pollution problems.

