



Low Carbon PLS Day

Teaching Resources for Primary School



Package-free



Eat Local



Eat Seasonal



Low Carbon PLS Day

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“Low Carbon PLS” Day Background Information



In everyday life, every process from the production to the consumption of food ingredients generates greenhouse gases. Whether it's transporting non-local ingredients, excessive packaging, or choosing out-of-season ingredients, all of these increase energy consumption and result in higher carbon emissions. Excessive carbon emissions can lead to a series of environmental problems, impacting ecosystems and animal habitats.

Practicing a low carbon diet is an effective way to address climate change. The three major principles of low carbon diet include shopping Package-free, eating Locally and eating Seasonally, thereby reduce the environmental impact of food production.

The Hong Kong Ocean Park Conservation Alliance aims to promote the concept of a low carbon diet through the "Low Carbon, PLS" Day campaign, encouraging students to develop low carbon eating habits in their campus life.

At the student level, students can learn about the impact of food ingredients on carbon emissions through the "Low Carbon, PLS" Day campaign, and encourage classmates and teachers to practice low carbon eating habits at school.

Introduction of “Low Carbon PLS” Day Toolkit



This set of toolkit is designed to support teachers in organizing educational activities and promoting the concept of low carbon eating within the school. Through various teaching activities and school-wide extension activities, the toolkit aims to enhance students' understanding of shopping package free foods, consuming local and seasonal foods, and cultivate their habits of low carbon eating.



Introduction of PRI “Low Carbon PLS” Day Suggested Activity



The “Low Carbon PLS” Day activities span across the entire academic year. Through a series of school activities, students would acquire knowledge related to carbon footprint and low carbon diet. In addition, schools can encourage students to establish low carbon eating habits in school life. Schools can integrate the concept of low carbon diets into various school subjects and promote relevant concepts to the community.

Seahorse Rangers can help lead the activities and encourage all teachers and students to participate in the “Low Carbon PLS” Day.

Main Learning Objective

- Understand the concepts and purpose of low carbon diet
- Develop the habit of shopping package free, eating locally, and eating seasonal
- Enhance the understanding of low carbon diet concepts and promote low carbon practices

Low Carbon Diet (PLS)



Package-free





Eat Local



Eat Seasonal

Objective of Suggested Classroom Activities



Relevant Subjects	Visual Arts 	General Studies 
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Goals

Through different activities, students should be able to:

- Understand the carbon emission situation in Hong Kong and internationally
- Understand the 3 concepts of “Low Carbon Diet” (Shop Package-free, Eat Local and Eat Seasonal)
- Develop a habit of practising a low carbon diet
- Promote the concepts of low carbon diets through interesting activities

Preparation

1. Understand students’ prior knowledge of conservation, environmental protection and low carbon diet related topics
2. Introduce the theme of conservation, environmental protection and low carbon diet related topics in lessons to help students gain a better understanding before classroom activities.

Introduction

1. Introduce low carbon diet related news to raise students’ awareness of relevant topics.
2. Teachers can refer to the following news examples to introduce the 3 main themes of low carbon diet in lessons.



Reference :

1. 「實行低碳飲食 支持本地耕作」 (香港地球之友) , <https://www.foe.org.hk/tc/article/綠色資訊/文章/實行低碳飲食 支持本地耕作>
2. 「環保署「淨零綠生活」指引：低碳飲食納入蔬食推廣、推「生鮮裸賣」減少一次性用品」 (環境資訊中心) , <https://www.thenewslens.com/article/180264>

Suggested Classroom Activities



Part 1 : Understanding the Concepts of Carbon Footprint and Low Carbon Diet

1. Understand the whole lifecycle of food carbon footprint.
2. Learn about different forms of food packaging and methods of naked shopping.
3. Learn about different food choices and advantages of consuming local food.
4. Understand the concept of seasonal food
5. There are three steps in Part 1:



1

Understanding Food Carbon Footprint

- Understand the process of food carbon footprint
- Learn about the relation between food and carbon footprint

Example

Apply to
General Studies

Understanding Food Carbon Footprint

1. Invite students to bring a food to class (Teachers don't need to remind students to choose food from a low carbon diet perspective).
2. Ask the students' to discuss the food brought in group (e.g. Number of food packaging, origin of food).

Suggested Classroom Activities



Example (cont.)

3. Teachers can explain the lifecycle of carbon footprint produced based on the number of packaging and origin of food (Teachers can take reference from Supplementary Powerpoint P.5).

- Number of food packaging – Processing and Packaging
- Origin of food – Transportation and distribution

4. Calculate food carbon footprint by points (The scoring system below is for teachers' reference).

- Educate students that the number of food packaging and origin of food will affect the carbon footprint
- Higher score means higher food carbon footprint

5. Encourage students to purchase local food with less packaging to reduce food carbon footprint.

Number of packaging	
0 piece	1 point
1 – 3 piece(s)	2 points
4 – 6 pieces	3 points
7 – 9 pieces	4 points
10 pieces of above	5 points

Origin of food	
Hong Kong	1 point
China	2 points
Asia	3 points
Outside Asia	4 points

*9 points in total; Higher score means higher carbon footprint

Suggested Classroom Activities



2

Understanding Low Carbon Diet

- Understand the concepts of low carbon diet
- Learn about the advantages of low carbon diet

Example

Apply to
General Studies

Low Carbon Diet Lesson

1. Share the advantages of low carbon diet during the general studies lesson (Please refer to Supplementary Powerpoint P.6–25).
2. Introduce the three main themes of low carbon diet:
 - Package-free
 - Eat Local
 - Eat Seasonal
3. After class, students can explore the possibilities of implementing a low carbon diet in their daily lives and conduct an inclass sharing

Suggested Classroom Activities



3

Strengthening Learned Concepts

- Review the concepts of food carbon footprint and low carbon diet
- Ensure students understand the concepts of food carbon footprint and low carbon diet clearly

Example

Apply to
General Studies

Low Carbon Diet Quiz

1. Teachers can divide students into a group of five.
2. Teachers will ask questions about carbon footprint and low carbon diet by using the scoring system (Reference questions can be found in Teaching Material P.3–4).
3. Provide time for discussion after each question.
4. Invite one student to the blackboard to write down the answer (Invite different students to answer each question).
5. Award points for each correct answer. Teachers can explain the question and help students to understand the concepts of low carbon diet.
6. The group with the highest points will be the winner.

Part 2: Practice and Promote Low carbon Diets

1. Develop a habit of shopping without packaging.
2. Understand locally made food.
3. Learn about different seasonal food.

Suggested Classroom Activities



Example

Apply to
Visual Art

Design Your Own Shopping Bag

Preparation

Teachers need to prepare a white shopping bag, water colour and aprons in advance (Prepare the required number of materials according to students in the class).

1. Using low carbon diet as the main theme, have students design their own shopping bags.

Suggestions:

- Students can draw different seasonal foods and combine them to represent the Earth (e.g. Seasonal fruit of December)
 - Students can draw locally made food
2. Discuss the purpose and importance of using their own shopping bags.
 3. Encourage students to develop the habit of bringing their own shopping bags.
 - Recommend students to carry their own shopping bags while shopping with family to reduce the usage of plastic bags
 4. Conduct a sharing session after the drawing activity and promote low carbon diet in school.
 - Organize an inter-class competition to select students' shopping bags for promotion
 - Awards can include "Most creative award", "Most relevant theme award", "Most active participation in the class"
 - Teachers will select the award winners
 - Select a representative for a school-wide vote

Suggested Classroom Activities



Example

Apply to
General Studies

Creating a New Dish

1. Divide students into group of five.
2. Have each group design one dish.
 - Encourage students to create different dishes
3. Students can work together to complete the worksheet (Worksheet can be found in Teaching Material P.5).
 - Activity details :
 - Name the dish
 - Draw a complete picture of dish
 - Discuss and write down the details of the required ingredients:
 - a. Photos of ingredients (Recommend students to take photos of foods including packaging in supermarket
 - b. Name of the food
 - c. Origin of the food (Recommend students to choose ingredients locally sourced or closer origin in advance)
 - d. Seasonal (Assign each group to search for seasonal food during activity period)
 - e. Number of food packaging (Recommend students to choose food with fewer packaging in advance)
4. Conduct a sharing session after completing the worksheet to introduce the designed dish to the class.

Suggested Classroom Activities



Example (cont.)

5. Summarise students' creations.

- Introduce the methods of incorporation low carbon diet in daily life
 - a. Shop naked or shop with minimal packaging
 - b. Choose locally sourced or closer origin food
 - c. Choose seasonal food

6. Teachers can display students' created dishes.

- Allow students to know different combinations of seasonal food and promote low carbon diet in school
 - Encourage students to cook seasonal dish with their families
 - Share the concepts of low carbon diet with their families and promote them outside of school

Suggested Extended Activities



Through different activities, students should be able to:

1. Learn about low carbon diet during school wide events.
2. Develop low carbon diet habit and share with their families.

Example

Naked Tuck Shop Day

Preparation

1. Collaborate with suppliers and host naked-shopping day together.
 - a. Recommend suspending the sale of packaged food on the day of the event, including packaged snacks, canned or bottled soft drinks.
 - b. Advice against providing disposable utensils.
 - c. Consider of fering discounts for bringing one's own container (e.g. Provide a 10% discount on purchasing \$10 worth fish balls with a container).
 - d. Choose locally made and/or seasonal food (e.g. Seasonal fruit box).
 - Introduce students to locally made and seasonal food
 - Encourage the habit of purchasing locally made and seasonal food
2. Seahorse Rangers will assist in promoting Naked Tuck Shop Day before activity starts.

Suggested Extended Activities



Example (cont.)

1. Students can bring their own containers to tuck shop and purchase food or drinks (e.g. Using lunchboxes to carry sandwiches, fish balls or siu mai).
2. Seahorse Rangers can set up a booth next to the tuck shop for:
 - a. Placing posters to promote and explain the purpose and importance of the event.
 - b. Providing several clean containers for students who do not have containers for the naked shopping activities (Recommend using reusable containers to reduce waste).
 - c. Remind the students to return the used container after washing and educate the students how to effectively reuse different containers.

Low Carbon Diet Competition

Preparation

1. Teachers should introduce the purpose and content of the competition, inviting Seahorse Rangers to communicate and promote the activity in school.
2. Seahorse Rangers will help promote Low Carbon Diet Competition in school before the activity starts.
 - Recommend students to design the activity poster
 - Introduce the scoring system to each class before competition
3. Teachers can arrange awards or prizes in advance.
4. Teachers can assign each student a different type of food to avoid duplication.
 - Encourage students to prepare food together with their parents

Suggested Extended Activities



Example (cont.)

1. Organise a low carbon eating competition that involves students' participation in various dining activities at school.
2. Conduct a class-based competition with a scoring system, where the class with the highest score will be the winner (Please refer to the following table for the scoring method).
3. Seahorse Rangers will assist in calculating the score of each class, including the number of food packages, local and seasonal food.
4. Recommend organizing an inter-class competition to select outstanding class as accomplishment.
 - e.g. “Lowest Carbon Class”, “Star of No Packaging”, “Star of Local food” and “Star of Seasonal food”

Food Packaging	
0 – 10 piece(s)	10 points
11 – 20 pieces	7 points
21 – 30 pieces	5 points
30 pieces or above	3 points

Local Food
1 point for each locally made food (MAX:10 points) e.g. Jack'n Jill Potato Chips, Vitasoy

Seasonal Food
1 point for each seasonal food (MAX:10 points) e.g. Strawberries are seasonal on December to April

*30 points in total

The Role of Seahorse Ranger



Arrange, Conduct and Promote activities

Organise

- Assist in conducting low carbon diet activities (e.g. Assist teacher in collecting the information of low carbon diet, preparing activities' props, calculating and integrating the result of the activities)

Promote

- Promote low carbon diet activities (e.g. promote the activities information to different classes in form-teacher periods)



Low Carbon PLS Day

Toolkit for Primary School

1. Supplementary Powerpoint
2. Teaching Resources
3. Teaching Material
4. Poster