

# 價值觀教育系列：

## (2) 減緩氣候變化與節能綠建

基督教中國佈道會聖道迦南書院  
Mr. Tam, Ho Chi Owen - Head of Green School Committee



## 學校背景

# ECF Saint Too Canaan College

EMI DSS Christian School

Established in 2013

No. of staff: 106

No. of students: 722

# 第十八屆香港綠色學校獎



**金獎**  
Gold Award



**基督教中國佈道會聖道迦南書院**  
ECF Saint Too Canaan College

學生參加「兩岸四地綠色建築技術發展論壇」，介紹學校的綠色發展，並學習最新的環保建築技術。

Students participated in the Cross-strait Green Building Technology Development Forum. They introduced the green development of the school and learnt the latest green building technology.



學校設有小型氣象站提供包括溫度、濕度、雨量、風速、風向及紫外線指數等氣象數據，讓學生從中得悉附近的天氣情況。

The school has set up a small weather station to collect meteorological data, including temperature, humidity, rainfall amount, wind speed and direction, and UV index, etc., for students to know more about the weather condition nearby.

# 迦南綠色教育

「認識環境」  
(education about  
the environment)

課程發展  
學科知識

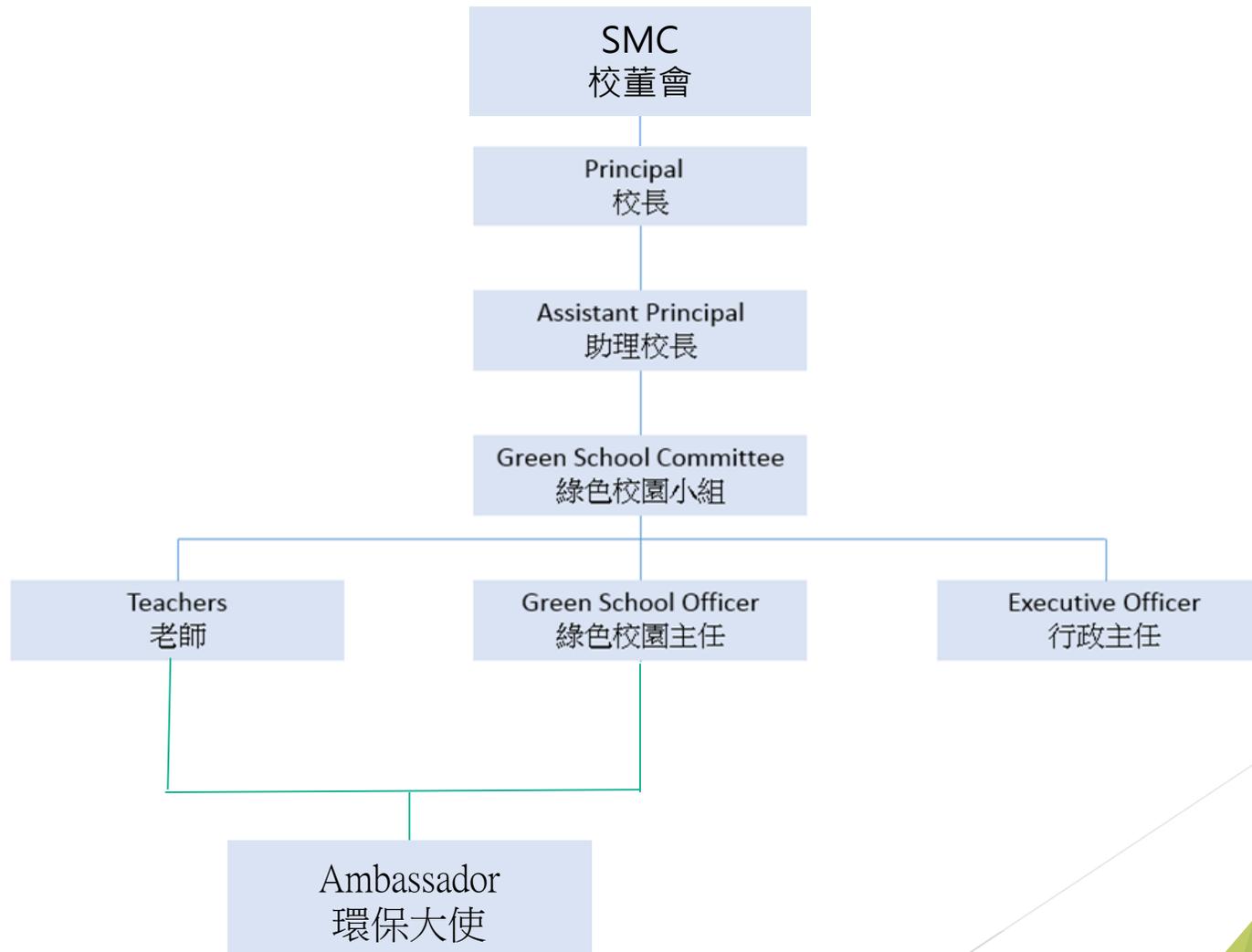
「在環境中學習」  
(education in the  
environment)

硬件提升  
綠化校園

「關心及改善環境」  
(education for the  
environment)

對環境及自然的關愛  
注重培育關懷倫理 (ethic of caring)  
建立對自然的關愛及環保使命感  
珍惜的態度

# Whole school approach structure



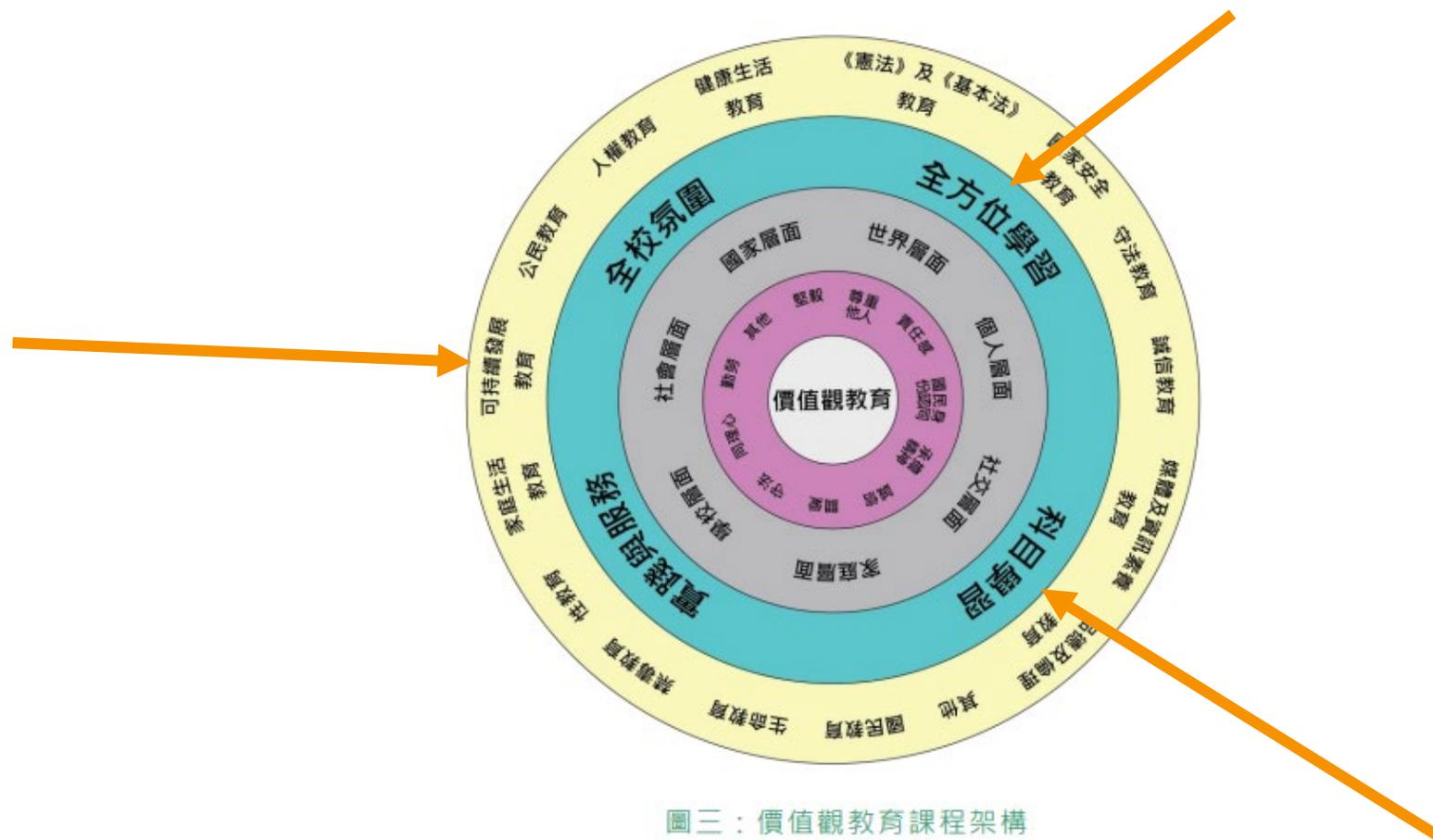
# Start from teachers 由教師開始...

邀請校董兼香港房屋署  
（發展及建築）總建築師  
嚴汝洲先生於教師發展日  
分享：

- 全球氣候變化狀況
- 發展綠色校園的重要性
- 中國內地的綠色學校例子
- 介紹本校環境氣品質監測儀
- 介紹本校學校的節能設施



# 全校參與的模式，由不同科目協助推行環保的理念



圖三：價值觀教育課程架構

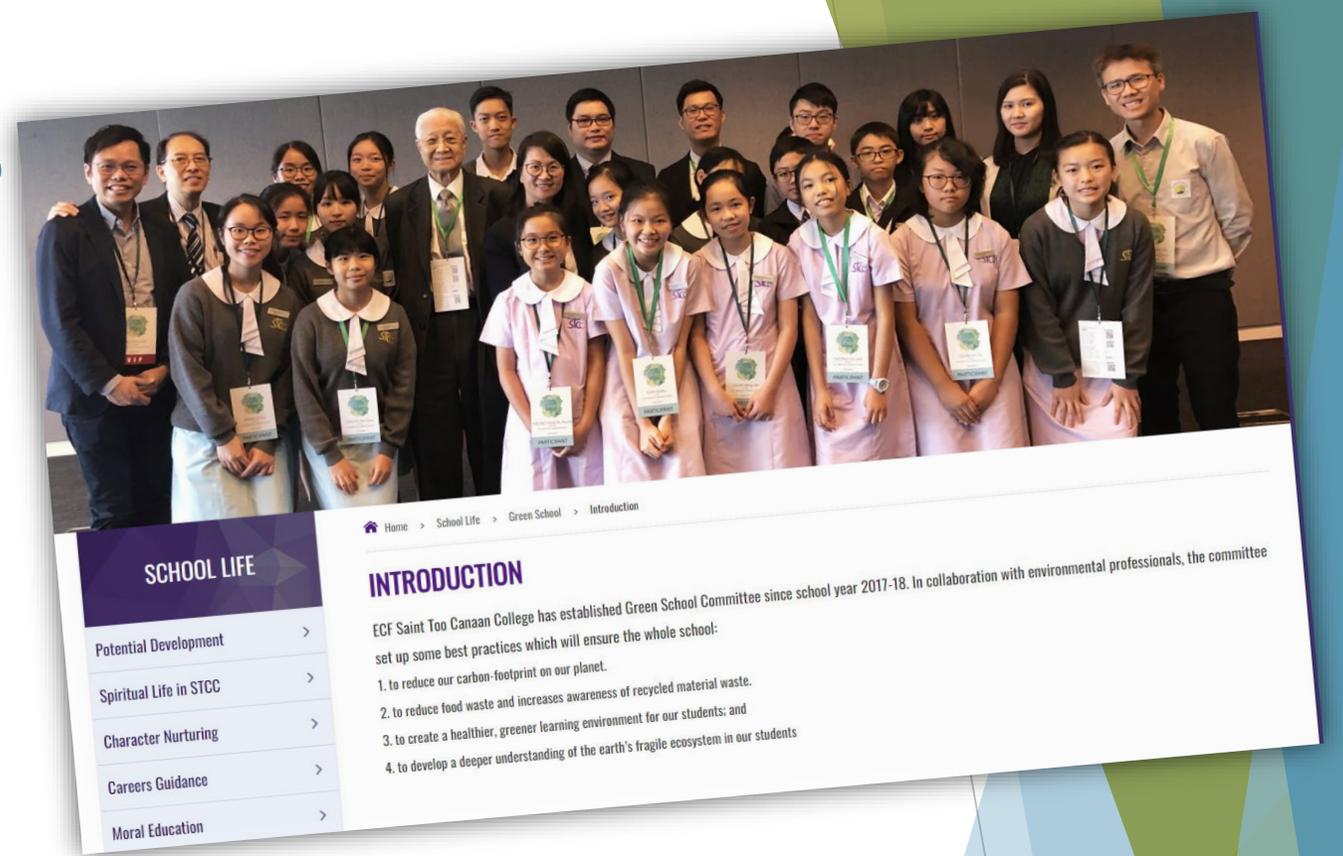
# Green School Committee

Established in 2017-18

In collaboration with environmental professionals, the committee set up some best practices which will ensure the whole school:

1. to reduce our carbon-footprint on our planet.
2. to reduce food waste and increase awareness of recycled material waste.
3. to create a healthier, greener learning environment for our students; and
4. to develop a deeper understanding of the earth's fragile ecosystem in our students

- Geography teacher
- English teachers
- STEM and SCI teachers
- PIC of Organic Farm
- Executive Officer



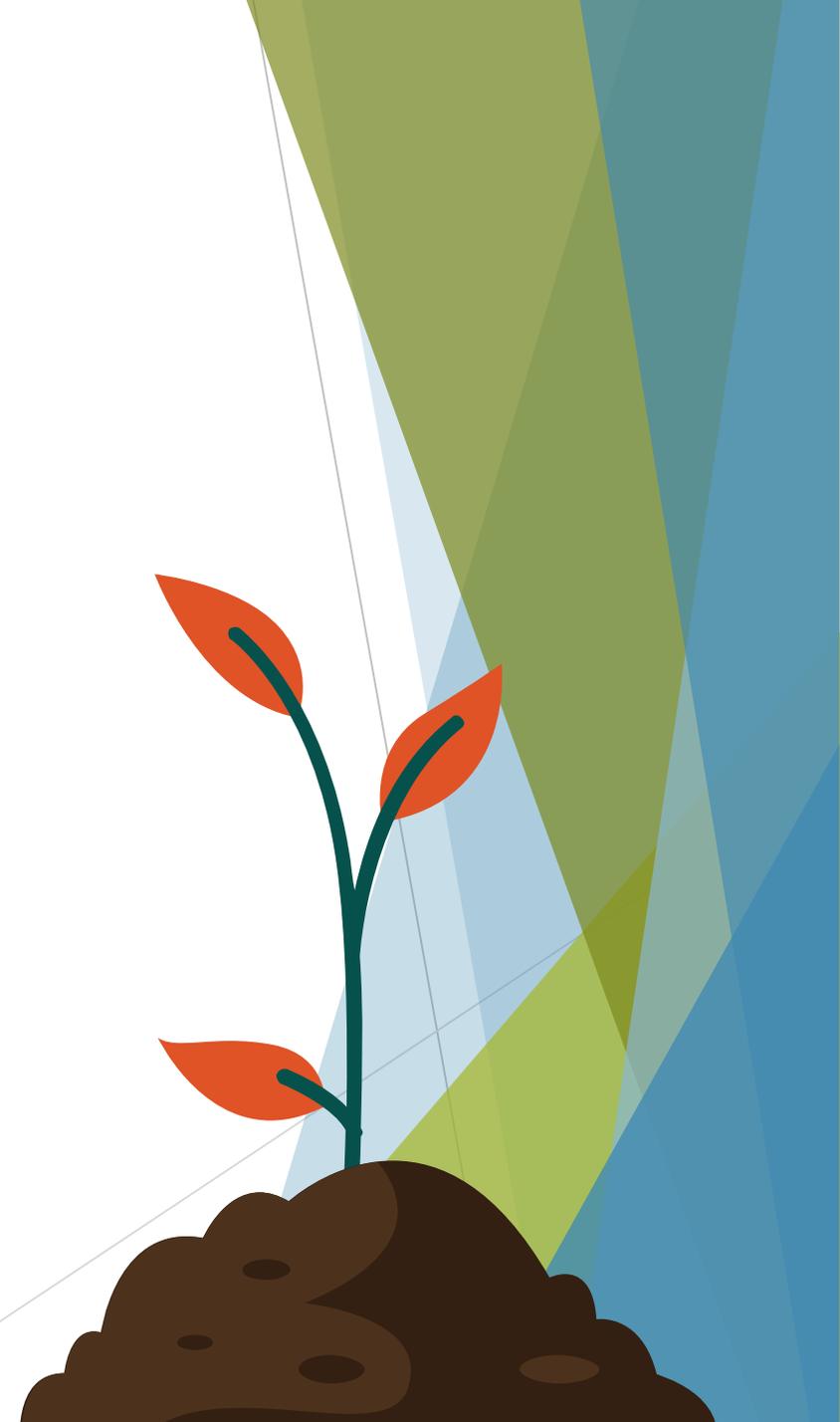
# Green education targets 目標

**訂立每年減少10%能源消耗的目標：**

- 透過職員會議告知全校職員
- 透過週會告知全校學生

**每年減少10%能源消耗的目標得以達成：**

- 透過職員會議告知全校職員
- 透過壁報板告知全校學生



# 17-20 三年環境教育規劃

## 2017/18

- ▶ 開始綠色校園計劃
- ▶ 舉辦綠色校園活動
- ▶ 電能消耗及用水監控系統
- ▶ 邀請學生成為環保大使推廣環保並參與相關活動

## 2018/19

- 訂定節能目標
- 增加參觀活動
- 向校外人士介紹本校綠色校園發展
- 建設小型氣象站及購入環境品質監測儀
- 在校本課程強調綠色教育元素
- 透過班主任課進行環保教育

## 2019/20

- 設立回收攤位鼓勵回收
- 結合學校的硬件設施，把綠色教育元素溶入學科課程中
- 增加太陽能板等可再生能源設施
- 增加LED照明系統
- 安裝自動感應式水龍頭
- 興建蝴蝶園並進行蝴蝶保育相關教育

# 20-23 三年環境教育規劃

## 2020/21

全面**硬件**升級:

- 全校更換LED照明裝置
- 安裝風力發電機
- 全校更換感應式水龍頭
- 全校更換更具能源效益冷氣機

培訓環保大使:

- 參加校外與環保相關的比賽
- 獲得第十八屆綠色學校獎

## 2021/22

本校計劃將擴建**蝴蝶園**及添設**中藥園**，進行蝴蝶保育，並藉此教育學生環境保育及生態平衡的重要性。

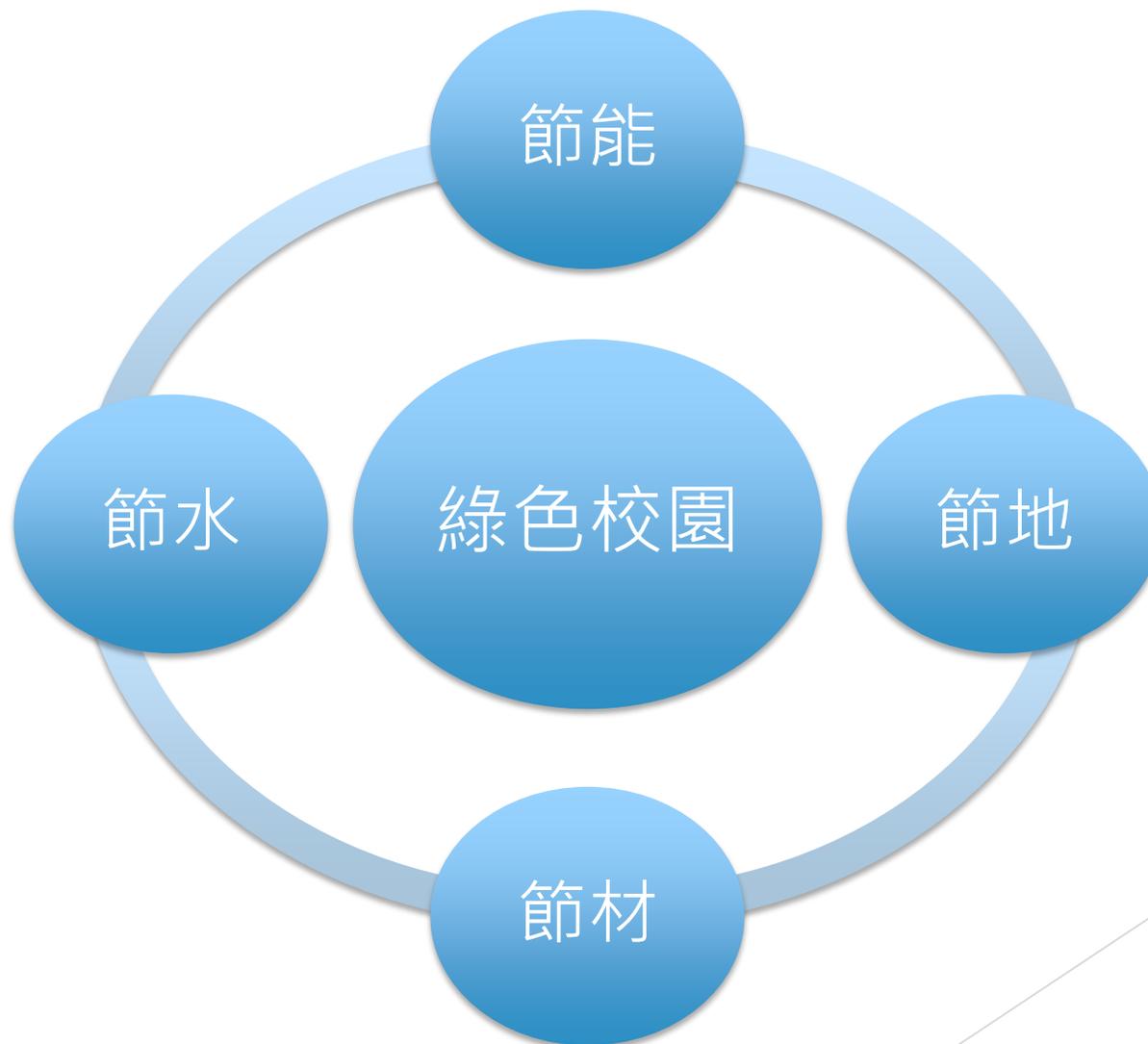
結合學校的硬件設施，發展富本校特色的綠色教育，並滲透於不同科目中。

## 2022/23

申請**綠建環評**相關認證

# (1) 學校設施

# 政策





本校已制定節能減碳指引，  
並採取措施減少能源消耗及碳排放。



ST. JOSEPH CATHOLIC COLLEGE  
聖若瑟天主教中、小學聯合幼稚園暨小學

### 課室環保節能措施

#### Environmental Protection and Energy Saving Approaches in Classrooms

請環保大使每天查閱班房電腦桌面上所顯示的當天氣溫，同學應依照以下指引，按氣溫開啟適當數量的冷氣機：  
Environmental Prefects should check the temperature on the desktop of the computer every day, and turn on suitable amount of air conditioners according to the guideline below

Temp. of the day	No. of air con. can be turned on
≤25°C	0 (indicated by a red X over the icon)
25.5-29.5°C	2
≥30°C	3

離開課室，若下一堂沒有人使用班房，同學請關掉冷風扇及電燈。  
If no one uses the classroom in next lesson, students should turn off all the air conditioners, ceiling fans and lightings.

放學後，同學離開前應關掉課室的電腦。  
After school, students should turn off the computer in the classroom before leaving.

Green School Committee

Temp. of the day	No. of air con. can be turned on
≤25°C	0 (indicated by a red X over the icon)
25.5-29.5°C	2
≥30°C	3

Green School Committee



# LED燈發動態感應器



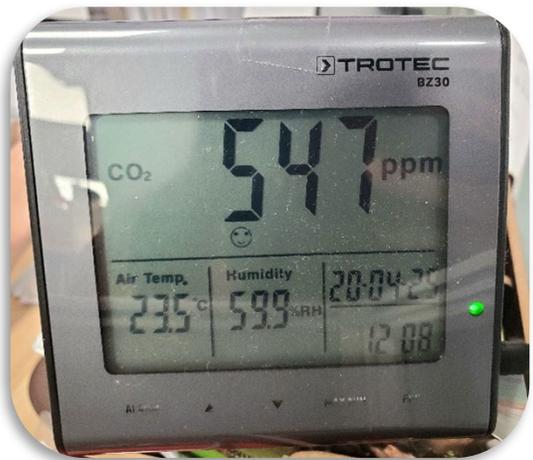
# 太陽能板



# 風力發電裝置



# 定期監控教員室 氣溫濕度及二氧化碳含量



Seat no.	Staff Initial	Staff Name	Lighting (Lx)	Temperature (°C)	CO <sub>2</sub> (ppm)	Remarks
1	ACY	AU Cheuk Yan	244	25.7	771	
2	LKE	LAM Chun Yam	520	25.6	768	
3	HCK	HUI Chun Kau	668	25.6	768	
4	WSY	WONG Shun Yiu	718	25.6	776	
5	ERI	WONG Wai Kit	533	25.7	796	
6	CYE	CHENG Kwok Yeung	511	25.6	767	
7	LLM	LI Lee Mei	643	25.6	768	
8	WCH	WONG Chi Hang	704	25.6	785	
9	KLY	KWOK Lai Yi	557	25.6	814	
10	DER	CHAN Ka Wing	516	25.2	822	
11	LYY	LIANG Ying Yi	616	25.2	796	
12	AMK	AU YEUNG Mei Kuen	611	25.2	787	
13	SAU	LEE Sau Kuen	603	25.5	830	
14	YCW	YIP Chun Wa	680	25.1	848	
15	LWM	LAM Wing Man	612	25.2	805	
16	AYY	AU Yu Yan	677	25.2	792	
17	WYV	WONG Yiu Yan	570	25.2	839	
18	CYA	CHAN Suet Yan	569	25	659	
19	CSZ	CHOW Mui Sze	610	25	718	
20	THC	TAM Ho Chi	511	25	752	
21	LKM	LEE Ka Ming	491	25.1	828	
22	WYL	WONG Yu Lan	477	25	691	
23	CWK	CHAN Wai Kin	534	25	728	
24	YLS	YIU Lai Shan	424	25.1	762	
25	WCW	WONG Chi Wang	479	25.1	783	
26	NYM	NG Yee Man	597	24.9	751	
27	SKW	SUN Ka Wa	669	24.9	718	
28	BEN	LEUNG Chi Ho	584	24.9	689	
29	SSS	SO Suet Shan	666	24.9	687	



# 改善室內環境及空氣流通



# 在丟棄物資前充分利用



# 回收箱

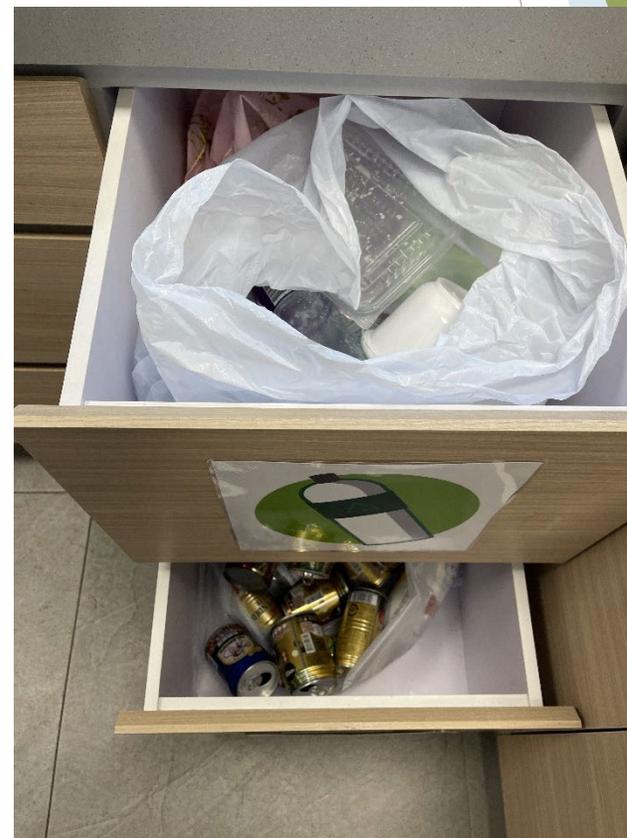
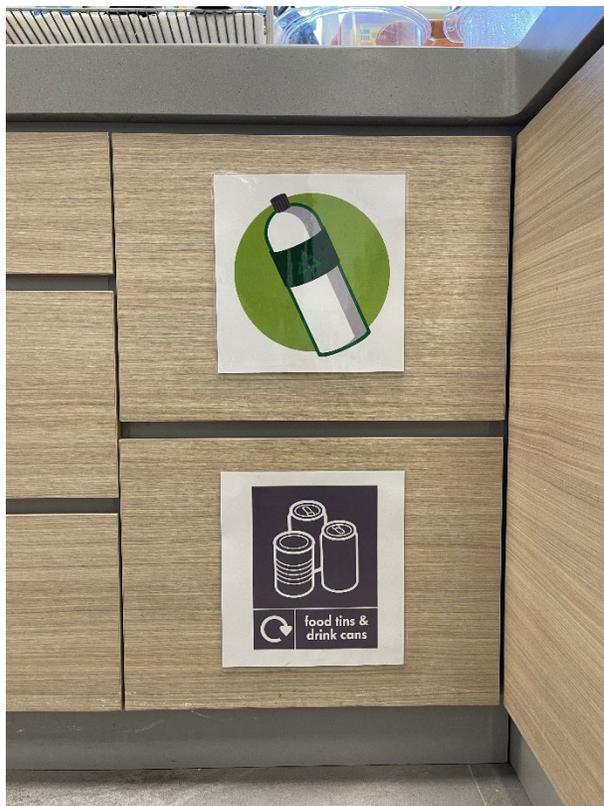
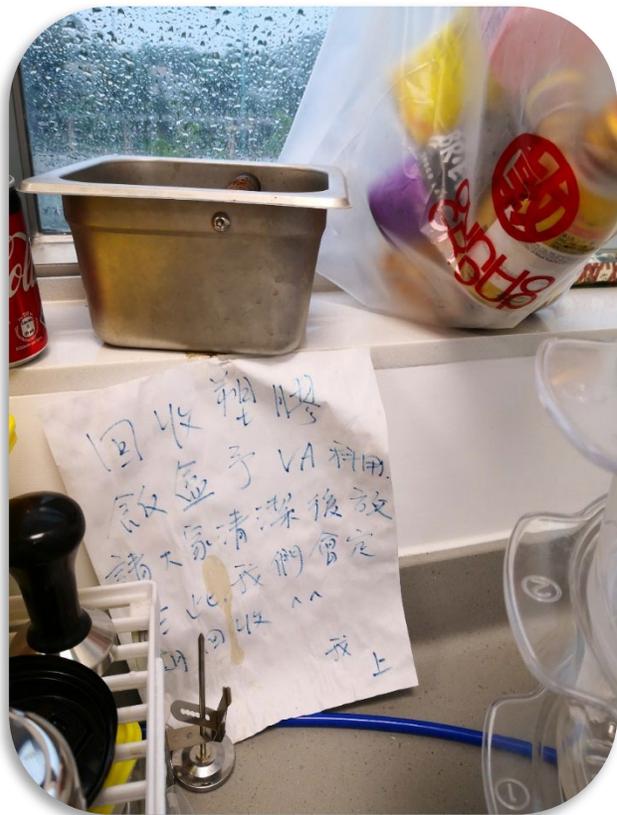
New! (2022)



# 廚餘機



# 回收塑膠 (教員室)



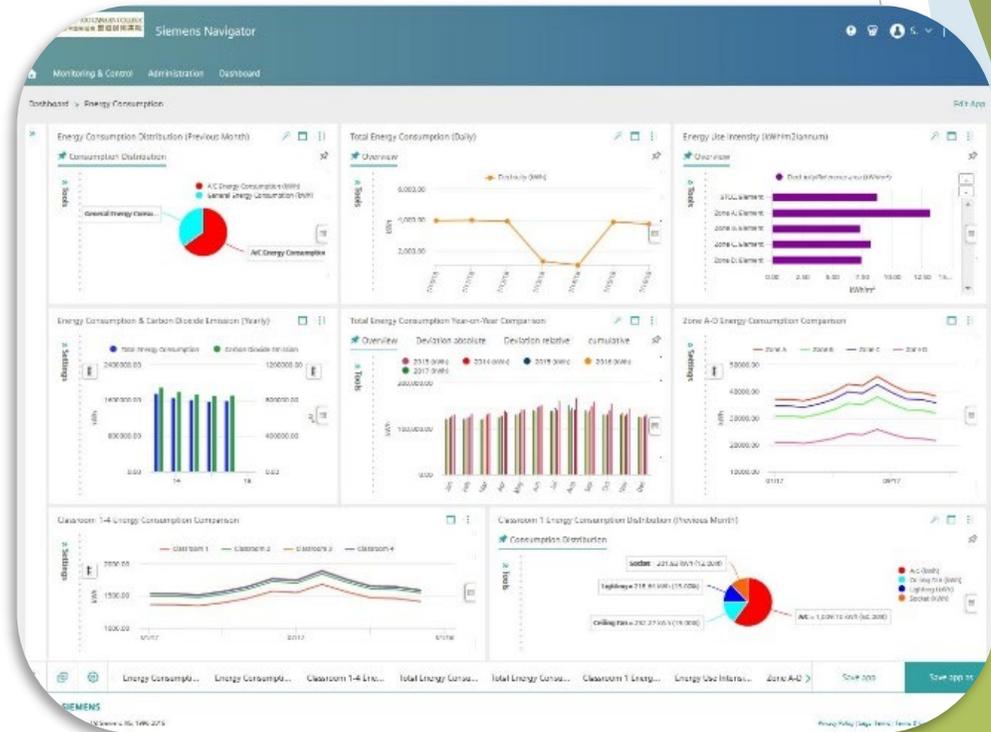
# 安裝感應式水龍頭



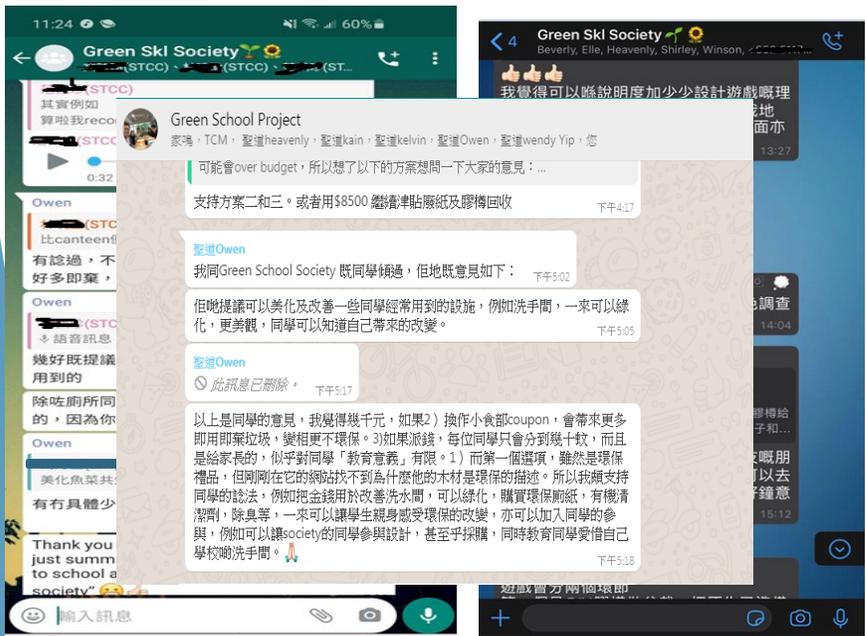
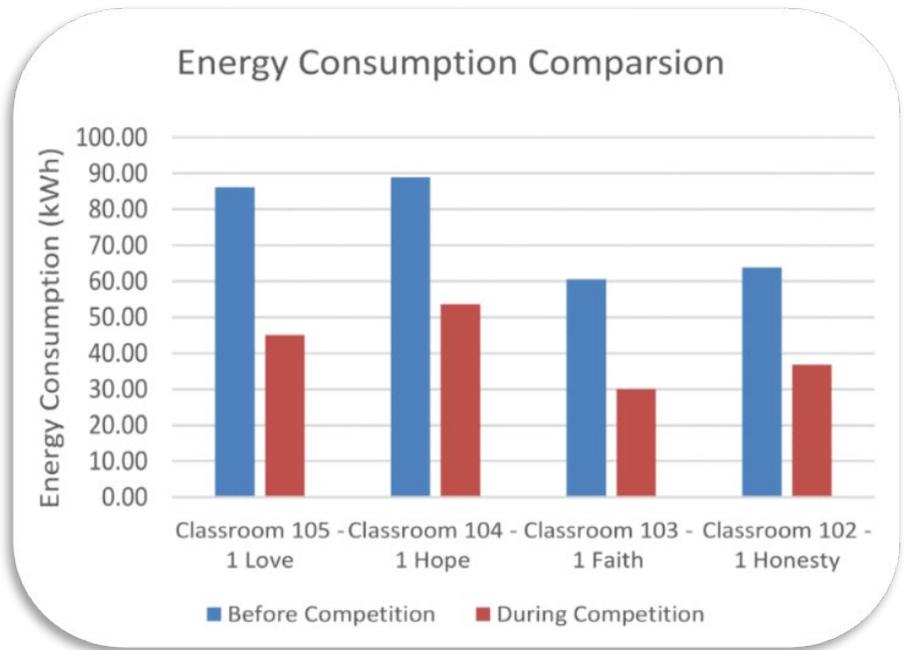
利用索帶縮短出水時間



# 電能消耗監控系統



# 中一級班際 節能比賽



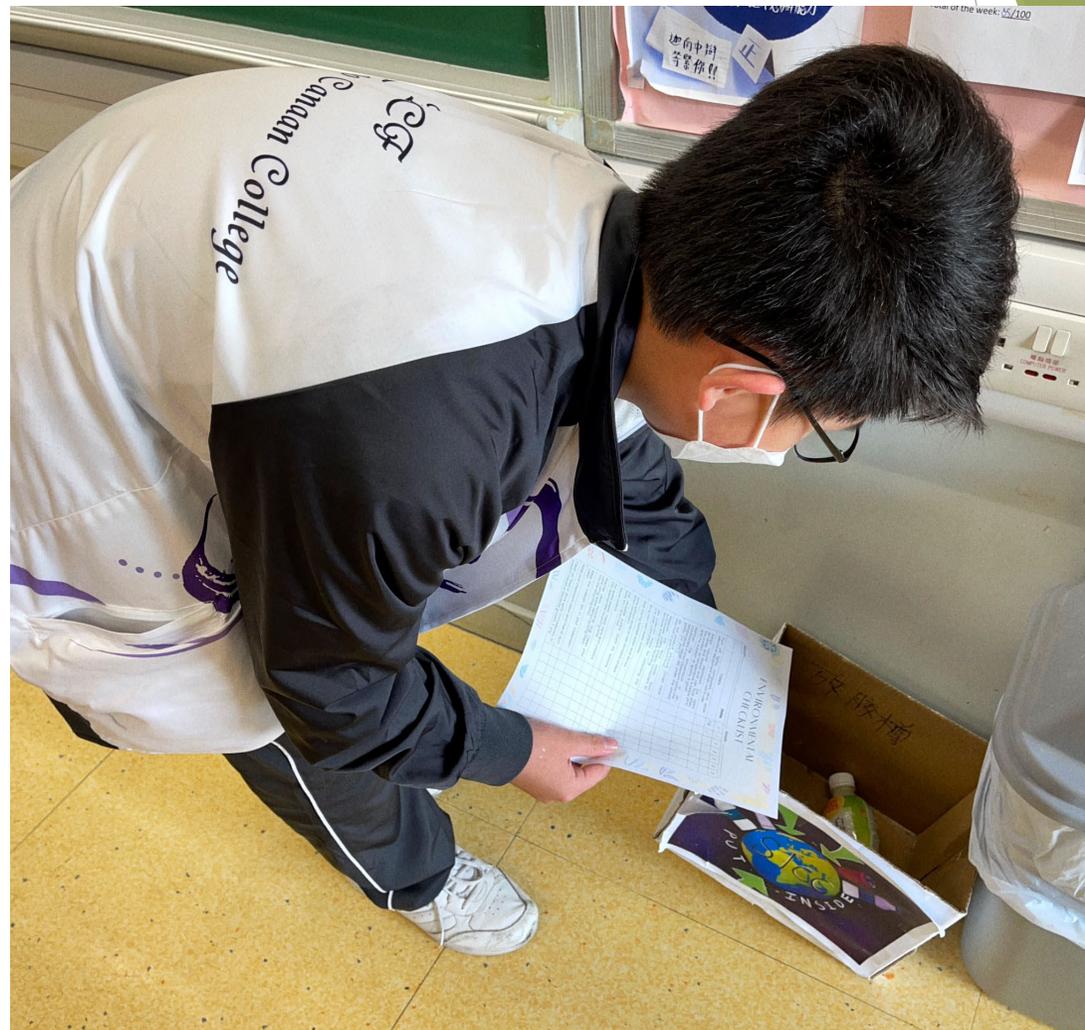
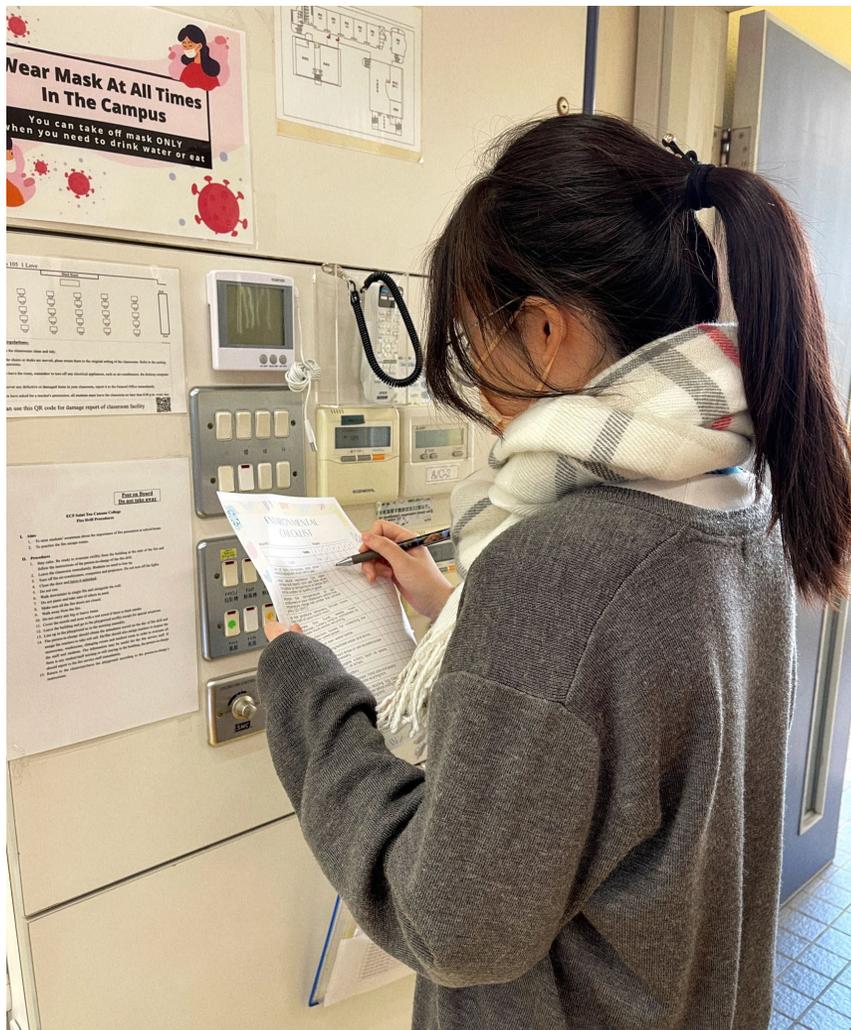




# 魚菜共生系統



# 大家估一估同學正在做甚麼？



學校每一班選出1-2位同學為Green Prefect，  
他們會監察班內的節能情況，  
並完成 Environmental checklist。

# ENVIRONMENTAL CHECKLIST

Month: \_\_\_\_\_ Week: \_\_\_\_\_

Date:	/	/	/	/	/	/	/	/
Tasks	E.g.	✓						
Turn off lights, computers and other electrical equipment when not in use.								
Adopt natural ventilation (i.e. open windows and doors) and use fans when the outdoor air temperature is below 25°C and the outdoor air quality is good.								
Maintain the temperature of air-conditioners in your classroom within the temperature range set under the school policy. (23-25°C).								
Do not produce leftovers. (Finish more than half of your lunch box)								
Separate the food waste from lunchboxes, cutlery and/or containers to facilitate food waste recycling.								
Use collection boxes for collecting the one-side-used paper.								
Bring your own water bottle.								
Stop buying bottled water and drinks.								
Drink without straw or use reusable straws when necessary.								
Use reusable cutlery (such as spoons, forks, etc.) at school.								
Reuse folders.								
Put waste paper, metal cans and plastics into appropriate recycling bins.								
Practise clean recycling. (e.g. Clean your cans using water before putting them into the recycling bins)								
Keep the rubbish bin in your classroom clean.								
Keep your classroom clean and free of dust.								
Clean up food or drink spills immediately to prevent mould or bacterial growth, if any.								

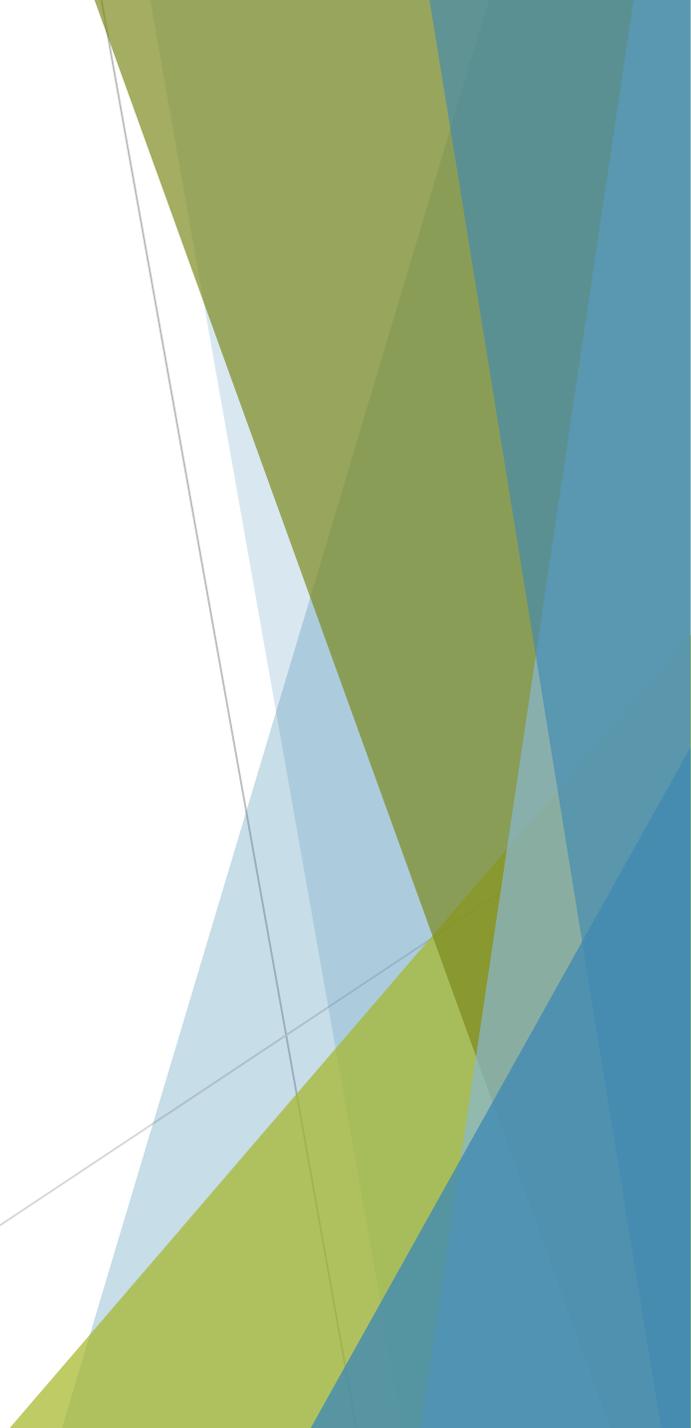
## Environmental checklist by Green Prefects



## (2) 學生教育及活動



## 2. (a) 認知層面



# 迦南抗逆包 網上學習資源

雲端硬碟

在「雲端硬碟」中搜尋

與我共用 > 迦南抗逆包 Online Resources > 9 綠色生活 Green Life

檔案

名稱 ↓

C(iii) Worksheet\_impacts of...

C(ii) Clearer water, cleaner ...

C (i) Impacts of COVID-19 o...

B(i) How to Practice Enviro...

B (iii) Worksheet\_how to pr...

B (ii) You are helping earth L...

儲存空間  
已使用 12.25 GB

新增

優先項目

我的雲端硬碟

共用雲端硬碟

與我共用

最近

已加星號

垃圾桶

STCC Anti-adversity Package 綠色生活 Green Life

QR Code

A. 綠色生活 Green Life

## 相關連結：

- ▶ <https://drive.google.com/drive/folders/1DtpAUSU2TTW0sA6RxfjNzl1Hk9TUr7CI?usp=sharing>

# Online assemblies related to Green Education during the suspension period

- ▶ Video clip
- ▶ [https://www.youtube.com/watch?v=t3ye5HI\\_l4w&list=PL3\\_vkyfWJxNIOZWx4EPWGPAlmOlod9KYC&index=45&t=32s](https://www.youtube.com/watch?v=t3ye5HI_l4w&list=PL3_vkyfWJxNIOZWx4EPWGPAlmOlod9KYC&index=45&t=32s)



# 校董嚴先生親自帶領培訓工作坊



日期: June/2021

- ▶ EDUHK sharing
- ▶ 有才有德：優質生命教育及品德教育計劃（和富慈善基金捐贈）
- ▶ Date: 2021/ June
- ▶ Participants:  
Sheeta Wong (2020 graduate)  
Brian Yan (Assistant Principal)  
Celine Tsui (Principal)



# 探訪活動 (賽馬會氣候變化博物館)

日期: July/2021





# 參觀屯門 O Park (廚餘回收設施)

Oct / 2022



學校週會：  
嘉賓分享  
(環保協進會--- 淨灘)



學校週會  
同學分享環節  
(Ocean 3C)



# 每月環保資訊

The amount of PLASTIC WASTE produced by Hong Kong people every day can fill up **80.5** double-decker buses.

(Source: www.consumer.org.hk)

**DECOMPOSITION TIME OF PLASTIC WASTE**

PLASTIC BAG 120 YEARS

PLASTIC STRAW 1200 YEARS

WATER BOTTLE 1600 YEARS

BRAIDED FISHING LINE 600 YEARS

**GREEN SCHOOL COMMITTEE (GSC)**

**3.96** million tonnes of municipal waste was dumped in landfills in 2020.

**30%** is food waste.

(Source: Hong Kong 2020 Municipal Solid Waste)

Raising awareness on marine sustainability

A group of students joined the Ocean 3C conducted a presentation to raise teachers' and students' awareness on plastic waste during the Green Assembly on 4 November 2022.

**Food waste composting machine**

Food waste is connected to the tuck shop for compost. Clear guidelines are provided.

**GREEN PREFECT LIST**

4th (32) Yang Man Wai (Chairperson)  
3rd (80) Chiu Yat Long (Vice-chairperson)

1st (85) CHAN Chung Yan  
1th (10) Chung Him Yau Illy  
1th (19) Ng Hei Yin  
1th (23) Tang Yu Hong  
1th (25) Ho Tsz Tsz  
1th (18) Ma Yui Hong  
1th (15) Makani, Jennifer Cecilia  
2th (22) Yeung Pui Yi Doris  
2th (13) Leung Tai Kiu  
2th (27) WONG, Lok Hin  
2th (05) Ho Keith  
2th (23) TSANG Long Yat  
2th (11) LEONG, Au Yin  
2th (22) TAM Cho Yin  
3th (09) Lai Hui Yin Huiyee  
3th (12) Lam Yik Hei  
3th (05) Chan Chiu Yip Calla  
3th (13) Lee Kai Chi Isaac  
2 HP (25) Yip Ming Hei Kyle  
2 HP (14) Lee Pak Ho  
3P (7) Che Yoon Hoi  
4th (15) Leong Lok Dor Trust  
4th (25) Lam Tai Yu  
4th (08) Lukie Yui  
4th (19) Tam Siu Yin  
5th (02) Zhen Wu Kerney  
5th (08) Wong Chak Hei  
5th (08) Wong Tai Hei  
5th (16) Lam Pui Fan  
6th (20) Wong Jack Ka  
6th (26) Wong Kai Ho  
6th (06) Kai Hung Young  
6th (12) Wong Brandon  
6th (05) Chu Kevin  
6th (18) Yeung Wang Sam Kitty

**WHAT IS ORGANIC FARMING**

"Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. (FAO/WHO Codex Alimentarius Commission, 1999)

VEGETABLES THAT ARE GROWN ORGANICALLY IN STCC ORGANIC GARDEN

OKRA GUA POTATOES TOMATOES CABBAGE

**GREEN NEWS**

## Impact of the Covid-19 Pandemic on the environment

**Positive Impacts**

FACT 1: "The area where industrial levels of Nitrogen Dioxide (NO<sub>2</sub>) are more prominent in Wuhan, China, which has seen a 200% drop in NO<sub>2</sub> levels since a lockdown was initiated there in January."

FACT 2: "During the first 4 weeks, traffic was down by about 45% as a result of the strict measures in Wuhan. The total carbon dioxide emissions fell by about a quarter during the period compared with the previous 4 weeks." (Carbon dioxide emissions in New Zealand has dropped 80%.)

FACT 3: Indo-Pacific humpback dolphins, also known as pink dolphins and Chinese white dolphins, have been spotted in numbers in the Pearl River Delta in 30% higher rate since the first lockdown day they were before the pandemic, according to a survey.

FACT 4: The emissions of air pollutants, such as SO<sub>2</sub> and O<sub>3</sub> have decreased as people stay at home during COVID-19 pandemic.

FACT 5: The pandemic has given the wildlife a chance to regroup and make a return. The closure of the space in the world, which is mostly restricted and polluted by the human activities, has allowed them, too, to flourish.

**Negative Impacts**

FACT 1: "In the first week of April, the volume of single-use plastics grown for takeaways was 2.2 times more than the figure last year, with more than 100 million pieces of disposable plastic bags."

FACT 2: "The outbreak has also provided cover for illegal activities such as deforestation of the Amazon rainforest and poaching in Africa." In Cambodia, more than 100 illegally endangered protected areas checked 1% of the same population was wiped out in a single event at Cambodia's Peak Khamer from the largest waterfalls in the Southeast Asia.

FACT 3: Masking from home has led to an increase in electricity consumption. In California, electricity usage during the pandemic has risen 15% to 20% over the same period last year, the state's utilities commission reports. In New York City, residential power use is up 4% to 7%, according to Columbia University researchers.

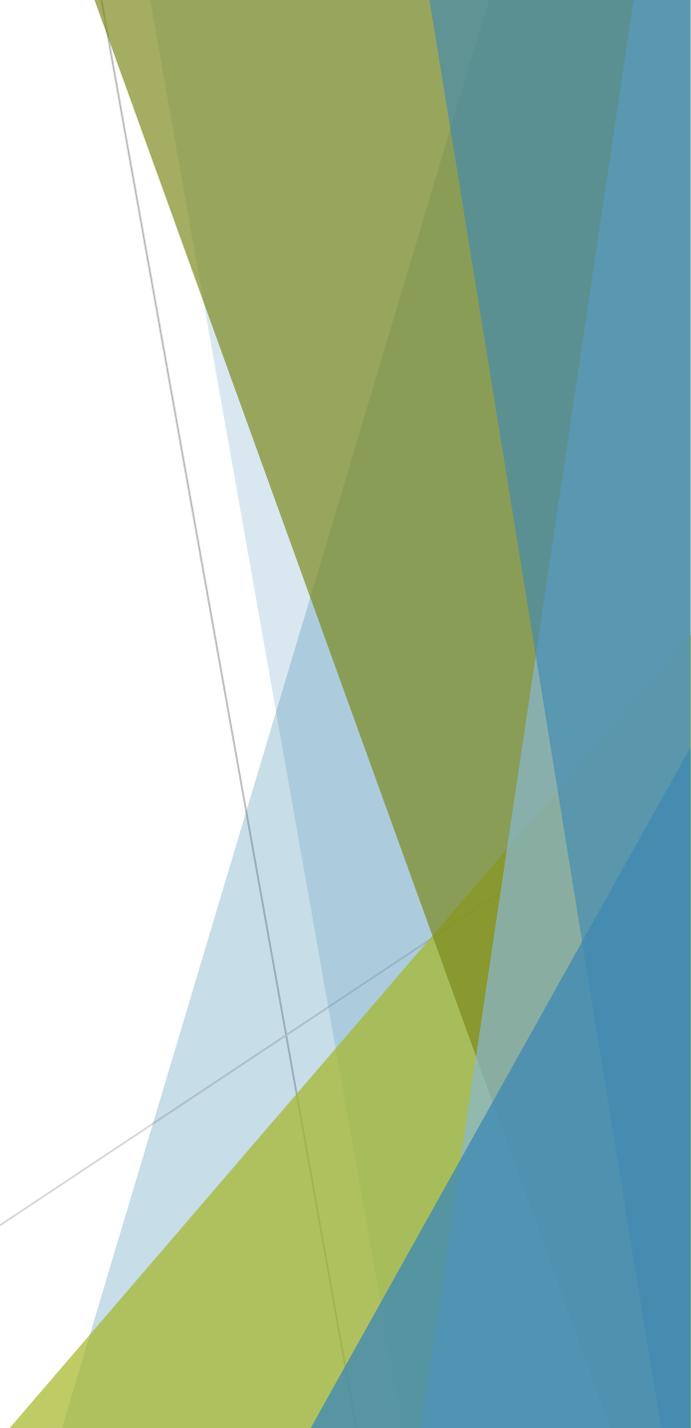
FACT 4: Food delivery services have increased the amount of plastic waste. In California, residents are using more plastic during the pandemic. The use of air conditioning with windows, power windows, and heat and reduce more carbon dioxide that are used in the transportation system.

FACT 5: Fish, walrus, sea turtles, and marine mammals can become entangled in or ingest plastic waste, causing malnutrition, starvation, and poisoning that increased the risk of death.

FACT 6: Working from home leads to an increase demand for heating and air conditioning, and heat and reduce more carbon dioxide that are used in the transportation system.

**How Covid-19 is affecting electricity consumption**

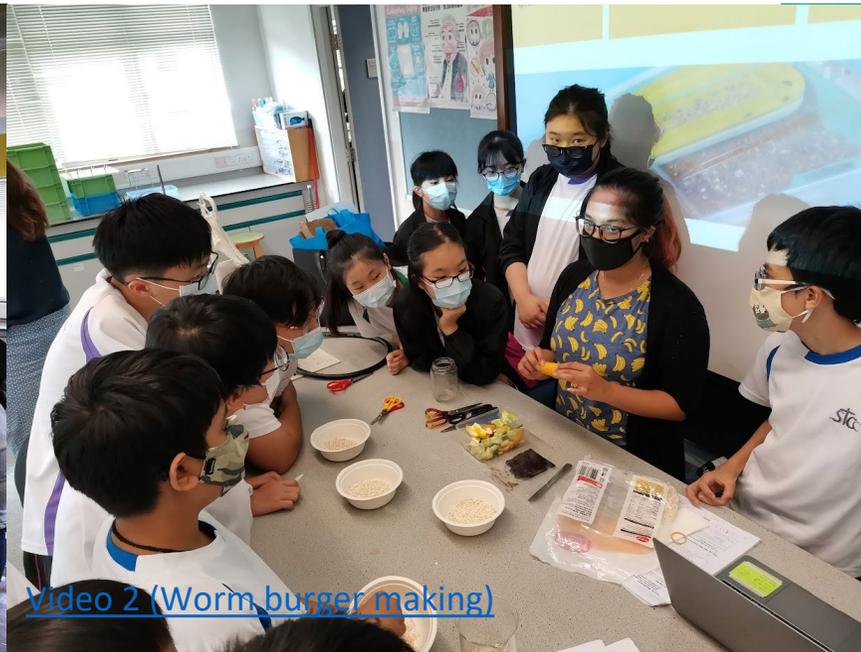
## 2. (b) 情感層面



# 學會(一): 養蟲學會



# Mealworm Program



[Video 2 \(Worm burger making\)](#)



[Video 1 \(Click\)](#)



# 學會(二): 有機農莊

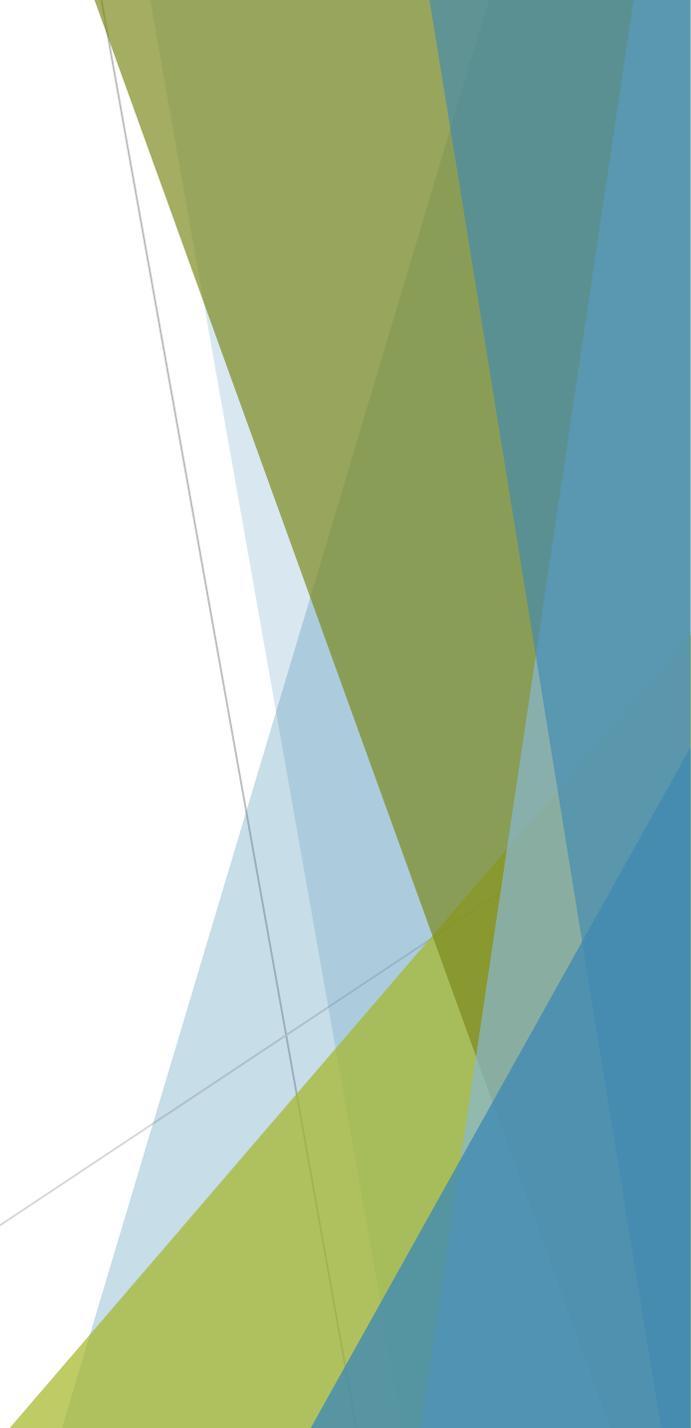




學生參與打理綠化空間  
(例如：照顧植物、參與耕種等)



## 2. (c) 實踐層面



# 環保大使於學期初協助回收 上一學年班房的剩餘物資



日期: Oct/ 2020  
參與人數: 15人

# DIY ECO BAG workshop

日期: June/2021  
參與人數: 90人

## Green School Society LWL DIY ECO BAG



### Amount of wasted clothes around the world 🌐

- An average consumer throws away **31.75 kilograms** of clothing per year.
- Globally we produce **13 million tons of textile waste** each year **95% of which could be reused or recycled.**

### How used clothes is collected in Hong Kong?

- An average of 110,000 tonnes of disposed garments are collected in Hong Kong each year, **which equals to a rate of 1,400 T-shirts per minute.**

### How used clothes are collected in Hong Kong?

- **Redress**, an environmental NGO that sells second-hand clothes
- It can help to reduce the waste in fashion industry
- Used clothes collected bins are available in most residential areas in Hong Kong.



### What can we do to relieve the problems of used clothes ?



### DIY eco bag ( Reuse 📧 )

<https://www.youtube.com/watch?v=zpaM3u2zag>

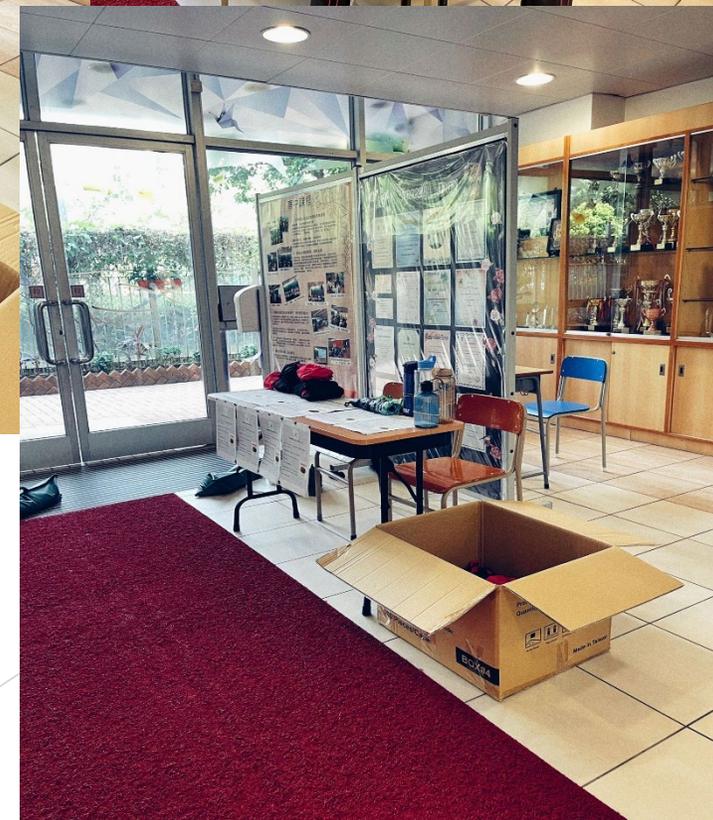
<https://www.youtube.com/watch?v=suY1d5l0eCY>

日期: June/2021

參與人數: 90人



# 環保大使於學期尾回 收舊校服、課外書及文具



日期: Sept/2021

# 學校開放日 (二手物品、種籽義賣) Nov/ 2022



# 淨灘 @馬鞍山泥涌

Dec/ 2022



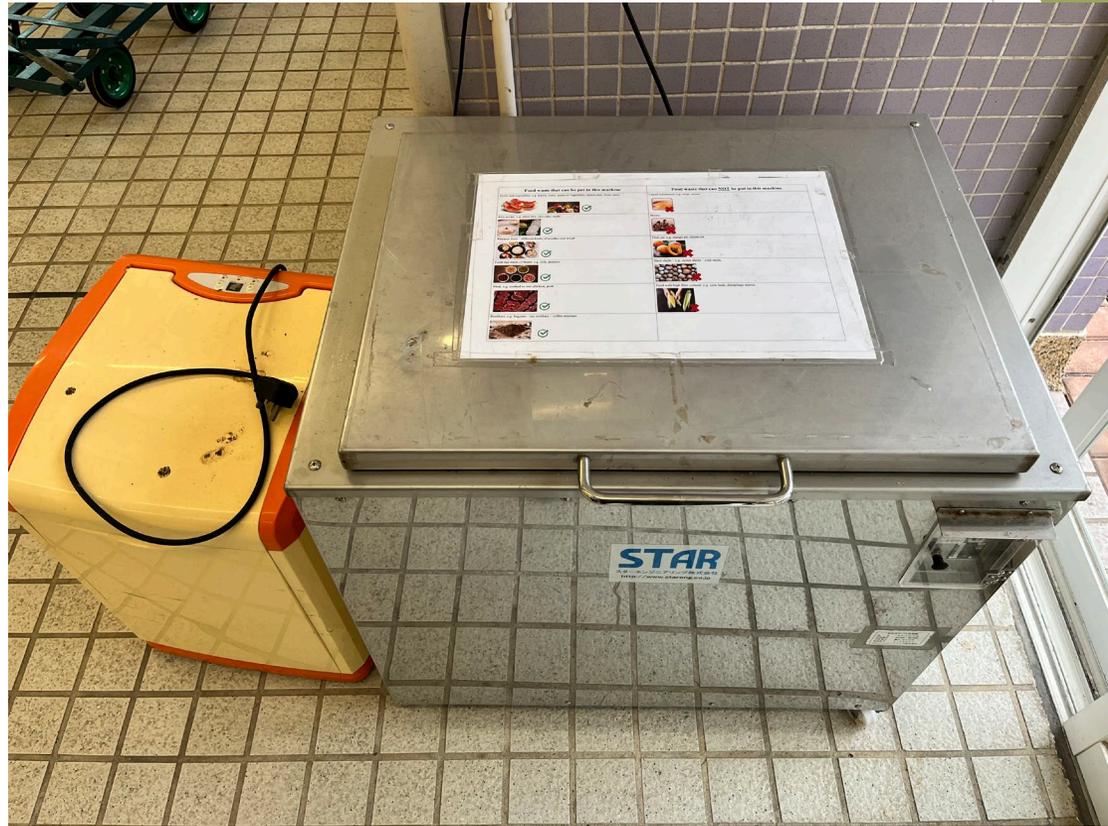
同學眼中的綠色校園！

# 同學眼中的綠色校園!









Q and A

▶ 謝謝大家!