

# The Water Resources Sustainable Development Education in Ying-Qiao :Building a Miniature Sponge School.

螢橋國小水資源永續發展教育:打造一個微型海綿學校



Loving and giving  
a happiness child.

**Here is Ying-Quio  
Elementary school**

這裡是螢橋國小

**Next to the school is the  
beautiful Xindian River**

學校鄰近美麗的新店溪

**It's an ecological elementary  
school in Taipei City**

學校就像一所生態博物館



# 學校基本資料

## About the School

- **Campus area:**  
**About 2.48 hectares**
- **Number of Classes:**  
**Regular classes: 20 classes,**  
**Gifted class: 1 class,**  
**Resource class: 1 class.**
- **Number of students: 623**  
**Faculty: 74 people**

- 螢橋國小已經成立**77**年
- 校地有**2.48**公頃
- 班級數:  
普通班:**20**班  
資優班:**1**班  
資源班:**1**班
- 學生人數:**623**人
- 教職員:**74**人

**Ying Qiao Elementary school is 77 years old.**



# Concept behind Water Resources Sustainable Development Education in Ying Qiao Elementary School

## 螢橋國小水資源永續發展教育的理念



School is like a sponge in the community, it can, when the land can absorb one centimeter more water, conserve water and give back to the community.

學校就像社區中的一塊海綿，能夠涵養吸收並回饋社區水量



# Operational Strategy of Water Resources Sustainable Development Education 水資源永續發展教育的推動方法



永續臺北海綿城市



Water environment  
education

水環境教育

The whole school adopts  
permeable pavement  
全校採透水鋪面

Green Campus

豐富的綠化校園

Operational Strategy  
執行策略







# Preservation of Campus Water Resources- Greening(Re-forestation) and Water Conservation

涵養校園水資源~綠化和保水





The campus has more than 100 kinds of plants. Thirteen of them are protected cultural trees.(endangered)  
校園植栽種類超過100種，有13棵受保護的文化樹。



Bitter tree 苦楝



Albizia julibrissin 大葉合歡



Indian Dillenia 第倫桃



Selected as "The most Beautiful School Tree"  
全國最美校樹選拔獲獎



Indian rubber tree 印度橡膠



Melaleuca 白千層





The outdoor walkway and parking lot of the school are paved by 100% condensed water permeable bricks.  
全校戶外走道與停車場採透水磚鋪面接近100%





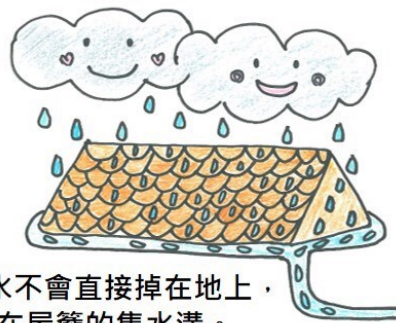
Applying for a total water control project to complete the rainwater recovery system (3 rain barrels) and an demo ecological pool.

申請總合治水工程，完成雨水回收系統(3個雨撲滿)與教學生態池。

## Campus Water Resources



1 下雨的時候 When it rains,



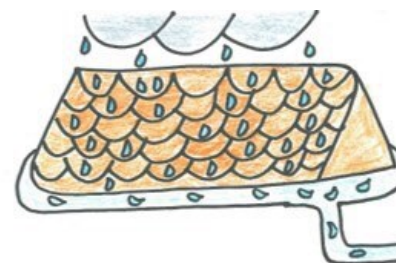
2 雨水不會直接掉在地上，而是落在屋簷的集水溝。

rain water is collected in roof gutters rather than falling on the ground



4 雨撲滿的水，引入生態池中，達成自給自足的永續水利用。

Collected barrel water flows into ecological pool completing the self-sustainable water recycling system.



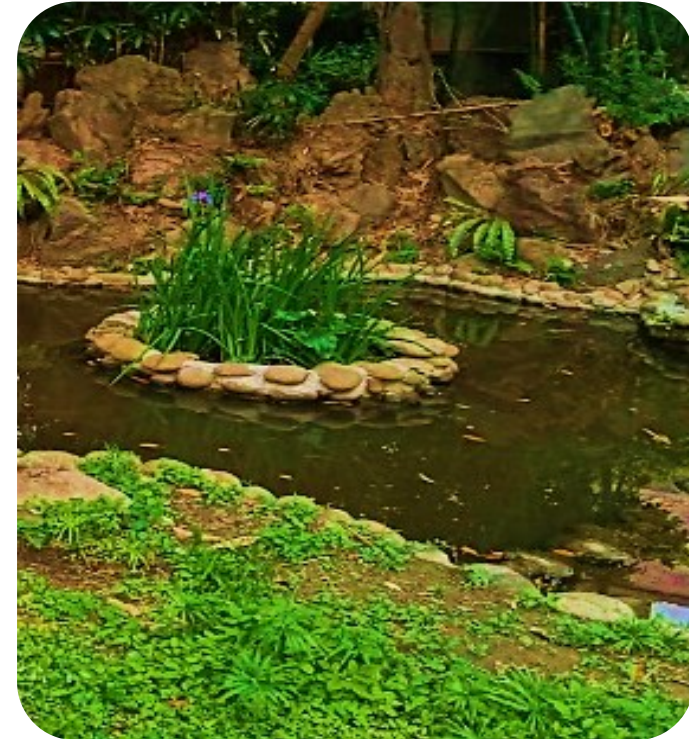
3 藉由水管將雨水接到雨撲滿裡，水資源就能再利用囉！



Rain water in gutters flows down the downspout into collecting barrels,



Applying for a total water control project to complete the rainwater recovery system (3 rain barrels) and an demo ecological pool.  
申請總合治水工程，完成雨水回收系統(3個雨撲滿)與教學生態池。



## Campus Water Resources

3 Rain Barrels



The demo ecological pool



# Sustainable water usage : Rural City Education

永續水利用：田園城市教育



Experience rice planting  
小農夫學習活動

Promote food farming education  
推動食農教育

將小田園延伸到綠屋頂  
Extend the small garden to the  
roof



Learning in holistic

open • place-based • experiential



# That is our Thanksgiving(Appreciation) Farm in Ying Qiao.

## 螢橋感恩水稻田



60 square meters  
60平方公尺



Site  
preparation

transplant rice  
seedlings

sprout

full

Harvest



體驗插秧了解農事  
Experience rice planting



Site  
preparation

transplant rice  
seedlings

sprout

full

Harvest



Lively paddy field  
充滿生機的螢橋感恩水田





Outdoor Education: embrace nature, and explore life  
讓學習走出課堂，擁抱自然，探索生活

秋收

結實累累的螢橋黃金米  
Bountiful Golden Rice



Site  
preparation

transplant rice  
seedlings

sprout

full

Harvest



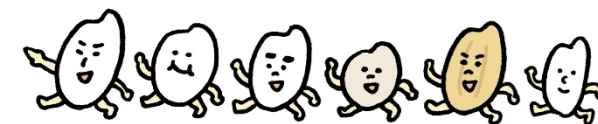
2020.8.5 Harvest 收割



鋤禾日當午汗滴禾下土  
Toiling Farmers  
Farmers weeding at noon,  
Sweat down the field soon.  
Who knows food on a tray,  
Thanks to their toiling day?



# Using the bicycle to thresh rice 利用腳踏車打穀







# Organic Planting: Learn about the path of food, from origin to table



永續臺北海綿城市

從產地到餐桌 有機蔬菜種植





I harvested the corn I planted  
自己種的玉米收成了,幫午餐加菜





# Extend the small garden to the roof 綠屋頂



Greening and cooling of the roof (6th floor).  
Expand green area.  
Natural rainwater irrigation to promote water utilization.  
屋頂(6樓)綠化降溫 擴增綠地面積 天然雨水澆灌 促進水利用



Learning in holistic open



# Water Environment Education

水環境教育





Combined with global issues, SDGs  
Sustainable Goal 6 「Clean Water and  
Sanitation」

Recognize that water is a limited resource of  
the earth. It needs to be well-managed in  
order to be sustainably developed.

螢橋國小的水環境教育是校本國際教育中的一環，  
結合全球永續發展目標SDGs 6「確保所有人都能  
享有水及衛生及其永續管理。」

認識水是地球的有限資源，需要被管理，才能永  
續發展。



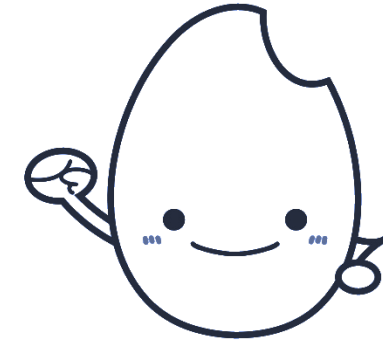
# Water Environment Education Learning Objectives

## 水環境教育學習目標



Recognize the importance of water  
and its connection with the world  
認識水的重要及其與世界連結

1

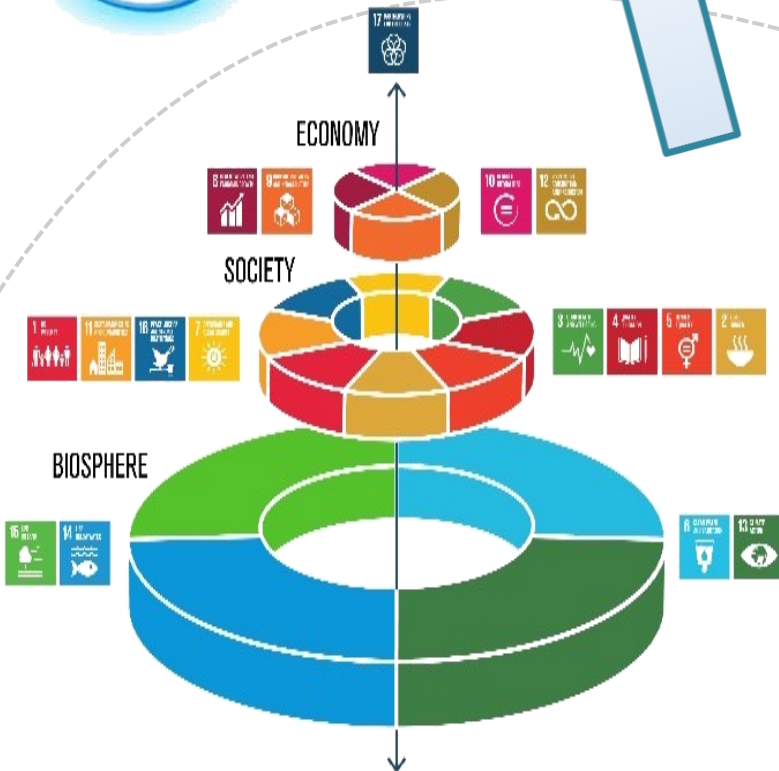


2

3

Learn how to improve  
water use and  
management  
了解如何提升水利用與管理

Effective water  
conservation and  
water use  
能為保水與有效用水行動



# Recognize the importance of water and its connection with the world

## 認識水的重要及其與世界連結



Every life needs water.  
Water is limited.  
Clean water is very important.  
We need to manage water because it is a limited natural resource.



每個生命都需要水  
水是有限  
水的乾淨衛生是非常重要的  
水是有限自然資源需要被管理

照片來源<https://www.chinatimes.com/newspapers/20190428000634-260114?chdtv>(2020.8.15)





## Sustainable Water Usage Education 永續水利用教育

Build a rainwater recycling system (3 rain barrels) that is link to the demo ecological pool.  
建置雨水回收系統(3個雨撲滿)連結教學生態池







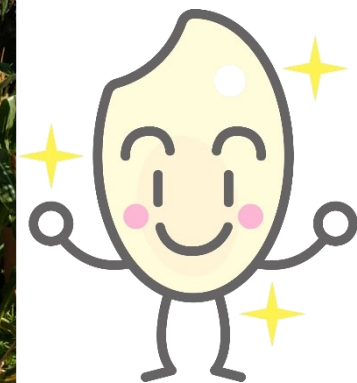
Water Circulatory System:  
Using the circulating filtration system  
to cultivate hydroponic  
水循環系統  
利用循環過濾系統培育水耕蔬菜

Water spinach





# Effective water conservation and water use 能為保水與有效用水行動







Named "A Green School"  
by the Ministry of  
Education



First Prize, 2019 Rice School Creativity  
Project, awarded by The Agriculture and  
Food Department of the Executive Yuan.



Won the Campus  
Construction Award  
in the Selection of  
Taipei Quality  
Schools.







螢造深耕福田  
橋見幸福孩子

Thanks for your attention



**Loving and giving a happiness child.**