

Creating Rain Gauges! 製作雨量計

How are we affected by rain?

Global climate change comes from precipitation. Too little precipitation can result in dry soil, shallow streams, and shortages of municipal water supplies. However, too much precipitation can also have a negative impact on human activities, business and industry, agriculture, and the environment. The students were presented with these problems and posed many thoughtful questions as they researched and looked at the importance of water. They learned about different instruments used to measure or predict weather and how they help us. The students inquired into how to determine the wind direction by creating their own wind vane and then connecting it to rainfall.

The Water Cycle

The students discovered that water changes state by realizing water evaporates from the sun into a gas and that this gas later on becomes rain. The third graders didn't take long to add other phases of the water cycle in to complete the picture. The water cycle led the students to visualize precipitation and how they can measure it.

Measuring Rain

Considering the research that was done on how too much or too little water can be bad for the environment, the students worked in groups on how to measure and record rainfall patterns. They came up with interesting ideas for building reusable and sturdy gauges. Together, the students created and improved on their designs after testing the prototypes. They did well with expressing their understanding of the importance of being able to measure the rain.

雨水如何影響我們?

全球氣候變化來自降雨。降雨太少會導致土壤乾燥、溪流乾涸和城市供水短缺。但是，過多的降雨也會對人類活動、工商業、農業和環境產生負面影響。在研究水的重要性時，學生們討論上述議題，並提出了許多值得思考的問題。學生認識了用於測量或預測天氣的不同工具以及它們如何提供幫助。學生透過製作風向儀並將風向與降雨連結。

水循環

學生發現水經由太陽照射蒸發成氣體，後來又變成雨水來改變型態。三年級孩子很快就增加水循環的其他階段來完成循環圖。透過水循環，學生觀察了降雨並測量降雨量。

雨水測量

從研究得知過多或過少的水都可能對環境造成傷害，學生分組測量並記錄降雨的模式。他們運用有趣的想法，建造可重複使用並且堅固的雨量計。他們在測試雨量計之後，共同改進了設計，並充分地表達了測量雨量的重要性。

1

ASK + IMAGINE
提問 + 創思

2

We used wind vanes to determine where the rain will come from.
我們使用風向儀確定降雨的方向。



3

PLAN
計畫

1

It was important to have a design that could accurately measure precipitation.
一個可以精確測量降水的設計是非常重要的。



4

CREATE
創造

1



Building the gauge and working together!
我們一同建造雨量計!

5

IMPROVE
改進

1



Simulating hard and soft rain to test and improve the rain gauge.
模擬大雨和小雨以測試和改良雨量計。

6

PRESENT
展現

1



Presenting and sharing our findings.
介紹並分享我們的發現。