The Weather: Hot or Cold
天氣：熱或冷

Understanding Temperature

Temperature is a measurement of how hot something is. Water freezes at 0°C (degrees Celsius) and boils at 100°C. As a basis for understanding temperature and how it is measured we did basic research into various weather conditions. How do they occur and why is there such a big difference in temperature from winter to summer? During the early stages of the project, students had the opportunity to study various different thermometers and how these assist us in our daily lives.

Creating a Thermometer

Initially the students were introduced to the material that they would need to create their own thermometer. They had to figure it out on their own, therefore the design process took a little more time as the students had to collaborate, discuss, and put a plan together. We were amazed at the variety and quality of some of the designs. Several groups even managed to figure out the exact design.

Once team had an opportunity to showcase their designs, we put the thermometers together step by step. The students were surprised as they observed the water inside the straw move up with warmer temperatures and down with cooler temperatures.

了解溫度

溫度用來測量物體熱度。水在 0 度時結冰，在 100 度時沸騰。為了解溫度及其測量方式，我們對天氣條件進行了基礎研究。究竟是什麼原因引起的，為什麼氣溫從冬天到夏天的變化如此之大?在此專題的第一階段，學生有機會學習各種不同的溫度計，及了解溫度計如何幫助我們的日常生活。

製作溫度計

一開始學生先學習製作溫度計所需材料，接著他們需要自己想辦法做出溫度計，因此設計過程中也和同學一起收集資料、討論及計畫。部分學生的設計展現出多樣性和品質令人感到驚艷，甚至有幾個組別做出了精確的設計。

每組展示他們的設計後，我們一步一步把溫度計組合起來。學生驚喜地觀察到，吸管裡的水隨著溫度升高而向上移動，而隨著溫度降低則向下移動。

1 2 ASK + IMAGINE 提問 + 創思

We researched and examined thermometers and how to read them.
我們研究和測試溫度計，並學習如何讀取溫度。

3 PLAN 計畫
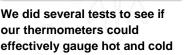

We were tasked to plan and design a thermometer to effectively gauge the temperature.
我們的任務是計畫並設計能有效測量溫度的溫度計。

4 CREATE 創造

It looked easy but it was tricky to piece the thermometer together.
看似簡單，但將溫度計組合在一起時很不容易。

5 IMPROVE 改進

We did several tests to see if our thermometers could effectively gauge hot and cold temperatures and made changes to our plan if needed.
我們做了多次測試，看溫度計是否能有效地測量冷熱，並根據需要修改計畫。