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 especially now when we have our own temperatures measured wherever we go.

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 everyone 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

溫度是量測物體溫度的方法。水在 0°C（攝氏度）時結冰，在 100°C 時沸騰。為了了解溫度及其測量方法，我們對各種天氣條件進行了基礎研究，像是它們是如何發生的？為什麼冬季和夏季的溫差如此之大？在研究企劃的早期階段，學生們學習各種不同的溫度計，以及了解它們如何在日常生活中幫助我們，尤其是現在我們無論走到哪裡都要量測自己的溫度。

製作溫度計

一開始，老師介紹了製作溫度計所需的材料。學生在設計過程中花了許多時間，因為他們必須協作、討論並製定計劃。我們對某些設計的多樣性和品質感到不可思議。有幾個小組甚至設法弄清楚了確切的設計。

當每位學生都展示了自己的設計，我們一步一步地將溫度計放在一起。學生們驚訝地發現吸管內的水隨著溫度升高而上升，隨著溫度降低而下降。

ASK + IMAGINE 提問 + 創思

We researched and examined the material provided for the thermometer.
我們用提供的溫度計材料研究及實驗。

PLAN 計畫

We were tasked to plan and design a thermometer to effectively gauge the temperature.
我們的任務是計畫及設計溫度計來有效地量測溫度。

CREATE 創造

It looked easy but it was tricky to piece the thermometer together.
溫度計組裝看似簡單，但其實很有挑戰性。

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.
我們做了幾次測試，看看溫度計是否可以有效地測量冷熱溫度。