

States of Matter 物質狀態

Does it Matter

In this project, students gained knowledge about matter, which is present in our surroundings and exists in everything. They developed the ability to recognize and explain the characteristics of matter, such as flexibility, strength, transparency, hardness, size, color, weight, and texture. Additionally, students explored the three states of matter: solid, liquid, and gas. They discovered that the properties of an object determine its functionality and realized that certain objects are more suitable for specific tasks than others.

Three States of Matter

To comprehend the different states of matter, the students needed to grasp the fundamental idea of matter itself. Throughout the lesson, the students engaged in practical activities, such as creating gas-filled balloons by combining liquids and solids. They also participated in a hands-on experiment that demonstrated how objects can sometimes simultaneously exist in two or three states.

Design and Build

As part of this captivating learning experience, the students utilized the three states of matter to design and construct a toy. They drew inspiration from the solids, liquids, and gases provided in the box, showcasing their remarkable creativity throughout the process.

物質重要嗎

在這個專題中，學生學習周遭無所不在的物質，他們學會分辨及描述物質特性，包含延展性、強韌度、透明度、硬度、尺寸、顏色、重量及質地。此外，學生還學習三種物質狀態：固體、液體和氣體。他們發現物質的特性決定它的功能，並了解不同用途適合使用不同的物質。

物質的三態

為了瞭解每一種物質狀態，學生必須先理解物質的概念。課程中，他們參與了實作活動，像是用液體和固體結合使氣球充滿氣體，以及透過實驗了解有時物體可以同時存在於兩種或三種狀態。

設計和製作

學生利用物質三態的特性來設計和製作玩具，用箱子中提供的固體、液體和氣體來展現驚人的創意。

1 ASK + IMAGINE 提問 + 創思

Hands-on activities helped us understand the three states of matter.

親手做的活動幫助我們了解物質三態。



3 PLAN 計畫

We applied our knowledge to formulate a plan for the toy we want to create.

運用我們學到的知識來設計玩具。



4 CREATE 創造

We worked together and created various toys from a solid, liquid and gas.

我們一起用固體、液體和氣體創造各種玩具。



5 IMPROVE 改進

Sometimes we had to go back to the drawing board if things didn't work out.

如果製作中有問題，我們會回去檢視設計圖。

