

3D Shapes and Community Mapping 3D 形狀及社區地圖

Shapes

This project based learning activity had students use their geometry skills to design and build their own community. The project extended beyond math skills and included valuable mapping skills important for the students as they navigate everyday life. The students showed tremendous knowledge of basic shapes and used that knowledge effectively when introduced to various 3D shapes that they had to identify and use to plot and plan their community map.

Students were taken through the process of reading and designing basic maps using a map key combined with two and three dimensional shapes. The project started by putting their map reading skills to the test, they had to look at various maps of the school and communities to identify places and use a map key to read the map. Once they showed confidence in their mapping skills they were tasked to show their geometry skills and use 3D shapes to construct a model of their community.

The world around me

This project focused on geometry (shapes), mapping and directional skills, however students were able to be part of so many other elements of learning, which included problem solving, collaboration, making inferences, communication as well as independent learning. Students had the opportunity to showcase their future skills as young city planners, engineers and mathematicians as they plotted and planned their community.

形狀

此專題讓學生以幾何形狀來設計及建造自己的社區，學習過程除了涵蓋數學技巧，也包括對日常生活重要且俱價值的製圖技巧。學生於課堂中展現豐富的基本形狀知識，並有效地運用這些知識繪製及規劃社區地圖的 3D 形狀。

學生結合地圖標示與平面及立體的圖形，閱讀及設計基本地圖。一開始先測試學生閱讀地圖的技巧，他們必須觀察學校及社區的地圖來辨別地點，並透過地圖標示說明來閱讀地圖。一旦學生建立起對製圖技巧的信心，便可以開始運用幾何技巧和 3D 形狀構建他們的社區模型。

我周圍的世界

這次的專題著重於幾何（形狀）、繪圖和方向技巧，但學生同時也學到解決問題、協同合作、推理、溝通以及獨立學習等能力。學生在規劃社區的同時，也展現出他們作為小小城市規劃師、工程師和數學家的一面。

ASK + IMAGINE 提問 + 創思

Comparing community maps enabled us to understand what we needed to include in our own map.

透過比較社區地圖能讓我們理解自己的地圖需涵蓋的內容。



PLAN 計畫

I planned the layout of my community using different shapes to create various designs.

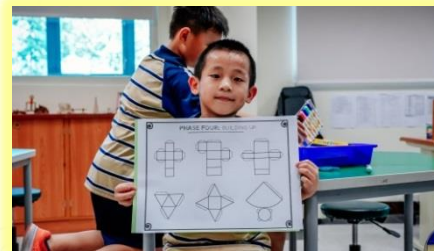
我使用不同形狀設計出各種社區結構。

CREATE 創作



Creating my map involved many elements of design, planning and creative thinking.

我的地圖包含許多設計、規劃和創思的元素。



IMPROVE 改進



We compared our community models and shared ideas on how to make them better.

我們分享彼此的社區模型，並討論如何能做得更好。