

參與學校：黃埔宣道小學

數學科教學計劃

科目：數學

級別：六年級

課題：不規則立體體積

技術使用：AR Apps、Power Lesson、利用數數粒計算立體的 APPS

技術簡介：AR(擴增實境) (Augmented Reality)，是一種實時地計算攝影機影像的位置及角度並加上相應圖像的技術，這種技術的目標是在螢幕上把虛擬世界套在現實世界並進行互動。

Primary Six Mathematics: (Volumes of Irregular solids)

After using the AR for students in learning this topic, enable students to find the volume of irregular solids by using the dissecting method or fitting method.

The teacher found that the knowledge was invested by students. In the traditional way of teaching this topic, the teacher stated that he used to tell the students information about how to find the volumes of irregular solids directly. With the designed AR worksheet and learning App, students could observe the volume of the 3D shape and wrote their findings and got the faster method to find the volume of the 3D shape. The lesson was guide students to analyse the question with the help of the AR in the worksheet so that they can understand how to choose by using the dissecting method or fitting method.

In addition to the study of theory and knowledge in the Mathematics class, this allows students to experience how effective the AR is in teaching, and to make learning more interesting.

技術簡介：Power Lesson

PowerLesson 配合平板電腦教學至今，本校發現其對教學有著以下顯著成效：

1.即時互動，落實因材施教

- 老師往往未必能在短短一課節中完全了解每位學生的想法，但透過 PowerLesson 的互動，學生能即時發表個人想法，老師便可因材施教，按他們不同的想法作深入討論。

2.跨平台，讓學習無障礙

- PowerLesson 是一個跨平台的媒體，學生即使家中沒有平板電腦，都可以透過桌面或手提電腦重溫課堂學到的知識，讓學生無障礙地學習。

3.省時備課，同工協作分享

- 老師的備課時間比以往節省很多，備課流程亦較順暢。而 PowerLesson 亦能把整個課程設計及教學流程記錄下來，隨時與同工分享，促進教師專業發展。

4.綜合管理，讓教與學更投入

- 透過 PowerLesson 配合平板電腦的教學法，讓老師有系統地把用心製作的課材完完全全地展示給學生，而學生亦能把已完成的學習成果或經歷，即時呈交給老師，達至真正互動教學。

5.融入教學 App，整合教學成果

- 由教學 App 製作的作品，學生只須三個步驟即可呈交至 PowerLesson，比傳統桌面電腦簡單得多，省卻不少時間。

另有關 PowerLesson 的課堂使用詳情可瀏覽以下網址：

<https://www.youtube.com/watch?v=9BMSL4I5P2k>